



Notice of Proposed Amendment 2023-09 (A)

in accordance with Article 6 of MB Decision 01-2022

Implementation of the latest CAEP amendments to ICAO Annex 16 Volumes I, II and III

RMT.0514 (SUBTASK 2)

EXECUTIVE SUMMARY

This Notice of Proposed Amendment (NPA) proposes to update the applicable environmental protection requirements for the certification of products in Regulations (EU) 2018/1139 and (EU) No 748/2012, and the associated acceptable means of compliance (AMC) and guidance material (GM).

Article 9(2) of Regulation (EU) 2018/1139 as amended by Regulation (EU) 2021/1087 sets out the essential requirements for environmental protection that refer to the requirements contained in Volumes I, II and III of Annex 16 'Environmental Protection' to the Convention on International Civil Aviation.

On 20 March 2023, the International Civil Aviation Organization (ICAO) Council adopted new amendments to these volumes for the continuous improvement of the environmental protection standards and recommended practices (SARPs).

The proposed regulatory material transposes these new amendments into Article 9(2) of Regulation (EU) 2018/1139. The proposed updates to Annex I (Part 21) to Regulation (EU) No 748/2012 ensure the implementation of these amendments for the certification of products and clarify the applicable procedures for the environmental compatibility of the products.

The proposed regulatory material is expected to provide a level playing field for all stakeholders in the aviation market.

The objective is to ensure a high uniform level of environmental protection and to contribute to European policies on climate change, air quality and noise reduction.

NPA 2023-09 is divided in two parts. The present NPA 2023-09 (A) includes the background information pertaining to the regulatory proposal. NPA 2023-09 (B) includes the proposed amendments.

REGULATIONS TO BE AMENDED

- Regulation (EU) 2018/1139 (Basic Regulation)
- Regulation (EU) No 748/2012 (Initial Airworthiness)

ED DECISIONS TO BE AMENDED

- ED Decision 2012/020/R 'AMC and GM to Part 21 — Issue 2'

AFFECTED STAKEHOLDERS

Design organisation approval (DOA) holders; production organisation approval (POA) holders.

WORKING METHODS

Development	Impact assessment(s)	Consultation
By EASA	Light Based on ICAO impact assessment	NPA — Public

RELATED DOCUMENTS / INFORMATION

- ToR RMT.0514 issued on 13.6.2016

PLANNING MILESTONES: Refer to the latest edition of the EPAS Volume II.



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1. About this NPA

1.1. How this regulatory material was developed

This rulemaking activity is included in the 2023 edition of Volume II of the European Plan for Aviation Safety (EPAS) for 2023–2025¹ under Rulemaking Task (RMT).0514 (Subtask 2).

The European Union Aviation Safety Agency (EASA) developed the regulatory material in question in line with Regulation (EU) 2018/1139² (the Basic Regulation) and the Rulemaking Procedure³, as well as in accordance with the objectives and working methods described in the Terms of Reference (ToR) for this RMT⁴.

1.2. How to comment on this NPA

The draft regulatory material is hereby submitted for public consultation.

Please submit your comments using the **Comment-Response Tool (CRT)** available at <https://hub.easa.europa.eu/crt/>⁵.

The deadline for the submission of comments is **15 February 2024**.

1.3. The next steps

Following the consultation of the draft regulatory material, EASA will review all the comments received and will duly consider them in the subsequent phases of this rulemaking activity.

Considering the above, EASA may:

- issue an opinion proposing amendments to the Basic Regulation and to Regulation (EU) No 748/2012⁶; the opinion will be submitted to the European Commission, which shall consider its content and decide whether to issue amendments to those Regulations;

¹ <https://www.easa.europa.eu/en/document-library/general-publications/european-plan-aviation-safety-epas-2023-2025>

² Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139>).

³ EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (<https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb>).

⁴ <https://www.easa.europa.eu/en/document-library/terms-of-reference-and-rulemaking-group-compositions/tor-rmt0514>

⁵ In case of technical problems, please send an email with a short description at crt@easa.europa.eu.

⁶ Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design

- following the amendments to Regulation (EU) No 748/2012, issue a decision amending ED Decision 2012/020/R to update the acceptable means of compliance (AMC) and guidance material (GM) to Annex I (Part I) to that Regulation.

When issuing the opinion and decision, EASA will also provide feedback on the comments received.

and production organisations (OJ L 224, 21.8.2012, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0748&qid=1698683248256>).



2. In summary – why and what

2.1. Why we need to act

The ICAO Council at the fifth meeting of its 228th Session on 20 March 2023 adopted Amendments 14, 11 and 2 to respectively Volumes I, II and III of Annex 16 to the Convention on International Civil Aviation (ICAO Annex 16), which will become applicable on 1 January 2024. An overview of these amendments is provided in Appendix 1.

These amendments do not modify the noise limits or emissions maximum levels that a product shall comply with for certification. However, they improve and clarify the SARPs for a consistent and robust application of the certification procedures for aircraft noise, aircraft engine emissions and aeroplane CO₂ emissions.

Article 9(2) of the Basic Regulation (as amended by Regulation (EU) 2021/1087 sets out the essential requirements for environmental protection that refer to the requirements contained in the previous Amendments 13, 10 and 1 to respectively Volumes I, II and III of ICAO Annex 16.

2.2. What we want to achieve – objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. The regulatory material presented here is expected to contribute to achieving these overall objectives by addressing the issue described in Section 2.1.

More specifically, with the regulatory material presented here, EASA intends to maintain a high uniform level of environmental protection and to provide a level playing field for all stakeholders in the aviation market.

In addition, the transposition of the new amendments will avoid EASA Members States filing a difference with Volumes I, II and III of ICAO Annex 16 once the rulemaking process is completed.

2.3. How we want to achieve it — overview of the proposed amendments

a. Proposal

This NPA proposes to:

- implement the new amendment references in Article 9(2) of the Basic Regulation;
- update Annex I (Part 21) to Regulation (EU) No 748/2012 to ensure the implementation of these amendments for the certification of products;
- update the AMC and GM to Annex I (Part 21) to Regulation (EU) No 748/2012 to clarify the applicable procedures for the environmental compatibility of the products and to refer to the guidance material in ICAO Doc 9501 ‘Environmental Technical Manual’ for the uniform implementation of ICAO Annex 16;
- provide other updates and corrections linked to previous ICAO Annex 16 transpositions for consistent implementation of the environmental protection requirements.



b. Applicability date

Due to the applicability date of 1 January 2024 of Amendments 14, 11 and 2 to respectively Volumes I, II and III of ICAO Annex 16, the targeted applicability of the regulatory material for the amended regulations should be as soon as it is adopted (i.e. 20 days following their publication in the *Official Journal of the European Union*). EASA intends to issue an opinion in the first half of 2024 for an expected completion of the RMT in the first quarter of 2025.

c. Legal basis

The legal basis for amending the references to the provisions of the Chicago Convention referred to in the first subparagraph of Article 9(2) of the Basic Regulation is Article 19(3) of that Regulation.

The legal basis for amending Regulation (EU) No 748/2012 is Article 19(1) of the Basic Regulation and specifically Article 19(1)(d) regarding the conditions for issuing type certificates and for changes to such certificates.

The legal basis for the issuance of AMC and GM for the application of the delegated acts is Article 76(3) of the Basic Regulation.

d. Rationale for the proposed regulatory material

Table 1 summarises the rationale behind the proposed amendments to the Basic Regulation and **Error! Reference source not found.** summarises the rationale behind the proposed amendments to Annex I to Regulation (EU) No 748/2012 and its related AMC and GM. The proposed regulatory material is provided in NPA 2023-09 (B) (see Chapter 4).

Table 1: Proposed amendments to Regulation (EU) 2018/1139

Article	Rationale behind the proposed regulatory text
Article 9(2) first subparagraph	<p>Amendment levels update</p> <p>Article 9(2) is amended to refer to Amendments 14, 11 and 2 to respectively Volumes I, II and III of the Annex 16 to the Chicago Convention.</p>

Table 2: Proposed amendments to Annex I to Regulation (EU) No 748/2012 and its related AMC and GM

Points/AMC/GM	Rationale behind the proposed regulatory text
<p>21.B.85</p> <p>GM1 21.B.85(a)</p> <p>GM1 21.B.85(a)</p>	<p>Applicable environmental protection requirements</p> <p>21.B.85 is amended to include the reference to the essential requirements in the first subparagraph of Article 9(2) of the Basic Regulation. This reference ensures the application of the latest amendment levels of Volumes I, II and III of ICAO Annex 16 as adopted by the delegated acts amending this subparagraph.</p> <p>The list of references to ICAO Annex 16 provided in 21.B.85(a)(1) to (a)(4) do not add any value to the applicable requirements in Article 9(2) of the Basic Regulation since these references can be easily found in ICAO Annex 16. Moreover, including these references may result in erroneous requirements</p>



	<p>due to typos. This is currently the case in 21.B.85(a)(1)(ii)(B) and (D) where ‘aeroplanes’ should read ‘aircraft’ and ‘helicopters’ respectively.</p> <p>The reference to the first subparagraph of Article 9(2) of the Basic Regulation is necessary and sufficient. The list of references is therefore deleted.</p> <p>The current GM1 21.B.85(a) refers mainly to guidance material in Volumes I, II and III of ICAO Annex 16 and in ICAO Doc 9501. This GM is amended to improve the explanation of the content of these volumes to better understand their content and their purpose.</p> <p>The titles of 21.B.85 and GM1 21.B.85(a) are amended for consistency.</p>
<p>AMC1 21.A.14(b) 21.A.15 GM 21.A.15(c) GM 21.A.20(d) 21.A.91 GM 21.A.91 21.A.93 21.A.147 AMC1 21.A.239(d) 21.A.243 AMC1 21.A.243(d) GM1 21.A.243(d) 21.A.245 21.A.247 GM1 21.A.247 GM-ELA No 1 to 21.A.247 21.A.251 AMC2 21.A.263(c)(1) GM 21.A.265(h) 21.A.432C GM 21.A.435(a) GM1 21.B.85 21.B.100 AMC 21.B.100(a)</p>	<p>Environmental compatibility</p> <p>‘Environmental compatibility’ is a new term introduced in the Basic Regulation that expresses the characteristic of a product that complies with the essential requirements for environmental protection.</p> <p>The term is introduced in Regulation (EU) No 748/2012 for the qualification of products that comply with the applicable environmental protection requirements in 21.B.85 (i.e. latest ICAO Annex 16 SARPs as implemented in Article 9 of the Basic Regulation).</p> <p>The use of this term permits the use of the adjectives ‘environmentally compatible’ or ‘environmentally incompatible’, and improves the drafting.</p> <p>Note: This new term was introduced in Annex Ib (Part 21 Light) with the adoption of Regulations (EU) 2022/1358⁷ and (EU) 2022/1361⁸.</p>
<p>21.A.93 GM 21.A.701(a) 21.B.100 21.B.105 21.B.107 21.B.109 21.B.111</p>	<p>‘Applicable’ environmental protection requirements</p> <p>‘Applicable’ is added in some points to clarify that it is about the environmental protection requirements in 21.B.85. Since 21.B.85 refers to Article 9 of the Basic Regulation, the applicable requirements are the applicable SARPs in ICAO Annex 16 as transposed in that article (i.e. the specific applicability criteria are determined in Volumes I, II and III of ICAO Annex 16).</p>

⁷ Commission Delegated Regulation (EU) 2022/1358 of 2 June 2022 amending Regulation (EU) No 748/2012 as regards the implementation of more proportionate requirements for aircraft used for sport and recreational aviation (OJ L 205, 5.8.2022, p. 7) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1358&qid=1698683420608>).

⁸ Commission Implementing Regulation (EU) 2022/1361 of 28 July 2022 amending Regulation (EU) No 748/2012 as regards the certification, oversight and enforcement tasks of the competent authorities in the implementation of the rules concerning the organisations involved in the design and production of aircraft used for sport and recreational aviation (OJ L 205, 5.8.2022, p. 127) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1361&qid=1698683525904>).

21.B.453	
<p>21.A.91 GM 21.A.91 Appendix A to GM 21.A.91 GM No 1 to 21.A.93(b)(1)(iii) Appendix H to GM 21.A.101 Appendix I to GM 21.A.101 AMC No 1 to 21.A.263(c)(5), (8) and (9)</p>	<p>Changes to a type certificate</p> <p>21.A.91: the amendments clarify the environmental protection criteria for the classification of changes, i.e. certified levels of noise and emissions (NO_x, CO, HC, smoke, nvPM for aircraft engines and CO₂ for aeroplanes) and other characteristics related to environmental compatibility (e.g. vented fuel standard in Volume II of ICAO Annex 16).</p> <p>‘Environmental characteristics’ is replaced with ‘environmental compatibility’ (see rationale on ‘environmental compatibility’) to improve the current sentence, which currently reads ‘... or other characteristics affecting ... its environmental characteristics’. ‘Characteristics that affect the environmental compatibility’ is explained in GM 21.A.91.</p> <p>Note: The proposed change in 21.A.91 is in line with 21L.A.63 in Annex Ib.</p> <p>GM 21.A.91, GM No 1 to 21.A.93(b)(1)(iii), and AMC No 1 to 21.A.263(c)(5), (8) and (9) are amended for consistency with 21.A.91.</p> <p>A condition for the classification of major change is added for environmental protection in paragraph (3.4)(a) of GM 21.A.91. This is to ensure that the applicable production cut-off requirements for engine emissions and aeroplane CO₂ emissions are considered.</p> <p>Paragraph 8 of Appendix A to GM 21.A.91: the introductory text is simplified to improve clarity and moved to paragraph 3.7 of GM 21.A.91. The list of examples is updated for consistency and to reflect the current state of the art. The flowchart ‘Classification Process’ is amended for consistency.</p>
<p>21.A.432C(b) AMC 21.A.432C(b) 21.A.433 GM 21.A.435(a) 21.B.450</p>	<p>Repair design approval</p> <p>Subpart M of Sections A and B are amended for a consistent implementation of the environmental protection requirements for the repair design approval.</p> <p>The amendment in 21.A.432C(b) introduces the missing provision related to environmental protection for consistency with 21.B.453 and 21.B.100.</p> <p>Note: These amendments are consistent with the requirements in 21L.A.205 in Annex Ib.</p> <p>AMC 21.A.432C(b) is amended accordingly.</p> <p>The provision related to environmental protection is reintroduced in 21.A.433(a)(1) since it was incorrectly deleted with the adoption of Regulation (EU) 2019/897⁹ amending Regulation (EU) No 748/2012. The provision is also added in 21.A.433(a)(2) for consistency.</p> <p>The amendments in paragraph 1 of GM 21.A.435(a) are in line with the amendments in 21.A.91. The characteristic ‘change to noise and emissions’ is deleted in paragraph 2(v) of GM 21.A.435(a) because paragraph 2 relates to airworthiness.</p> <p>The reference to ‘environmental protection requirements’ is deleted from the title of 21.B.450 for consistency with the provision. 21.B.450 relates to</p>

⁹ Commission Delegated Regulation (EU) 2019/897 of 12 March 2019 amending Regulation (EU) No 748/2012 as regards the inclusion of risk-based compliance verification in Annex I and the implementation of requirements for environmental protection (OJ L 144, 3.6.2019, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0897&qid=1698743133876>).

	amendments to the type-certification basis necessary to maintain a level of safety equal to that previously established. This provision is linked to the last part of 21.A.433(a)(1) and relates to airworthiness only.
GM1 21.A.174 GM1 21.B.326	<p>Certificate of airworthiness</p> <p>The two GM provide guidance to the applicant and the competent authority for the application/issuance of a certificate of airworthiness on the applicable environmental protection requirements, and more specifically on the potential applicability of the production cut-off related to aeroplane CO₂ emissions.</p>
21.B.70	<p>Certification specifications</p> <p>21.B.70 implements Article 76(3) of the Basic Regulation for the issuance of certification specifications (CSs). CSs can only be used for those situations where the Basic Regulation provides for the establishment of a certification basis, i.e. for airworthiness and operational suitability data only (Article 11 and Article 19(1)(b)(i) and (ii)). The Basic Regulation does not provide for the establishment of a certification basis for environmental protection. As such, 21.B.70 is amended to delete the reference to environmental protection.</p> <p>Background information</p> <p>21.B.70 was inserted with Regulation (EU) 2019/897 to replace the former 21.A.16A initially related to airworthiness codes as standard means to demonstrate compliance with the essential requirements. 21.A.16A was amended with Regulation (EU) No 69/2014¹⁰ to include CSs for operational suitability data. The scope of 21.B.70 was extended to environmental protection CSs to include the former 21.A.18(c) ('21.A.18 Designation of applicable environmental protection requirements and certification specifications'). However, 21.A.18(c) provided for the issuance of CSs that provide for acceptable means to demonstrate compliance with the environmental protection requirements laid down in 21.A.18(a) and (b). The intent of this provision, which referred to acceptable means, was different from the one in 21.A.16A, which referred to standards.</p> <p>CS-34 and CS-36 were created to include AMC referring to the appendices to Volumes I and II of ICAO Annex 16, which were excluded from the essential requirements in Article 6 of the first and second Basic Regulations. These appendices are essential for standardised certification procedures. It was decided to implement them in CSs instead of an AMC to 21.A.18(a) and (b). CS-CO₂ was created following the same principle.</p> <p>The appendices to Volumes I, II and III of ICAO Annex 16 are now part of the essential requirements (Article 9 of the current Basic Regulation). As such, CS-34, CS-36 and CS-CO₂ are not relevant anymore and were amended with ED Decision 2021/011/R to simply point to the applicable environmental protection in Part 21.</p>
GM1 21.A.145(b)(2)	'Environmental protection' v 'noise, fuel venting and exhaust emissions'

¹⁰ Commission Regulation (EU) No 69/2014 of 27 January 2014 amending Regulation (EU) No 748/2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 23, 28.1.2014, p. 12) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0069&qid=1698743458023>).



	Regulation (EU) 2019/897 included the implementation of the SARPs in Volume III of ICAO Annex 16. Since then, the terms ‘noise, fuel venting and exhaust emissions’ should be replaced with ‘environmental protection’ to cover all aspects and to ensure that aeroplane CO ₂ emissions are also included.
Appendix A to GM 21.A.91 GM No 1 to 21.A.93(b)(1)(iii) 21.A.165 21.A.701(a) GM 21.A.701(a)	‘Environmental protection’ v ‘environmental’ ‘Protection’ is added after ‘environmental’ when the provision relates to environmental protection and not to environmental conditions linked to the airworthiness of the product to avoid any confusion.
GM1 21.B.425(a) Appendix VII to Annex I (EASA Form 45)	Noise certificates The instructions for the completion of Blocks 5, 7 and 8 of EASA Form 45 are improved to ensure consistency between the noise certificates created by the Member States. For consistency with Block 5, the headers of Blocks 7 and 8 are amended to specify that the blocks should contain both the manufacturer and the manufacturer designation. The reference to the Basic Regulation in Appendix VII needs to be updated to refer to Article 14(1) of the Basic Regulation for the issuance of a noise certificate.
GM 21.A.20(d) 21.A.95(b)(3) GM1 21.A.130(b)(4)(i) GM1 21.A.165(c)(3)	Other corrections GM 21.A.20(d) The provision in 21.A.20(d)(2) is related to safety only. ‘Or to the environment’ is deleted to avoid inconsistency. 21.A.95(b)(3) ‘Environmental protection requirements’ is added for consistency with 21.A.95(b)(1). The compliance with these requirements shall also be declared and its justification recorded in the compliance documents. GM1 21.A.130(b)(4)(i) and GM1 21.A.165(c)(3) A mistake in the second paragraph of these GM was introduced when they were updated with ED Decision 2021/011/R. The second paragraph should refer to the first bullet in the first paragraph instead of the third. The point numbers in the first paragraph are specified to avoid any confusion. The drafting is improved, and the titles of the GM are updated to follow the formatting convention.

2.4. What are the stakeholders’ views

The adopted Amendments 14, 11 and 2 to Volumes I, II and III respectively of ICAO Annex 16 arise from the recommendations of the 12th meeting of the Committee on Aviation Environmental Protection (CAEP/12).

These recommendations are the outcome of the work conducted during the 3 years preceding the meeting in accordance with the CAEP/12 Work Programme, and are the result of consensus discussions, which involved the stakeholders concerned with the subject matter together with representatives from civil aviation authorities.



3. What are the expected benefits and drawbacks of the regulatory material

To address the issue described in Section 2.1, there are no alternative options to rulemaking for the implementation of Amendments 14, 11 and 2 to respectively Volumes I, II and III of ICAO Annex 16 into the EU regulatory framework.

EASA based its impact assessment on the assessment carried out by ICAO. A summary is provided in **Table 3**.

Table 3: Impacts

	Impact	Rationale
Safety	None	
Security	None	
Efficiency	None	
Environmental protection	Positive	The new amendments add clarity for a straightforward implementation of the new SARPs by the manufacturers. Although no new noise limits or emissions maximum levels were adopted, the implementation of the provisions within the EU regulatory framework will provide a level playing field for all actors in the aviation market and will ensure a high uniform level of environmental protection.
Cost for the Agency	Negligible	One-off cost for the implementation of the provisions within the EU regulatory framework.
Cost for industry	Negligible	One-off cost for the adoption of the internal processes for the demonstration of compliance with the new amendments.
Cost for Member States	Negligible	One-off cost for the adaptation of Form 45.

The environmental protection benefit of the proposal outweighs the negligible cost impact.

EASA also assessed the impacts of the proposed regulatory material to ensure that the regulatory material delivers its full benefits with minimum drawbacks.

The proposed regulatory material has been developed in view of the 'Better regulation' principles, and in particular the 'Regulatory fitness' principles.



4. Proposed regulatory material

Please refer to NPA 2023-09 (B).



5. Monitoring and evaluation

EASA does not plan any specific monitoring or evaluation provisions for the transposition of Amendments 14, 11 and 2 to respectively Volumes I, II and III of ICAO Annex 16. However, the efficiency of actions contained in the EPAS in relation to environmental protection (i.e. including RMT.0514) is continuously monitored as part of the *European Aviation Environmental Report*¹¹. This report is updated every 3 years and provides indicators on the environmental protection performance of the civil aviation sector in the EU.

¹¹ <https://www.easa.europa.eu/eco/eaer/downloads>



6. Proposed actions to support implementation

No specific action to support the implementation of the proposed amendments is foreseen.



7. References

- ICAO State Letter AN 1/17.14 – 23/35, ‘Adoption of Amendment 14 to Annex 16, Volume I’, 27 April 2023
- ICAO State Letter AN 1/17.14 – 23/36, ‘Adoption of Amendment 11 to Annex 16, Volume II’, 27 April 2023
- ICAO State Letter AN 1/17.14 – 23/37, ‘Adoption of Amendment 2 to Annex 16, Volume III’, 28 April 2023
- Annex 16 ‘Environmental Protection’ to the Convention on International Civil Aviation:
 - Amendment 14 to Volume I ‘Aircraft Noise’,
 - Amendment 11 to Volume II ‘Aircraft Engine Emissions’,
 - Amendment 2 to Volume III ‘Aeroplane CO₂ Emissions’.
- ICAO Doc 9501 ‘Environmental Technical Manual’, Volumes I, II and III



Appendix 1 – Overview of Amendments 14, 11 and 2 to respectively Volumes I, II and III of ICAO Annex 16

1. Amendment 14 to Volume I of ICAO Annex 16 on Environmental Protection — Aircraft Noise

The main amendments are:

- alignment with ICAO Doc 8143, Part II ‘Formulation of Proposals for International Standards, Recommended Practices and Procedures’ for the formulation of SARPs, especially the proper use of modal verbs;
- guidelines for acquiring helicopter hover noise data;
- addressing of the limitations of specifications with respect to the adjustment of test-day sound pressure levels (SPL) to reference conditions;
- editorial corrections.

2. Amendment 11 to Volume II of ICAO Annex 16 on Environmental Protection — Aircraft Engine Emissions

The main amendments are:

- restructuring in accordance with ICAO Doc 8143, Part II ‘Formulation of Proposals for International Standards, Recommended Practices and Procedures’;
- language consistency updates and consistent use of notes and recommendations;
- applicability language improvement (e.g. for smoke number and nvPM standards);
- ‘equivalent procedure’ definition;
- definitions, descriptions, references and language improvements;
- nvPM measurement procedure improvements in accordance with SAE ARP 6320A and AIR 6241A;
- editorial and technical corrections for clarity and consistency across the document.

3. Amendment 2 to Volume III of Annex 16 on Environmental Protection — Aeroplane CO₂ Emissions

The amendment concerns the improvement of definitions, descriptions, references and language (e.g. to avoid potential misinterpretation and introduces additional clarifications related to the reference geometric factor (RGF)).



Appendix 2 — Quality of the NPA

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this document with regard to the following aspects:

Please provide your feedback on the quality of this document as part of the other comments you have on this NPA. We invite you to also provide a brief justification, especially when you disagree or strongly disagree, so that we consider this for improvement. Your comments will be considered for internal quality assurance and management purposes only and will not be published (e.g. as part of the CRD).

1. The regulatory proposal is of technically good/high quality

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

2. The text is clear, readable and understandable

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

3. The regulatory proposal is well substantiated

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

4. The regulatory proposal is fit for purpose (achieving the objectives set)

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

5. The regulatory proposal is proportionate to the size of the issue

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

6. The regulatory proposal applies the ‘better regulation’ principles ^[1]

Please choose one of the options

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7. Any other comments on the quality of this document (please specify)

^[1] For information and guidance, see:

- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

