



European Union Aviation Safety Agency
Comment-Response Document 2020-06

RELATED NPA: 2020-06 — RMT.0514 — 8.10.2020

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1. Summary of the outcome of the consultation

The comments from state organisations (10) and from industry (14) on NPA 2020-06 were generally positive, with some suggestions for clarification and edits to the NPA text. 7 comments were directly related to the amendments proposed by ICAO.

Chapter 2 provides the individual responses to each comment.



2. Individual comments and responses

In responding to the comments, the following terminology has been applied to attest EASA's position:

- (a) **Accepted** — EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — EASA either partially agrees with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — EASA acknowledges the comment, but no change to the existing text is considered to be necessary.
- (d) **Not accepted** — The comment or proposed amendment is not agreed by EASA.

(General Comments)

comment	11	comment by: <i>FOCA Switzerland</i>
	The Federal Office of Civil Aviation (FOCA), Swiss CAA, supports the proposed amendments and has no remark.	

response	Noted
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comment	12	comment by: <i>LBA</i>
	The LBA has no comments.	

response	Noted
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3. Proposed amendments and rationale in detail — 3.1. Draft regulation (draft EASA opinion) — 3.1.1. Draft amendment to Regulation (EU) 2018/1139 (and 3.1.2. Rationale for amending Article 9 of Regulation (EU) 2018/1139)

p. 8

comment	18	comment by: <i>FNAM</i>
	FNAM (Fédération Nationale de l'Aviation Marchande):	

Draft regulation (draft EASA opinion):

"Terminological modifications and addition of documentary references following the ICAO CAEP / 11 meeting.

Position: Neutral impact. "

response	Noted
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3. Proposed amendments and rationale in detail — 3.1. Draft regulation (draft EASA opinion) — 3.1.3. Draft amendment to Commission Regulation (EU) No 748/2012 and to the related AMC and GM p. 9-23

comment 3

comment by: FAA

Page Number	Paragraph Number	Referenced Text	Comment/Rationale or Question	Proposed Resolution
9	21.A.21(a) 3. II	have been demonstrated to be in compliance with the aircraft type-certification basis established and the environmental protection requirements designated and notified by the Agency as necessary to ensure the safe and environmentally compatible flight of the aircraft.'	How would this be demonstrated? There is no requirement in Annex 16, Vol. I or SARP for engines or propellers by themselves to "demonstrate" being in compliance with noise requirements based on the aircraft certification basis. Propellers and engines have their own type certificates whose certification do not include noise.	Remove requirement to "demonstrate" for engines and propellers.
21	21.B.85 (a)	The Agency shall designate and notify to the applicant the applicable environmental protection requirements for a type-certificate or restricted type-certificate for an aircraft or an engine.	Is not consistent with ¶21.A.21 (a) 3. ii.	Make consistent with ¶ 21.A.21 3. ii.

response Not accepted

21.A.21(a)(3)(ii):
The provision in 21.A.21(a)(3)(ii) is about the case where an aircraft TC is sought for and the engine does not hold its own TC. Then the applicant for the aircraft restricted TC needs also to demonstrate compliance with the engine-related



specifications in the aircraft TC basis and with the environmental protection requirements (aircraft and engines).

The proposal in the NPA is to add 'environmental compatibility' in 21.A.21(a)(3)(ii), which is missing.

21.B.85(a):

21.B.85 is not inconsistent with 21.A.21(a)(3)(ii) since the basis for certifying the aircraft consists of the TC basis and the environmental protection requirements for the aircraft and engines. 21.B.85 provides the requirements for the aircraft and also for engines in case they are certified separately.

comment

13

comment by: DGAC France

GM 21.1.130(b)(4)(i) : the definition of the different applicability dates is not crystal clear and in particular the second "date of application for a type certificate". The difference between the first two definitions deserves to be better defined.

response

Accepted

GM 21.A.130(b)(4)(i) provides details on 'Date of manufacture for the individual engine' since 21.A.130(b)(4)(i) relates to the production requirements for engine exhaust emissions.

GM 21.A.130(b)(4)(i) lists the different applicability dates used within Annex 16 Volume II for which ICAO Doc 9501 'Environmental Technical Manual' Volume II provides guidance.

A reference to ICAO Doc 9501 'Environmental Technical Manual' Volume II will be added in GM 21.A.130(b)(4)(i) and GM 21.A.165(c)(3) for consistency and clarity.

comment

17

comment by: DGAC France

AMC 21.A.130(b)(4)(i)

1 General : The AMC states that *"In the case the competent authority has granted an exemption, the emissions requirements applicable are the regulatory levels from the previous corresponding standard."*

DGAC France supports this sentence albeit unspecified in ICAO Annex 16. Therefore we would be grateful if EASA can confirm that it is indeed how the Agency intends to implement the ICAO exemption provision.

response

Accepted

This sentence is extracted from ICAO Doc 9501 'Environmental Technical Manual' Volume II. Since the reference to this document is provided in this AMC 21.A.130(b)(4)(i), the Opinion will propose to simplify the text to avoid any ambiguity by just referring to this Doc 9501.

comment

19

comment by: FNAM



	<p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>For 21.A.21; 21.A.130; AMC No 2 to 21.A.130(b); AMC 21.A.130(b)(4)(i); GM 21.A.130(b)(4)(i); AMC 21.A.130(b)(4)(ii); 21.A.145; AMC-ELA No 1 to 21.A.145(b); GM 21.A.145(b)(2); 21.A.147; AMC No 2 to 21.A.163(c); AMC 21.A.165(c)(3); GM 21.A.165(c)(3); AMC 21.A.165(c)(4); 21.A.801; 21.B.45; 21.B.85:</p> <p>"Terminological modifications and addition of documentary references following the ICAO CAEP / 11 meeting.</p> <p>Position: Neutral impact. "</p>
response	Noted
comment	<p>20 comment by: <i>FNAM</i></p> <p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>GM 21.B.85(a)(5):</p> <p>"Addition of this GM in order to provide assistance to aircraft engine manufacturers on the CO2 emission criteria.</p> <p>Position: Positive Impact: This new point provides a documentary reference "</p>
response	<p>Noted</p> <p>GM 21.B.85(a)(5) is related to the calculation of nvPM mass and number system loss factors for nvPM mass and number inventory and modelling purposes.</p>

3. Proposed amendments and rationale in detail — 3.1. Draft regulation (draft EASA opinion) — 3.1.4. Rationale for amending Commission Regulation (EU) No 748/2012 and the related AMC and GM p. 23-24

comment	<p>6 comment by: <i>AIRBUS</i></p> <p>PAGE / PARAGRAPH / SECTION : Page 21 / §21.B.85 a)</p> <p>PROPOSED TEXT / COMMENT : It is suggested to remove the “a)” in 21.B.85 a) (without changing the text of the paragraph).</p> <p>RATIONALE / REASON : For consistency reason with other Part 21 sections, a “a)” section is followed by a “b)” one. There is no “b)” in 21.B.85.</p>
response	<p>Accepted</p> <p>21.B.85 b) will be added and marked as ‘reserved’ as a placeholder for future text developed in the context of the activities of another rulemaking task.</p>



comment	7	comment by: AIRBUS
	<p>PAGE / PARAGRAPH / SECTION : Page 23 / GM 21.B.85(a)(5)</p> <p>PROPOSED TEXT / COMMENT : Linked to previous comment, it is proposed to remove the “(a)” in GM 21.B.85(a)(5) without changing the text itself.</p> <p>RATIONALE / REASON : Same rationale as in previous comment.</p>	
response	<p>Accepted</p> <p>21.B.85 b) will be added and marked as ‘reserved’ as a placeholder for future text developed in the context of the activities of another rulemaking task.</p>	

<p>3. Proposed amendments and rationale in detail — 3.2. Draft Certification Specifications, Acceptable Means of Compliance and Guidance Material for Aircraft Engine Emissions and Fuel Venting — CS-34 3.2.1. Draft amendment to CS-34</p>	<p>p. 25-26</p>
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comment	21	comment by: FNAM
	<p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>For CS 34.1, 34.2:</p> <p>"Terminological modifications and addition of documentary references following the ICAO CAEP / 11 meeting.</p> <p>Position: Neutral impact. "</p>	
response	Noted	
comment	22	comment by: FNAM
	<p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>For GM 34.1, GM 34.2:</p> <p>"Amendment of these GM in order to provide the documentary reference in order to comply with point 21.A.21.</p> <p>Position: Positive Impact: This new point provides a documentary reference. "</p>	
response	Noted	



3. Proposed amendments and rationale in detail — 3.3. Draft Certification Specifications, Acceptable Means of Compliance and Guidance Material for Aircraft Noise — CS-36 3.3.1. Draft amendments to CS-36	p. 27-28
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comment	<p>23</p> <p style="text-align: right;">comment by: <i>FNAM</i></p> <p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>For CS 36.1:</p> <p>"Terminological modifications and addition of documentary references following the ICAO CAEP / 11 meeting.</p> <p>Position: Neutral impact. "</p>
response	Noted

comment	<p>24</p> <p style="text-align: right;">comment by: <i>FNAM</i></p> <p>FNAM (Fédération Nationale de l'Aviation Marchande):</p> <p>For GM 36.1:</p> <p>"Amendment of these GM in order to provide the documentary reference in order to comply with point 21.A.21.</p> <p>Position: Positive Impact: This new point provides a documentary reference. "</p>
response	Noted

3. Proposed amendments and rationale in detail — 3.4. Draft Certification Specifications, Acceptable Means of Compliance and Guidance Material for Aeroplane CO2 Emissions — CS-CO2 3.4.1. Draft amendments to CS-CO2	p. 29
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comment	<p>8</p> <p style="text-align: right;">comment by: <i>AIRBUS</i></p> <p>PAGE / PARAGRAPH / SECTION : Page 29 / GM CO2.1 Aeroplane CO2 emissions</p> <p>PROPOSED TEXT / COMMENT :</p> <p>It is suggested to modify the text of the first paragraph as follows: "Point 21.A.21 does not list the applicable requirements, but refers to point 21.A.20 that requests the applicant to demonstrate compliance with the environmental protection requirements designated by the Agency in accordance with point 21.B.85. Therefore, the environmental protection requirements which need to be complied with for CO₂ emissions are listed in point 21.B.85 of Annex 1 (Part 21) to commission Regulation (EU) No 748/2012."</p>
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	RATIONALE / REASON :
	Point 21.A.21 does not directly refer to environmental protection requirements of point 21.B.85, but refers to them through point 21.A.20.
response	Accepted
	GM CO2.1, as well as GM 34.1, GM 34.2 and GM 36.1, will be amended to take this comment into account.

comment	25	comment by: <i>FNAM</i>
	FNAM (Fédération Nationale de l'Aviation Marchande):	
	For CS CO2.1:	
	"Terminological modifications and addition of documentary references following the ICAO CAEP / 11 meeting.	
	Position: Neutral impact. "	
response	Noted	

comment	26	comment by: <i>FNAM</i>
	FNAM (Fédération Nationale de l'Aviation Marchande):	
	GM CS CO2.1:	
	"Amendment of these GM in order to provide the documentary reference in order to comply with point 21.A.21.	
	Position: Positive Impact: This new point provides a documentary reference. "	
response	Noted	

7. Appendices | 7.1. Appendix 1 — ICAO Annex 16 Volume I amendments p. 37-62

comment	4	comment by: <i>FAA</i>										
	<table border="1"> <thead> <tr> <th>Page Number</th> <th>Paragraph Number</th> <th>Referenced Text</th> <th>Comment/Rationale or Question</th> <th>Proposed Resolution</th> </tr> </thead> <tbody> <tr> <td>55</td> <td>Annex 16, Volume I, Appendix 2, ¶3.7.4</td> <td>The sum of the rising and corresponding falling response shall be -6.5 ± 1 dB, at both 0.5 and 1 seconds. At subsequent times</td> <td>The SLOW response exponential averaging process has historically required four half second measurements (2 seconds). What is the purpose for this change and has it been</td> <td>Clarification of the intent and whether this is may result in an EASA difference to</td> </tr> </tbody> </table>	Page Number	Paragraph Number	Referenced Text	Comment/Rationale or Question	Proposed Resolution	55	Annex 16, Volume I, Appendix 2, ¶3.7.4	The sum of the rising and corresponding falling response shall be -6.5 ± 1 dB, at both 0.5 and 1 seconds. At subsequent times	The SLOW response exponential averaging process has historically required four half second measurements (2 seconds). What is the purpose for this change and has it been	Clarification of the intent and whether this is may result in an EASA difference to	
Page Number	Paragraph Number	Referenced Text	Comment/Rationale or Question	Proposed Resolution								
55	Annex 16, Volume I, Appendix 2, ¶3.7.4	The sum of the rising and corresponding falling response shall be -6.5 ± 1 dB, at both 0.5 and 1 seconds. At subsequent times	The SLOW response exponential averaging process has historically required four half second measurements (2 seconds). What is the purpose for this change and has it been	Clarification of the intent and whether this is may result in an EASA difference to								

	<p>the The sum of the rising and falling responses shall be – 7.5–6.5 dB or less at 1.5 seconds and – 7.5 dB or less at 2 seconds and subsequent times relative to the steady-state levels. This equates to an exponential averaging process (SLOW weighting) with a nominal 1-second time constant (i.e. 2 seconds averaging time).</p>	<p>approved by ICAO CAEP as a change to Annex 16, Volume I, Appendix 2?</p>	<p>Annex 16, Volume I.</p>
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response

Not accepted

This proposed amendment was agreed at CAEP/11 meeting. The NPA provides an extract from CAEP/11 Report (ICAO Doc 10126), Appendix A to the Report on Agenda Item 4, in its Appendix 7 for reference.

Your proposal was adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 (ICAO State Letter AN 1/17.14 – 20/28 was published on 9 April 2020).

The NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 13 to Annex 16 Volume I and (EU) 748/2012 with direct references to sections of Annex 16 Volume I. Therefore, the final amendments as adopted by the ICAO Council will be automatically implemented in Regulation (EU) 2018/1139 and Commission Regulation (EU) No 748/2012. There is no need for EASA to file any difference.

comment

9

comment by: AIRBUS

PAGE / PARAGRAPH / SECTION :

§ 3.7.4 page 55 footer note

PROPOSED TEXT / COMMENT :

- 10. IEC 61260-1:2014... shall be replaced by **2.IEC 61260-1:2014**
- x2. IEC 61260-3:2016... shall be replaced by **10. IEC 61260-3:2016**

RATIONALE / REASON :

Consistency with superscript referred to in the main text of §3.7.4



response	<p>Not accepted</p> <p>The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix A to the Report on Agenda Item 4, and is provided as an appendix to the NPA for reference.</p> <p>Consistent subscripts were adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 (ICAO State Letter AN 1/17.14 – 20/28 was published on 9 April 2020).</p> <p>The NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 13 to Annex 16 Volume I and Regulation No (EU) 748/2012 with direct references to sections of Annex 16 Volume I. Therefore, the final amendments as adopted by the ICAO Council will be automatically implemented in Regulation (EU) 2018/1139 and Commission Regulation (EU) No 748/2012.</p>
comment	<p style="text-align: right;">comment by: AIRBUS</p> <p>10</p> <p>PAGE / PARAGRAPH / SECTION : § 3.7.4 page 55</p> <p>PROPOSED TEXT / COMMENT: "The sum of the rising and corresponding falling response shall be..." to be changed to: "The sum of the rising and corresponding falling responses shall be..."</p> <p>RATIONALE / REASON : For consistency / typo</p>
response	<p>Not accepted</p> <p>The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix A to the Report on Agenda Item 4, and is provided as an appendix to the NPA for reference.</p> <p>The NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 13 to Annex 16 Volume I and Regulation (EU) No 748/2012 with direct references to sections of Annex 16 Volume I.</p> <p>Your proposed typo correction was not adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 (ICAO State Letter AN 1/17.14 – 20/28 was published on 9 April 2020).</p>
comment	<p style="text-align: right;">comment by: DGAC France</p> <p>16</p> <p>ICAO Annex 16 Volume I :</p> <p>Several differences can be found between the amendments presented in the State Letter AN 1/17.14 - 20/28 dated April 9th 2020 (on A16V1) and this NPA. Among others :</p> <ul style="list-style-type: none"> - On page 48 : Definition of <i>Reference speed of sound</i> is not consistent with ICAO "<i>Speed of sound at a reference temperature conditions (25°C).</i>" - On page 52, the Note 2 of paragraph 3.7 Analysis systems is not consistent with the ICAO recommendation

- On page 59, The formula is not consistent with ICAO doc : $\Delta 1 = 12.5 \log (H/150 \text{ m})$ versus $\Delta 1 = 12.5 \log (H/150)$

- On page 59, paragraph 5.2.3 : *where $\Delta 2$ is the quantity in decibels that must be algebraically added* versus ICAO where $\Delta 2$ is the quantity in decibels that shall be algebraically added

- On page 61, Appendix 6 : 2. Noise certification test and measurement conditions, and 5. Adjustments to test results : several differences with ICAO SL 20/28 pages 30-31.

- NPA paragraph 7.1 is not consistent with ICAO SL 20/28 Appendix 2 changes on Chapter 3. Measurement of Aircraft Noise received on the ground : 3.6 Recording and reproducing systems : Note 1. Recommendation.— Level linearity of measurement system components should be tested according to the methods described in IEC 612651 as amended.

- NPA paragraph 7.1 is not consistent with ICAO SL 20/28 Appendix 2 changes on Chapter 3 (para 3.7.7), Chapter 4 (para 4.4.3, 4.5.3, 4.6.3), Chapter 8 (para 8.7.11) and Chapter 13 (para 13.7) : must versus shall

We shouldn't find these differences in the NPA text.

response

Not accepted

The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix A to the Report on Agenda Item 3, and is provided as an appendix to the NPA for reference. These are not the final amendments as adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 since the State letters were not available before the publication NPA on 16 March 2020 (ICAO State Letter AN 1/17.14 – 20/28 was published on 9 April 2020).

However, the NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 13 to Annex 16 Volume I, and Regulation (EU) No 748/2012 with direct references to sections of Annex 16 Volume I. Therefore the final amendments as adopted by the ICAO Council will be automatically implemented in Regulation (EU) 2018/1139 and Commission Regulation (EU) No 748/2012.

7. Appendices | 7.2. Appendix 2 — ICAO Annex 16 Volume II amendments

p. 63-166

comment

14

comment by: DGAC France

ICAO Annex 16 Volume II :

A recurring difference can be found between the amendments presented in the State Letters AN 1/17.14 - 20/29 dated April 15th 2020 (on A16V2) and this NPA (Refer to DGAC France comments on 7.1. Appendix 1 — ICAO Annex 16 Volume I amendments). This difference is on §1.5 : "*which is responsible for the production organisation of the engine*" in EASA NPA, versus "*having jurisdiction over the organization responsible for production of the engine,*" in State Letter.

We shouldn't find these differences in the NPA text.

response

Not accepted



The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix A to the Report on Agenda Item 3, and is provided as an appendix to the NPA for reference. These are not the final amendments as adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 since the State letters were not available before the publication NPA on 16 March 2020 (ICAO State Letter AN 1/17.14 – 20/29 was published on 15 April 2020).

However, the NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 10 to Annex 16 Volume II, and Regulation (EU) No 748/2012 with direct references to sections of Annex 16 Volume II. Therefore the final amendments as adopted by the ICAO Council will be automatically implemented in Regulation (EU) 2018/1139 and Commission Regulation (EU) No 748/2012.

7. Appendices | 7.3. Appendix 3 — ICAO Annex 16 Volume III amendments

p. 167-174

comment

5

comment by: FAA

Page Number	Paragraph Number	Referenced Text	Comment/Rationale or Question	Proposed Resolution
170	Note	Note.— In some States, where the certificating authority finds that the proposed change in design, configuration, power or mass is so extensive that a substantially complete investigation of compliance with the applicable airworthiness regulations is required, the aeroplane requires a new Type Certificate.	This note on a substantial design change is different than what is found in 14 CFR 21.19 which says "Each person who proposes to change a product must apply for a new type certificate if the FAA finds that the proposed change in design,	Consider using the following change to more closely match that found in 14 CFR 21.19: "Note.— In some States, where the certificating authority finds that the proposed change in design, power, thrust or weight is so extensive that a substantially complete investigation of compliance with the applicable airworthiness regulations is required, the aeroplane requires a new Type Certificate."



			power, thrust, or weight is so extensive that a substantially complete investigation of compliance with the applicable regulations is required."	
171		Type design. The set of data and information necessary to define an aircraft, engine or propeller type for airworthiness determination.	This definition of type design is different than that found in FAA Order 8110.4C on page 57 which says "The type design consists of the drawings, specifications, and information on the dimensions, materials, and processes necessary to define the product."	Consider using the definition found in FAA Order 8110.4C.
response	Not accepted			



The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix B to the Report on Agenda Item 3, and is provided as an appendix to the NPA for reference. The NPA proposes to amend the Regulation (EU) 2018/1139 with the direct reference to Amendment 1 to Annex 16 Volume III, and Regulation (EU) No 748/2012 with direct references to sections of Annex 16 Volume III.

comment 15

comment by: DGAC France

ICAO Annex 16 Volume III :

A recurring difference can be found between the amendments presented in the State Letter AN 1/17.14 - 20/28 dated April 9th 2020 (on A16V3) and this NPA (Refer to DGAC France comments on 7.1. Appendix 1 — ICAO Annex 16 Volume I amendments) : "*which is responsible for the production organisation of the engine*" in EASA NPA, versus "*having jurisdiction over the organization responsible for production of the engine,*" in State Letter.

In addition, a difference is on Note in Part II, chap 2, after 2.1.3 (page 173) which is missing (in the State Letter, the note reads : *Note.— Further guidance on issuing exemption, including guidance on the certifying authority or the competent authority having jurisdiction over the organization responsible for production of the aeroplane for granting exemptions, is provided in the Environmental Technical Manual (Doc 9501), Volume III — Procedures for the CO2 Emissions Certification of Aeroplanes.)*

We shouldn't find these differences in the NPA text.

response

Not accepted

The text in the NPA is an extract from CAEP/11 Report (ICAO Doc 10126), Appendix B to the Report on Agenda Item 3, and is provided as an appendix to the NPA for reference. These are not the final amendments as adopted by the ICAO Council at the fifth meeting of its 219th Session on 11 March 2020 since the State letters were not available before the publication NPA on 16 March 2020 (ICAO State Letter AN 1/17.14 – 20/30 was published on 9 April 2020).

However, the NPA proposes to amend Regulation (EU) 2018/1139 with the direct reference to Amendment 1 to Annex 16 Volume III, and Regulation (EU) No 748/2012 with direct references to sections of Annex 16 Volume III. Therefore the final amendments as adopted by the ICAO Council will be automatically implemented in Regulation (EU) 2018/1139 and Commission Regulation (EU) No 748/2012.

