



International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

Organización
de Aviación Civil
Internacional

Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

Tel.: +1 514-315-1987

Ref.: AN 13/13.1-25/26

17 April 2025

Subject: Adoption of Amendment 54 to Annex 11

Action required: a) Notify any disapproval before 4 August 2025; b) Notify any differences and compliance before 27 October 2025; c) Consider the use of the Electronic Filing of Differences (EFOD) System for notification of differences and compliance

Sir/Madam,

1. I have the honour to inform you that Amendment 54 to the *International Standards and Recommended Practices, Air Traffic Services* (Annex 11 to the Convention on International Civil Aviation) was adopted by the Council at the fourteenth meeting of its 234th Session on 2 April 2025. Copies of the Amendment and the Resolution of Adoption are available as attachments to the electronic version of this State letter on the ICAO-NET (<http://portal.icao.int>) where you can access all other relevant documentation.

2. When adopting the amendment, the Council prescribed 4 August 2025 as the date on which it will become effective, except for any part concerning which a majority of Contracting States have registered their disapproval before that date. In addition, the Council resolved that Amendment 54 to the extent it becomes effective, will become applicable on 27 November 2025.

3. Amendment 54 is a consequential amendment arising from fifth meeting of the Meteorology Panel (METP/5) concerning the improved definition of meteorological authority, the introduction of a new definition for meteorological service provider and the alignment of references with the new *Procedures for Air Navigation Services — Meteorology* (PANS-MET, Doc 10157).

4. The improved definition of meteorological authority and, consequently, a new definition for meteorological service provider, better distinguish the roles and responsibilities of the meteorological authority and the meteorological service provider. This reflects the arrangements currently being implemented by an increasing number of States. Current references to Annex 3 requirements required amendment to refer to the new PANS-MET provisions.

5. The subjects are given in the amendment to the Foreword of Annex 11 a copy of which is in Attachment A.

6. In conformity with the Resolution of Adoption, may I request:

- a) that before 4 August 2025 you inform me if there is any part of the adopted Standards and Recommended Practices (SARPs) amendments in Amendment 54 concerning which your Government wishes to register disapproval, using the form in Attachment B for this purpose. Please note that only statements of disapproval need be registered and if you do not reply it will be assumed that you do not disapprove of the amendment;
- b) that before 27 October 2025 you inform me of the following, using the Electronic Filing of Differences (EFOD) System or the form in Attachment C for this purpose:
 - 1) any differences that will exist on 27 November 2025 between the national regulations or practices of your Government and the provisions of the whole of Annex 11, as amended by all amendments up to and including Amendment 54, and thereafter of any further differences that may arise; and
 - 2) the date or dates by which your Government will have complied with the provisions of the whole of Annex 11 as amended by all amendments up to and including Amendment 54.

7. With reference to the request in paragraph 6 a) above, it should be noted that a registration of disapproval of Amendment 54 or any part of it in accordance with Article 90 of the Convention does not constitute a notification of differences under Article 38 of the Convention. To comply with the latter provision, a separate statement is necessary if any differences do exist, as requested in paragraph 6 b) 1). It is recalled in this respect that international Standards in Annexes have a conditional binding force, to the extent that the State or States concerned have not notified any difference thereto under Article 38 of the Convention.

8. With reference to the request in paragraph 6 b) above, it should be also noted that the ICAO Assembly, at its 39th Session (27 September to 6 October 2016), resolved that Member States should be encouraged to use the EFOD System when notifying differences (Resolution A39-22 refers). The EFOD System is currently available on the Universal Safety Oversight Audit Programme (USOAP) restricted website (<http://www.icao.int/usoap>) which is accessible by all Member States. You are invited to consider using this for notification of compliance and differences.

9. Guidance on the determination and reporting of differences is given in the Note on the Notification of Differences in Attachment D. Please note that a detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

10. I would appreciate it if you would also send a copy of your notifications, referred to in paragraph 6 b) above, to the ICAO Regional Office accredited to your Government.

11. At the fifth meeting of its 204th Session, the Council requested that States, when being advised of the adoption of an Annex amendment, be provided with information on implementation and available guidance material, as well as an impact assessment. This is presented for your information in Attachments E and F, respectively. An overview of the approval process for Amendment 54 to Annex 11 is also included for your information in Attachment G.

12. As soon as practicable after the amendment becomes effective, on 4 August 2025, replacement pages incorporating Amendment 54 will be forwarded to you.

Accept, Sir/Madam, the assurances of my highest consideration.

for Juan Carlos Salazar
Secretary General

Enclosures:

- A — Amendment to the Foreword of Annex 11
- B — Form on notification of disapproval of all or part of Amendment 54 to Annex 11
- C — Form on notification of compliance with or differences from Annex 11
- D — Note on the Notification of Differences
- E — Implementation task list and outline of guidance material in relation to Amendment 54 to Annex 11
- F — Impact assessment in relation to Amendment 54 to Annex 11
- G — Overview of approval process for Amendment 54 to Annex 11

ATTACHMENT A to State letter AN 13/13.1-25/26

AMENDMENT TO THE FOREWORD OF ANNEX 11

Add the following element at the end of Table A:

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/Approved Effective Applicable</i>
54	Fifth meeting of the Meteorology Panel (METP/5)	Inclusion of definition of meteorological service provider and alignment of notes with new PANS-MET.	2 April 2025 4 August 2025 27 November 2025

ATTACHMENT B to State letter AN 13/13.1-25/26

NOTIFICATION OF DISAPPROVAL OF ALL OR PART OF
AMENDMENT 54 TO ANNEX 11

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Quebec
Canada H3C 5H7

(State) _____ hereby wishes to disapprove the following parts of
Amendment 54 to Annex 11:

Signature _____

Date _____

NOTES

- 1) If you wish to disapprove all or part of Amendment 54 to Annex 11, please dispatch this notification of disapproval to reach ICAO Headquarters by 4 August 2025. If it has not been received by that date it will be assumed that you do not disapprove of the amendment. **If you approve of all parts of Amendment 54, it is not necessary to return this notification of disapproval.**
- 2) This notification should not be considered a notification of compliance with or differences from Annex 11. Separate notifications on this are necessary. (See Attachment C.)
- 3) Please use extra sheets as required.

ATTACHMENT C to State letter AN 13/13.1-25/26

**NOTIFICATION OF COMPLIANCE WITH OR DIFFERENCES
FROM ANNEX 11
(Including all amendments up to and including Amendment 54)**

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Quebec
Canada H3C 5H7

1. No differences will exist on _____ between the national regulations and/or practices of **(State)** _____ and the provisions of Annex 11, including all amendments up to and including Amendment 54.

2. The following differences will exist on _____ between the regulations and/or practices of **(State)** _____ and the provisions of Annex 11, including Amendment 54 (Please see Note 2) below.)

a) Annex Provision (Please give exact paragraph reference)	b) Details of Difference (Please describe the difference clearly and concisely)	c) Remarks (Please indicate reasons for the difference)
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(Please use extra sheets as required.)

3. By the dates indicated below, **(State)** _____ will have complied with the provisions of Annex 11, including all amendments up to and including Amendment 54 for which differences have been notified in 2 above.

a) Annex Provision (Please give exact paragraph reference)	b) Date	c) Comments
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(Please use extra sheets as required.)

Signature _____

Date _____

NOTES

- 1) If paragraph 1 above is applicable to your State, please complete paragraph 1 and return this form to ICAO Headquarters. If paragraph 2 is applicable to you, please complete paragraphs 2 and 3 and return the form to ICAO Headquarters.
- 2) A detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.
- 3) Guidance on the notification of differences is provided in the Note on the Notification of Differences and in the *Manual on Notification and Publication of Differences* (Doc 10055).
- 4) Please send a copy of this notification to the ICAO Regional Office accredited to your Government.

NOTE ON THE NOTIFICATION OF DIFFERENCES
(Prepared and issued in accordance with instructions of the Council)

1. *Introduction*

1.1 Article 38 of the Convention on International Civil Aviation (“Convention”) requires that a Contracting State notify ICAO any time it does not comply with a Standard in all respects, it does not bring its regulations or practices into full accord with any Standard, or it adopts regulations or practices differing in any particular respect from the Standard.

1.2 The Assembly and the Council, when reviewing the notification of differences by Contracting States in compliance with Article 38 of the Convention, have repeatedly noted that the timeliness and currency of such notifications is not entirely satisfactory. Therefore, this note is issued to reiterate the primary purpose of Article 38 of the Convention and to facilitate the determination and notification of differences.

1.3 The primary purpose of the notification of differences is to promote safety, regularity and efficiency in air navigation by ensuring that governmental and other agencies, including operators and service providers, concerned with international civil aviation are made aware of all national regulations and practices in so far as they differ from those prescribed in the Standards contained in Annexes to the Convention.

1.4 Contracting States are, therefore, requested to give particular attention to the notification of differences with respect to Standards in all Annexes, as described in paragraph 4 b) 1) of the Resolution of Adoption.

1.5 Although differences from Recommended Practices are not notifiable under Article 38 of the Convention, the Assembly has urged Contracting States to extend the above considerations to Recommended Practices contained in Annexes to the Convention, as well.

2. *Notification of differences from Standards and Recommended Practices (SARPs)*

2.1 Guidance to Contracting States in the notification of differences to Standards and Recommended Practices (SARPs) can only be given in very general terms. Contracting States are further reminded that compliance with SARPs generally extends beyond the issuance of national regulations and requires establishment of practical arrangements for implementation, such as the provision of facilities, personnel and equipment and effective enforcement mechanisms. Contracting States should take those elements into account when determining their compliance and differences. The following categories of differences are provided as a guide in determining whether a notifiable difference exists:

- a) *A Contracting State’s requirement is more exacting or exceeds a SARP (Category A).* This category applies when the national regulation and practices are more demanding than the corresponding SARP, or impose an obligation within the scope of the Annex which is not covered by the SARP. This is of particular importance where a Contracting State requires a higher standard which affects the operation of aircraft of other Contracting States in and above its territory;

- b) *A Contracting State's requirement is different in character or the Contracting State has established other means of compliance (Category B)**. This category applies, in particular, when the national regulation and practices are different in character from the corresponding SARP, or when the national regulation and practices differ in principle, type or system from the corresponding SARP, without necessarily imposing an additional obligation; and
- c) *A Contracting State's requirement is less protective, partially implemented or not implemented (Category C)*. This category applies when the national regulation and practices are less protective than the corresponding SARP; when no national regulation has been promulgated to address the corresponding SARP, in whole or in part; or when the Contracting State has not brought its practices into full accord with the corresponding SARP.

These categories do not apply to Not Applicable SARP. Please see the paragraph below.

2.2 **Not Applicable SARP.** When a Contracting State deems a SARP concerning aircraft, operations, equipment, personnel, or air navigation facilities or services to be not applicable to the existing aviation activities of the State, notification of a difference is not required. For example, a Contracting State that is not a State of Design or Manufacture and that does not have any national regulations on the subject, would not be required to notify differences from Annex 8 provisions related to the design and construction of an aircraft.

2.3 **Differences from appendices, tables and figures.** The material comprising a SARP includes not only the SARP itself, but also the appendices, tables and figures associated with the SARP. Therefore, differences from appendices, tables and figures are notifiable under Article 38. In order to file a difference against an appendix, table or figure, States should file a difference against the SARP that makes reference to the appendix, table or figure.

2.4 **Differences from definitions.** Contracting States should notify differences from definitions. The definition of a term used in a SARP does not have independent status but is an essential part of each SARP in which the term is used. Therefore, a difference from the definition of the term may result in there being a difference from any SARP in which the term is used. To this end, Contracting States should take into consideration differences from definitions when determining compliance or differences to SARPs in which the terms are used.

2.5 The notification of differences should be not only to the latest amendment but to the whole Annex, including the amendment. In other words, Contracting States that have already notified differences are requested to provide regular updates of the differences previously notified until the difference no longer exists.

2.6 Further guidance on the identification and notification of differences, examples of well-defined differences and examples of model processes and procedures for management of the notification of differences can be found in the *Manual on Notification and Publication of Differences* (Doc 10055).

* The expression "different in character or other means of compliance" in b) would be applied to a national regulation and practice which achieve, by other means, the same objective as that of the corresponding SARPs or for other substantive reasons so cannot be classified under a) or c).

3. *Form of notification of differences*

3.1 Differences can be notified:

- a) by sending to ICAO Headquarters a form on notification of compliance or differences;
or
- b) through the Electronic Filing of Differences (EFOD) System at www.icao.int/usoap.

3.2 When notifying differences, the following information should be provided:

- a) the number of the paragraph or subparagraph which contains the SARP to which the difference relates*;
- b) the reasons why the State does not comply with the SARP, or considers it necessary to adopt different regulations or practices;
- c) a clear and concise description of the difference; and
- d) intentions for future compliance and any date by which your Government plans to confirm compliance with and remove its difference from the SARP for which the difference has been notified.

3.3 The differences notified will be made available to other Contracting States, normally in the terms used by the Contracting State when making the notification. In the interest of making the information as useful as possible, Contracting States are requested to ensure that:

- a) statements be as clear and concise as possible and be confined to essential points;
- b) the provision of extracts from national regulations not be considered as sufficient to satisfy the obligation to notify differences; and
- c) general comments, unclear acronyms and references be avoided.

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* This applies only when the notification is made under 3.1 a).

ATTACHMENT E to State letter AN 13/13.1-25/26

**IMPLEMENTATION TASK LIST AND OUTLINE OF GUIDANCE MATERIAL
IN RELATION TO AMENDMENT 54 TO ANNEX 11**

1. IMPLEMENTATION TASK LIST

- 1.1 Essential steps to be followed by a State to implement the amendment to Annex 11:
- a) identification of the rule-making process necessary to transpose the modified ICAO provisions into the national regulations;
 - b) establishment of a national implementation plan that takes into account the modified ICAO provisions;
 - c) drafting of the modification(s) to the national regulations and means of compliance;
 - d) official adoption of the national regulations and means of compliance;
 - e) filing of State differences with ICAO, if necessary;
 - f) publication of significant differences in the Aeronautical Information Publication (AIP), if necessary.
 - g) training of State and operational personnel in the use of new provisions.

2. STANDARDIZATION PROCESS

- 2.1 Effective date: 4 August 2025
- 2.2 Applicability date: 27 November 2025
- 2.3 Embedded date (s): N/A

3. SUPPORTING DOCUMENTATION

3.1 ICAO documentation

Title, Doc no.	Type (PANS/TI/Manual/Circ.)	Planned publication date
<i>Procedures for Air Navigation Services — Meteorology</i> (PANS-MET, Doc 10157)	PANS	Q4 2025
<i>Manual on Aeronautical Meteorological Practices</i> (Doc 8896)	Manual	Q4 2025

Title, Doc no.	Type (PANS/TI/Manual/Circ.)	Planned publication date
<i>Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377)</i>	Manual	Q4 2025

3.2 External documentation

Title	External Organization	Publication date
None		

4. IMPLEMENTATION ASSISTANCE TASKS

Type	Global	Regional
None		

5. UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP)

5.1 No amendment of the USOAP CMA protocol questions is required. This will be assessed during the next amendment cycle of the protocol questions.

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**IMPACT ASSESSMENT IN RELATION TO
AMENDMENT 54 TO ANNEX 11**

1. INTRODUCTION

1.1 Amendment 54 to Annex 11 — *Air Traffic Services* is a consequential amendment concerning the improved definition of meteorological authority, the introduction of a new definition for meteorological service provider and the alignment of references with the new *Procedures for Air Navigation Services — Meteorology* (PANS-MET, Doc 10157).

2. IMPACT ASSESSMENT

2.1 Consequential amendment concerning the improved definition of meteorological authority, the introduction of a new definition for meteorological service provider and the alignment of references with the new PANS-MET

2.1.1 *Safety impact:* Positive. Improved definitions of the roles and responsibilities of the meteorological authority and the meteorological service provider will help States ensure the supply of meteorological information through the appropriate arrangements.

2.1.2 *Financial impact:* There is no financial impact for industry and minimal financial impact for States with the implementation of this amendment.

2.1.3 *Security impact:* No security impact is envisaged with the implementation of this amendment.

2.1.4 *Environmental impact:* There is no environmental impact with the implementation of this amendment.

2.1.5 *Efficiency impact:* Positive. Improved definitions of the roles and responsibilities of the meteorological authority and the meteorological service provider will help States ensure the supply of meteorological information through the appropriate arrangements.

2.1.6 *Expected implementation time:* Less than a year for States and industry. There is no significant change to State regulations foreseen with the implementation of this amendment.

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ATTACHMENT G to State letter AN 13/13.1-25/26

**OVERVIEW OF APPROVAL PROCESS FOR
AMENDMENT 54 TO ANNEX 11**

Amendment concerning	Source(s)	Preliminary review by the ANC	State letter and date	Final review by the ANC	No. of replies at final review	Adopted Effective Applicable
Consequential changes for the improved definition of meteorological authority, new definition for meteorological service provider and alignment of references with the new PANS-MET (METP/5)	Fifth meeting of the Meteorology Panel (METP/5)	24 November 2022 (ANC 221-5)	AN 10/1-23/1 26 January 2023	13 June 2024 (ANC 226-7 and ANC 226-8)	74 Contracting States 5 international organizations Total: 79 replies	2 April 2025 4 August 2025 27 November 2025

— END —

AMENDMENT 54

TO THE

**INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

AIR TRAFFIC SERVICES

ANNEX 11

TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

The amendment to Annex 11 contained in this document was adopted by the Council of ICAO on **2 April 2025**. Such parts of this amendment as have not been disapproved by more than half of the total number of Contracting States on or before **4 August 2025** will become effective on that date and will become applicable on **27 November 2025** as specified in the Resolution of Adoption. (State letter AN 13/13.1-25/26 refers.)

APRIL 2025

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**AMENDMENT 54 TO THE INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

ANNEX 11 — AIR TRAFFIC SERVICES

RESOLUTION OF ADOPTION

The Council

Acting in accordance with the Convention on International Civil Aviation, and particularly with the provisions of Articles 37, 54 and 90 thereof,

1. *Hereby adopts* on 2 April 2025 Amendment 54 to the International Standards and Recommended Practices contained in the document entitled *International Standards and Recommended Practices, Air Traffic Services* which for convenience is designated Annex 11 to the Convention;
2. *Prescribes* 4 August 2025 as the date upon which the said amendment shall become effective, except for any part thereof in respect of which a majority of the Contracting States have registered their disapproval with the Council before that date;
3. *Resolves* that the said amendment or such parts thereof as have become effective shall become applicable on 27 November 2025;
4. *Requests the Secretary General:*
 - a) to notify each Contracting State immediately of the above action and immediately after 4 August 2025 of those parts of the amendment which have become effective;
 - b) to request each Contracting State:
 - 1) to notify the Organization (in accordance with the obligation imposed by Article 38 of the Convention) of the differences that will exist on 27 November 2025 between its national regulations or practices and the provisions of the Standards in the Annex as hereby amended, such notification to be made before 27 October 2025, and thereafter to notify the Organization of any further differences that arise; and
 - 2) to notify the Organization before 27 October 2025 of the date or dates by which it will have complied with the provisions of the Standards in the Annex as hereby amended.
 - c) to invite each Contracting State to notify additionally any differences between its own practices and those established by the Recommended Practices, following the procedure specified in subparagraph b) above with respect to differences from Standards.

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NOTES ON THE PRESENTATION OF THE AMENDMENT TO ANNEX 11

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

~~Text to be deleted is shown with a line through it.~~

text to be deleted

New text to be inserted is highlighted with grey shading.

new text to be inserted

~~Text to be deleted is shown with a line through it followed by~~
the replacement text which is highlighted with grey shading.

new text to replace existing text

TEXT OF AMENDMENT 54

TO THE

**INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES**

AIR TRAFFIC SERVICES

ANNEX 11

TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

TABLE OF CONTENTS

...

CHAPTER 2. General	<i>Page</i> 2-1
---------------------------------	---------------------------

...

2.20 Aeronautical data.....	2-11
2.21 Coordination between meteorological service provider and appropriate air traffic services authorities authority	2-12

...

Meteorological service provider. The relevant entity designated to provide meteorological service for international air navigation on behalf of a Contracting State.

...

CHAPTER 2. GENERAL

...

**2.21 Coordination between meteorological service provider and appropriate air traffic services
authorities-authority**

2.21.1 To ensure that aircraft receive the most up-to-date meteorological information for aircraft operations, arrangements shall be made, where necessary, between the meteorological service provider and air traffic service authorities the appropriate ATS authority for air traffic services personnel:

- a) in addition to using indicating instruments, to report, if observed by air traffic services personnel or communicated by aircraft, such other meteorological elements as may be agreed upon;
- b) to report as soon as possible to the associated meteorological office meteorological phenomena of operational significance, if observed by air traffic services personnel or communicated by aircraft, which have not been included in the aerodrome meteorological report;
- c) to report as soon as possible to the associated meteorological office pertinent information concerning pre-eruption volcanic activity, volcanic eruptions and information concerning volcanic ash cloud. In addition, area control centres and flight information centres shall report the

information to the associated meteorological watch office and volcanic ash advisory centres (VAACs).

...

2.21.2 Close coordination shall be maintained between area control centres, flight information centres and associated meteorological watch offices to ensure that information on volcanic ash included in NOTAM and SIGMET messages information is consistent.

2.22 Coordination between aeronautical information services and appropriate air traffic services authorities

...

2.22.4 The air traffic services responsible for the provision of raw aeronautical information/data to the aeronautical information services shall do so while taking into account accuracy and integrity requirements necessary to meet the needs of the end-user of aeronautical data.

...

Note 3.— Reports of volcanic activity comprise the information detailed in Annex 3, Chapter Section 4.8.

...

CHAPTER 4. FLIGHT INFORMATION SERVICE

...

4.2 Scope of flight information service

...

4.2.3 **Recommendation.**— *ATS units should transmit, as soon as practicable, special air-reports to other aircraft concerned, to the associated meteorological office, and to other ATS units concerned. Transmissions to aircraft should be continued for a period to be determined by agreement between the meteorological service provider and air traffic services authorities concerned appropriate ATS authorities.*

...

4.3 Operational flight information service broadcasts

...

4.3.2 HF operational flight information service (OFIS) broadcasts

...

4.3.2.5 **Recommendation.**— *HF operational flight information service broadcast messages should contain the following information in the sequence indicated or as determined by regional air navigation agreements:*

- a) *En-route weather information*

Information on significant en-route weather phenomena should be in the form of available SIGMET as prescribed in Annex 3, Chapter 7.

...

4.3.3 VHF operational flight information service (OFIS) broadcasts

...

4.3.3.5 Recommendation.— *VHF operational flight information service broadcast messages should contain the following information in the sequence indicated:*

a) name of aerodrome;

...

o) trend forecast, when available; and

p) notice of current SIGMET ~~messages~~ information.

...

4.3.5 Data link-automatic terminal information service (D-ATIS)

...

4.3.5.1.1 Where real-time meteorological information is included but the data remains within the parameters of the significant change criteria, the content, for the purpose of maintaining the same designator, shall be considered identical.

Note.— *Significant change criteria are specified in 2.3.2 of Appendix 3 to Annex 3 the PANS-MET (Doc 10157), 2.1.2.2.1.*

...

4.3.6 Automatic terminal information service (voice and/or data link)

4.3.6.1 Whenever Voice-ATIS and/or D-ATIS is provided:

a) the information communicated shall relate to a single aerodrome;

...

g) the meteorological information shall be extracted from the local meteorological routine or special report.

Note.— *In accordance with Sections 4.1 and 4.3 of Appendix 3 to Annex 3 the PANS-MET (Doc 10157), Sections 2.2.1 and 2.2.3, the surface wind direction and speed and runway visual range (RVR) are to be averaged over 2 minutes and 1 minute, respectively; and the wind information is to refer to conditions along the runway for departing aircraft and to conditions at the touchdown zone for arriving aircraft. A template for the local meteorological report, including the corresponding ranges and resolutions of each element, are is in the PANS-MET (Doc 10157), Appendix 32, Table A2-1 to Annex 3. Additional criteria for the local meteorological report are contained in the PANS-MET (Doc 10157), Chapter 4 2 of, and in*

~~Attachment-D C to, Annex 3.~~

...

4.4 VOLMET broadcasts and D-VOLMET service

4.4.1 **Recommendation.**— *HF and/or VHF VOLMET broadcasts and/or D-VOLMET service should be provided when it has been determined by regional air navigation agreements that a requirement exists.*

Note.— *Annex 3, 11.54 and 11.65 provide details of VOLMET broadcasts and D-VOLMET service.*

...

CHAPTER 7. AIR TRAFFIC SERVICES REQUIREMENTS FOR INFORMATION

7.1 Meteorological information

7.1.1 General

...

7.1.1.3 **Recommendation.**— *When computer-processed upper-air data are made available to air traffic services units in digital form for use by air traffic services computers, the contents, format and transmission arrangements should be as agreed between the Meteorological Authority meteorological service provider and the appropriate ATS authority.*

...

7.1.2 Flight information centres and area control centres

7.1.2.1 Flight information centres and area control centres shall be supplied with meteorological information as described in Annex 3, Appendix 9, 1.3, particular emphasis being given to the occurrence or expected occurrence of weather deterioration as soon as this can be determined. These reports and forecasts shall cover the flight information region or control area and such other areas as may be determined on the basis of regional air navigation agreements.

Note.— *The list of meteorological information to be supplied to flight information centres and area control centres is contained in the PANS-MET (Doc 10157), 9.1.3.*

...

7.1.3 Units providing approach control service

7.1.3.1 Units providing approach control service shall be supplied with meteorological information as described in Annex 3, Appendix 9, 1.2 for the airspace and the aerodromes with which they are concerned. Special reports and amendments to forecasts shall be communicated to the units providing approach control service as soon as they are necessary in accordance with established criteria, without waiting for the next routine report or forecast. Where multiple anemometers are used, the indicators to which they are related shall be clearly marked to identify the runway and section of the runway monitored by each anemometer.

Note 1.— See Note following 7.1.2.1

Note 2.— The list of meteorological information to be supplied to units providing approach control service is contained in the PANS-MET (Doc 10157), 9.1.2.

...

7.1.3.6 Units providing approach control service for final approach, landing and take-off shall be supplied with information on wind shear which could adversely affect aircraft on the approach or take-off paths or during circling approach.

Note.— Provisions concerning the issuance of wind shear warnings and alerts and ATS requirements for meteorological information are given in Annex 3, Chapter 7 and ~~Appendices in the PANS-MET (Doc 10157), Chapters 6 and 9.~~

7.1.4 Aerodrome control towers

7.1.4.1 Aerodrome control towers shall be supplied with meteorological information ~~as described in Annex 3, Appendix 9, 1.1~~ for the aerodrome with which they are concerned. Special reports and amendments to forecasts shall be communicated to the aerodrome control towers as soon as they are necessary in accordance with established criteria, without waiting for the next routine report or forecast.

Note 1.— See Note following 7.1.2.1

Note 2.— The list of meteorological information to be supplied to aerodrome control towers is contained in the PANS-MET (Doc 10157), 9.1.1.

...

7.1.4.7 **Recommendation.**— *Aerodrome control towers and/or other appropriate units should be supplied with aerodrome warnings.*

Note.— The meteorological conditions for which aerodrome warnings are issued are listed in Annex 3, ~~Appendix 6, 5.1.3~~ 7.6.1.2.

...

— END —