International Civil Aviation Organization

MIDANPIRG AIM Sub-Group

Sixth Meeting (AIM SG/6)
(Cairo, Egypt, 21-23 January 2020)

Agenda Item 4: AIM Planning and Implementation in the MID Region

NEW SNOWTAM FORMAT

(Presented by the Secretariat)

SUMMARY

This Paper provides information on the new SNOWTAM format, which will be effective from 5 November 2020.

Action by the meeting is at paragraph 2.

REFERENCES

- PANS-AIM, Appendix 4

1. INTRODUCTION

1.1 This paper provides information on the Global Reporting Format (GRF) and the new SNOWTAM format at **Appendix A**. A draft EUR Guidance on SNOWTAM is at **Appendix B**, for information.

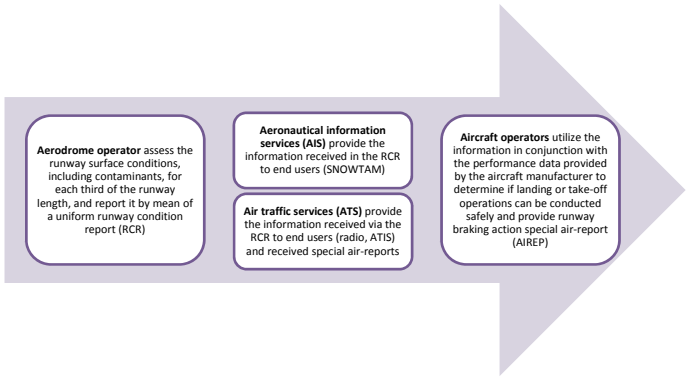
2. ACTION BY THE MEETING

2.1 The meeting is invited to note the information provided in the Appendices.

ICAO CAPACITY & EFFICIENCY

What is GRF?

- A globally-harmonized methodology for runway surface conditions assessment and reporting to provide reports that are directly related to the performance of aeroplanes.



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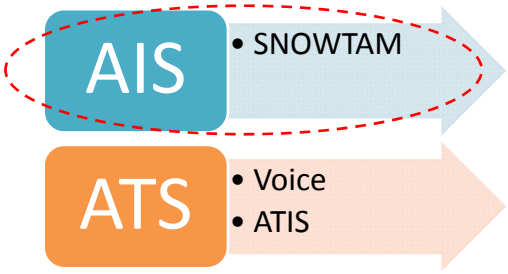
Dissemination of information

- **Through the AIS and ATS services:** when the runway is wholly or partly contaminated by standing water, snow, slush, ice or frost, or is wet associated with the clearing or treatment of snow, slush, ice or frost.
- **Through the ATS only:** when the runway is wet, not associated with the presence of standing water, snow, slush, ice or frost.



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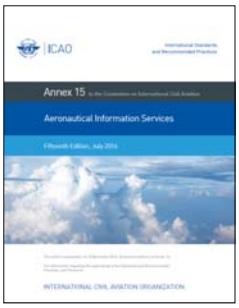
Amendment 39B to Annex 15

Amendment 39B arises from:

- Recommendations of the Friction Task Force of the Aerodrome Design and Operations Panel (ADOP) relating to the ***use of a global reporting format for assessing and reporting runway surface conditions***.



Amendment	*Source(s)*	*Subject*	*Adopted/Approved Effective Applicable*
39-B	Friction Task Force of the Aerodrome Design and Operations Panel (ADOP)	Amendment concerning the use of a global reporting format for assessing and reporting runway surface conditions	22 February 2016 11 July 2016 5 November 2020

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Major changes of amendment 39B

- SNOWTAM Definition
- SNOWTAM Provisions
- SNOWTAM Format (reporting format for assessing and reporting runway surface conditions has changed)

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SNOWTAM Provisions moved to PANS AIM

- After amendment 40 to Annex 15 and with the introduction of the new PANS AIM (DOC 10066), the provisions related to SNOWTAM were moved to PANS AIM.

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Changes in SNOWTAM Definition

- ***SNOWTAM***. A special series NOTAM given in a standard format providing a surface condition report notifying the presence or ~~removal~~ cessation of hazardous conditions due to snow, ice, slush, frost, ~~or~~ standing water or water associated with snow, slush ~~and~~, ice, or frost on the movement area~~, by means of a specific format~~.






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Major Changes in SNOWTAM Provisions

SNOWTAM Provisions (PANS AIM)

- "Assessment" instead of "Observation"
- The letters used to indicate items in SNOWTAM (A, B, C, …) are only used for reference purpose and should not be included in the messages.
- The maximum validity of SNOWTAM is 8 hours (not 24 hours).
- A SNOWTAM cancels the previous SNOWTAM
- New SNOWTAM shall be issued whenever a new Runway Condition Report (RCR) is received.
- Mandatory information in RCR / SNOWTAM:
  - i) AERODROME LOCATION INDICATOR
  - ii) DATE AND TIME OF ASSESSMENT
  - iii) LOWER RUNWAY DESIGNATOR NUMBER
  - iv) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD
  - v) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD

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Major Changes in SNOWTAM Provisions

SNOWTAM Provisions (PANS AIM)

Notes (from PANS Aerodrome)

- *RCR shall be initiated when a significant change in runway surface condition occurs due to water, snow, slush, ice or frost. Reporting of the runway surface condition should continue to reflect significant changes until the runway is no longer contaminated.*
- *A change in the runway surface condition used in the runway condition report is considered significant whenever there is:*
  - *a) any change in the RWYCC;*
  - *b) any change in contaminant type;*
  - *c) any change in reportable contaminant coverage according to Table II-1-1;*
  - *d) any change in contaminant depth according to Table II-1-2; and*
  - *e) any other information, for example a pilot report of runway braking action, which according to assessment techniques used, are known to be significant.*

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New SNOWTAM Format

- The new SNOWTAM has 2 sections
- The new SNOWTAM is conform to the Runway Condition Report (RCR) in content and format

1: Aeroplane performance Section

Item A - Aerodrome location indicator
Item B - Date and time of assessment
Item C - Lower runway designator number
Item D - Runway condition code (each runway third)
Item E - Per cent coverage (each runway third)
Item F - Depth of loose contaminant (each runway third)
Item G - Condition description for each third
Item H - Width of RWY to which the RWYCCs apply

2: Situational Awareness Section

Item I - Reduced runway length
Item J - Drifting snow on the runway
Item K - Loose sand on the runway
Item L - Chemical treatment on RWY
Item M - Snow banks on the runway
Item N - Snow banks on the taxiway
Item O - Snow banks adjacent to the runway
Item P - Taxiway conditions
Item R - Apron conditions
Item S - Measured friction coefficient
Item T - Plain language remarks

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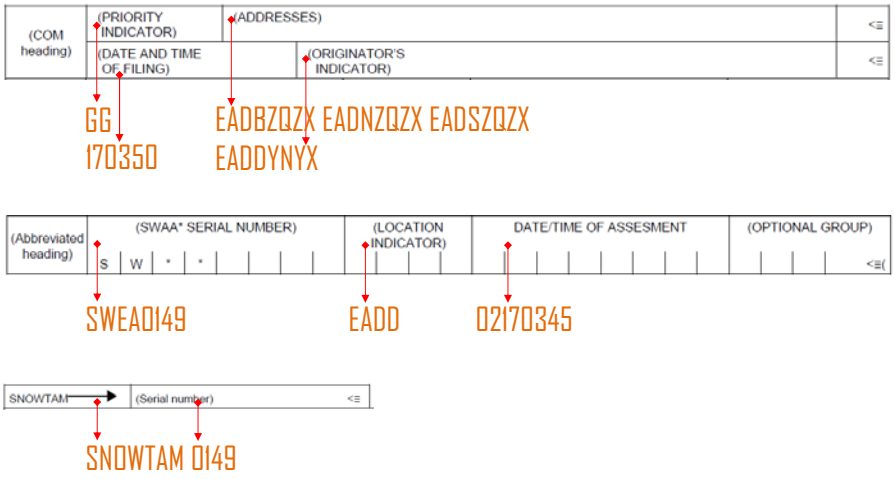

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Aeroplane performance calculation section			
(AERODROME LOCATION INDICATOR)	M	A)	<≡
(DATE/TIME OF ASSESSMENT *(Time of completion of assessment in UTC)*)	M	B)	→
(LOWER RUNWAY DESIGNATION NUMBER)	M	C)	→
(RUNWAY CONDITION CODE (RWYCC) ON EACH -RUNWAY THIRD) *(From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)*	M	D)	/ / →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E)	/ / →
(DEPTH *(mm)* OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)	C	F)	/ / →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) *(Observed on each runway third, starting from threshold having the lower runway designation number)* COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE	M	G)	/ / →
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H)	<≡

EADD 02170345 09C 3/2/1 75/100/100
06/12/12 SLUSH/WET SNOW/WET SNOW 35

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Situational awareness section			
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH *(m)*)	O	I)	→
(DRIFTING SNOW ON THE RUNWAY)	O	J)	→
(LOOSE SAND ON THE RUNWAY)	O	K)	→
(CHEMICAL TREATMENT ON THE RUNWAY)	O	L)	→
(SNOWBANKS ON THE RUNWAY) *(If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)*	O	M)	→
(SNOWBANKS ON A TAXIWAY)	O	N)	→
(SNOWBANKS ADJACENT TO THE RUNWAY)	O	O)	→
(TAXIWAY CONDITIONS)	O	P)	→
(APRON CONDITIONS)	O	R)	→
(MEASURED FRICTION COEFFICIENT)	O	S)	→
(PLAIN-LANGUAGE REMARKS)	O	T)	)

Example:

DRIFTING SNOW. RWY 09 LOOSE SAND. RWY 09 CHEMICALLY TREATED. RWY 09 SNOWBANK R20 FM CL. TWY A SNOWBANK. RWY 06R ADJACENT SNOWBANKS. TWY B POOR. APRON NORTH POOR.)

NOTES:
1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier.
2. Information on other runways, repeat from B to H.
3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported.
4. Words in brackets ( ) not to be transmitted.
5. For letters A) to T) refer to the *Instructions for the completion of the SNOWTAM Format*, paragraph 1, item b).

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NEW	OLD
GG EADBZQZX EADNZQZX EADSZQZX 170350 EADDYNYX	GG EHAMZQZX EDDFZQZX EKCHZQZX 070645 LSZHYNYX
SWEA0149 EADD 02170345	SWLS0149 LSZH 11070700
(SNOWTAM 0149	(SNOWTAM 0149
EADD 02170345 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET	A) LSZH
EADD 02170134 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH	B) 11070620 C) 02 D)…P)
EADD 02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET	B) 11070600 C) 09 D)…P)
SNOW 35	B) 11070700 C) 12 D)…P)
DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)	R) NO S) 11070920
	T) DEICING

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Guidance on the Issuance of SNOWTAM

- The ICAO EUR/NAT Office (in collaboration with the EUROCONTROL AIM/SWIM Team and EAD) prepared a guidance material in order to address some aspects of the new SNOWTAM format/provisions that required further clarification, as well as to provide explanation and examples for issuing SNOWTAM in the new format (as of 5 November 2020).
- The document is in draft status, as at **Appendix A**, and is considered to be published as EUR DOC in February 2020 (after the consultation period and endorsement by EASPG through correspondence).
- The AIM SG is invited to review the attached document and provide their comments and, if appropriate, adopt the final version of the document for the use in the MID Region.

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Recommendations

States are invited to:

- review the draft SNOWTAM Guidance at **Appendix B**;
- adopt the final version of the SNOWTAM Guidance (to be published in February 2020) for the MID Region;
- Update their State's regulatory framework with regard to GRF;
  - updating National regulations (transposition of ICAO provisions to the national regulations)
  - filing differences in EFOD / publishing significant differences in AIP (if required)
- establish a national GRF implementation team & plan that takes into account the modified ICAO provisions;
- conduct necessary **training, awareness, education** at the national level;
- coordinate between AIS, affected aerodromes, ATS units and Users (operators/airlines) of the new requirements and changes (through circular, etc.);
- revise/update the software/templates used to issue/receive SNOWTAM (NOTAM/SNOWTAM system);
- update the formal arrangements between aerodromes and AIS; and
- publish an aeronautical information circular (AIC) for awareness and readiness of all stakeholders, using the template at the attachment of **Appendix B**.

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

European and North Atlantic Office

GUIDANCE ON THE ISSUANCE OF SNOWTAM

DRAFT

(Applicable from 5 November 2020)

- First Edition -

February 2020

EUROPEAN AND NORTH ATLANTIC OFFICE OF ICAO

International Civil Aviation Organization (ICAO)
European and North Atlantic (EUR/NAT) Office
3 bis, Villa Emile Bergerat
92522, Neuilly-sur-Seine CEDEX
FRANCE

e-mail : icaoeurnat@paris.icao.int
Tel : +33 1 46 41 85 85
Fax : +33 1 46 41 85 00
web: http://www. icao.int/EURNAT

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LIST OF SNOWTAM ISSUES AND EAD POLICY/APPROACH.... ATTACHMENT A

SAMPLE AIC TEMPLATE....ATTACHMENT B

1. INTRODUCTION

1.1. The adoption of Amendment 39 to Annex 15 was issued on 1 April 2016 (State Letter Ref.: AN 2/2.4-16/18) with the effective date of 11 July 2016. The second part of the amendment (39B) is applicable as of 5 November 2020.

1.2. Amendment 39B introduced a new SNOWTAM format, based on the recommendations of the Friction Task Force of the Aerodrome Design and Operations Panel (ADOP) relating to the use of a global reporting format for assessing and reporting runway surface conditions. The SNOWTAM provisions/format was later moved to PANS-AIM (ICAO DOC 10066).

2. PURPOSE OF THE DOCUMENT

2.1 The ICAO EUR/NAT Office in collaboration with the EUROCONTROL (AIM/SWIM Team and EAD) prepared this document to address some aspects of the new SNOWTAM format/provisions that required further clarification, as well as to provide explanation and examples for issuing SNOWTAM in the new format (as of 5 November 2020).

2.2 List of issues identified by the AIM/SWIM Team (joint cooperation ICAO EUR/NAT Office, EUROCONTROL, EAD) including the details of the EAD policy/approach for addressing the issues is at **Attachment A**.

2.3 Submit any comments, observations or suggestions on this document to the ICAO EUR/NAT Office: icaoeurnat@paris.icao.int

3. GENERAL PROVISIONS OF SNOWTAM

Definition of SNOWTAM: A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area.

3.1. Metric units shall be used in SNOWTAM and the unit of measurement (e.g. mm, cm, m, etc.) should not be reported.

Example: **09/15/30** (item F) : *means that the depth of the contaminant in the first part of runway is 9mm, in the second part 15mm and in the third part 30mm. Units if measurement is metric but it is not reported in the message.*

3.2. As of 5 November 2020, the maximum validity of SNOWTAM is 8 hours.

Note 1 – when no SNOWTAM is issued after 8 hours of a previous SNOWTAM for an aerodrome, the old SNOWTAM is expired and it would be assumed that there is no more significant runway surface condition to be reported.

3.3. New SNOWTAM shall be issued whenever a new runway condition report (RCR) is received from the aerodrome operator.

Note 1 – prior arrangement between AIS (NOTAM Office) and the aerodrome authority is required to specify the means and process of submission of the Runway Condition Report (RCR) to the International NOTAM Office (NOF).

Note 2 – If there is a valid SNOWTAM in old format (with 24 hours validity) issued on 4 November 2020, it is recommended to issue an old-format SNOWTAM at the end of 4/11/2020 (i.e. 2359 UTC) to cancel the old format SNOWTAM and issue a new SNOWTAM with the new format instead, right after 0000 UTC. If not done so, there would be old and new format together on 5 November 2020, which may lead missing some of the old SNOWTAMs (because the systems will execute the new rules after 0000 UTC on 5 November 2020).

3.4. A SNOWTAM cancels the previous SNOWTAM. When a new SNOWTAM is issued for a specific aerodrome that has another valid SNOWTAM, the new one automatically replaces the older SNOWTAM (there is no need to reference the older SNOWTAM in the new SNOWTAM, as what we do for NOTAM).

3.5. With reference to the SNOWTAM template (see paragraph 4), the letters used to indicate items (A to T; third column of the SNOWTAM template) are only used for reference purpose and should not be included in the messages. The letters, M (mandatory), C (conditional) and O (optional) (second column of the SNOWTAM template) mark the usage and information.

Example: items B) to H) below without the letters indicating items (separated by one space):

01150915 12L 4/3/3 100/50/75 NR/06/06 WET/WET/SLUSH

3.6. The abbreviated heading "*TTAAiiii CCCC MMYYGGgg (BBB)*" is included to facilitate the automatic processing of SNOWTAM messages in computer data banks. The explanation of these symbols is:

TT = data designator for SNOWTAM = SW;
AA = geographical designator for States, e.g. LF = FRANCE, EG = United Kingdom (see Location Indicators (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);
iiii = SNOWTAM serial number in a four-digit group;

CCCC = four-letter location indicator of the aerodrome to which the SNOWTAM refers (see Location Indicators (Doc 7910));
MMYYGGgg = date/time of observation/measurement, whereby:
MM = month, e.g. January = 01, December = 12
YY = day of the month
GGgg = time in hours (GG) and minutes (gg) UTC;
(*BBB*) = optional group for correction, in the case of an error, to a SNOWTAM message previously disseminated with the same serial number = COR.

Note 1.— Brackets in (BBB) are used to indicate that this group is optional.

Note 2.— When reporting on more than one runway and individual dates/times of observation/assessment are indicated by repeated Item B, the latest date/time of observation/assessment is inserted in the abbreviated heading (MMYYGGgg).

Example: Abbreviated heading of SNOWTAM No. 149 from Zurich, measurement/observation of 7 November at 0620 UTC: **SWLS0149 LSZH 11070620**

Note 3.— The information groups are separated by a space, as illustrated above.

3.7. The text "SNOWTAM" in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, for example: **SNOWTAM 0124**.

Note 1.— The SNOWTAM serial number resets at the beginning of each calendar year (begins with SNOWTAM 0001 on January 1 at 0000 UTC).

3.8. **Repeating information in the aeroplane performance calculation section for more than one runway:** when a SNOWTAM is reporting on more than one runway of the aerodrome for which the SNOWTAM is issued, Items B to H (aeroplane performance calculation section) should be repeated.

Example:

02170135 09R 5/3/4 100/75/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW 35
02170225 09L 3/3/4 50/50/75 08/15/10 WET SNOW /WET SNOW/WET SNOW 40

3.9. **Repeating information in the situational awareness section:** Information in the situational awareness section could be repeated for each runway, taxiway and apron; repeat as applicable, when reported.

Note 1.— Option 1: it is recommended that the items of situational awareness section be kept in order when repeated (item I) to S)). It means that item I) should be repeated for several runways (if applicable) and then item J), then item K), etc. and item T) ends the SNOWTAM message. Example:

DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09R LOOSE SAND. RWY 09L CHEMICALLY TREATED. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.BREAKING ACTION 4/4/5.)

Note 2.— Option 2: repeat all relevant items of the same runway (item I) to M)) for each runway, then to continue with the rest of the items (item N) to T)). Example:

DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09L CHEMICALLY TREATED. RWY 09R LOOSE SAND.RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.BREAKING ACTION 4/4/5. TWY A AND TWY C CLOSED.)

Note 3— since there is no specific guideline/rule for repeating items in the situational awareness section, NOTAM systems should be flexible to receive and process situational awareness information in any order.

Note 4.— items in the situational awareness section are separated by a full stop and a space (item L. item M. item N. etc.).

3.10. For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, and after the aeroplane performance calculation section.

3.11. Mandatory information in SNOWTAM is:

1) AERODROME LOCATION INDICATOR;
2) DATE AND TIME OF ASSESSMENT;
3) LOWER RUNWAY DESIGNATOR NUMBER;
4) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD; and
5) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD ~~(when runway condition code (RWYCC) is reported 1-5)~~

Note 1.— "Condition description for each runway third" is always a mandatory item for issuance of SNOWTAM.

Example: a SNOWTAM with the minimum (mandatory) information

GG EADBZTZX …
111045 EADDYNYX
SWEA0124 EADD 01111035
(SNOWTAM 0124 EADD
01111045 09R 5/4/4 SLUSH/COMPACTED SNOW/ COMPACTED SNOW)

4. DESCRIPTION OF SNOWTAM ITEMS

This section provides description and examples for each item of the SNOWTAM format, as shown in the following template:

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)	<≡
	(DATE AND TIME OF FILING)	(ORIGINATOR'S INDICATOR)	<≡
(Abbreviated heading)	(SWAA* SERIAL NUMBER) S W * *	(LOCATION INDICATOR)	DATE/TIME OF ASSESMENT (OPTIONAL GROUP) <≡(

SNOWTAM →	(Serial number) <≡			
Aeroplane performance calculation section				
(AERODROME LOCATION INDICATOR)		M	A)	<≡
(DATE/TIME OF ASSESSMENT *(Time of completion of assessment in UTC)*)		M	B)	→
(LOWER RUNWAY DESIGNATION NUMBER)		M	C)	→
(RUNWAY CONDITION CODE (RWYCC) ON EACH RUNWAY THIRD) *(From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)*		M	D)	/ / →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)		C	E)	/ / →
(DEPTH *(mm)* OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)		C	F)	/ / →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) *(Observed on each runway third, starting from threshold having the lower runway designation number)*	COMPACTED SNOW DRY DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE	M	G)	/ / →
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)		O	H)	<≡≡
Situational awareness section				
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH *(m)*)		O	I)	→
(DRIFTING SNOW ON THE RUNWAY)		O	J)	→
(LOOSE SAND ON THE RUNWAY)		O	K)	→
(CHEMICAL TREATMENT ON THE RUNWAY)		O	L)	→
(SNOWBANKS ON THE RUNWAY) *(If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)*		O	M)	→
(SNOWBANKS ON A TAXIWAY)		O	N)	→
(SNOWBANKS ADJACENT TO THE RUNWAY)		O	O)	→
(TAXIWAY CONDITIONS)		O	P)	→
(APRON CONDITIONS)		O	R)	→
(MEASURED FRICTION COEFFICIENT)		O	S)	→
(PLAIN-LANGUAGE REMARKS)		O	T)	)

NOTES:
1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier.
2. Information on other runways, repeat from B to H.
3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported.
4. Words in brackets ( ) not to be transmitted.
5. For letters A) to T) refer to the *Instructions for the completion of the SNOWTAM Format,* paragraph 1, item b).

SIGNATURE OF ORIGINATOR *(not for transmission)*

SECTION 1: AEROPLANE PERFORMANCE CALCULATION SECTION

Item A − Aerodrome location indicator (four-letter location indicator) of the aerodrome, for which the SNOWTAM is issued. The aerodrome location indicators are listed in the ICAO DOC 7910 (Location Indicators).

Example: **LFPG** = *Paris/Charles du Gaulle*

Item B − Date and Time of assessment of the runway surface condition (eight-figure date/time group giving time of observation as month, day, hour and minute in UTC)

Example: **12040638**

12 = December ; 04 = Day 4 (4th) ; 0638 (06 hours and 38minutes)

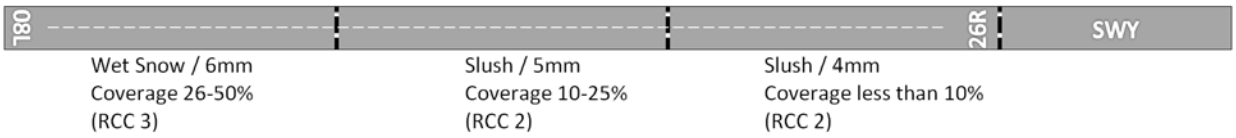
Item C − Lower runway designator number (nn[L] or nn[C] or nn[R])

Note.— Only one runway designator is inserted for each runway and always the lower number.

Example: **08L** *for RWY08L/26R, 08L should be reported (08<26)*

Item D − Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n). Runway Condition Code is determined during the assessment of the runway surface condition, in accordance with the provisions of the PANS-Aerodrome and the Runway Condition Assessment Matrix (RCAM).

Example: **3/2/2** : *runway condition code for the first part of runway 08L is 3; and for the second and third parts of runway is 2.*



Runway condition assessment matrix (RCAM)			
Assessment		**Downgrade assessment criteria**	
Runway condition code	**Runway surface description**	**Aeroplane deceleration or directional control observation**	**Pilot report of runway braking action**
6	• DRY	---	---
5	• FROST • WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) ***Up to and including 3 mm depth:*** • SLUSH • DRY SNOW • WET SNOW	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD

4	***−15ºC and Lower outside air temperature*:** • COMPACTED SNOW	Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	• WET ("slippery wet" runway) • DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW ***More than 3 mm depth:*** • DRY SNOW • WET SNOW ***Higher than −15ºC outside air temperature*:** • COMPACTED SNOW	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM
2	***More than 3 mm depth of water or slush:*** • STANDING WATER • SLUSH	Braking deceleration OR directional control is between Medium and Poor.	MEDIUM TO POOR
1	• ICE	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR
0	• WET ICE • WATER ON TOP OF COMPACTED SNOW • DRY SNOW or WET SNOW ON TOP OF ICE	Braking deceleration is minimal to non- existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR

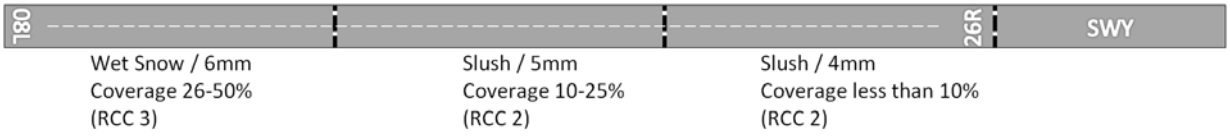
Item E − Per cent coverage for each runway third is reported as NR (less than 10% or DRY), 25 (10-25 %), 50 (26-50 %), 75 (51-75 %) or 100 (76-100 %) for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

Note 1.— This information is provided only when the runway condition for each runway third (Item D) has been reported as other than 6 and there is a condition description for each runway third (Item G) that has been reported other than DRY.

Note 2.— When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

Note 3. — When the runway condition is "DRY" or the coverage is less than 10%, item E should not be reported (insert "NR").

Example: **50/25/NR** : *percentage of coverage at the first runway third of RWY 08L is 50 % (between 26 to 50%), at the second part of the runway is 25 % (between 10 to 25 %) and the coverage is less than 10 % at the third part of the runway.*



Item F − Depth of loose contaminant for each runway third. When provided, insert in millimetres for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn). Depth should be reported in 2 digits (i.e. 05 for 5mm) and the units of measurement (mm) is not reported/inserted.

Note 1.— This information is only provided for the following contamination types:

- *standing water, values to be reported 04, then assessed value;*
- *slush, values to be reported 03, then assessed value;*
- *wet snow, values to be reported 03, then assessed value; and*

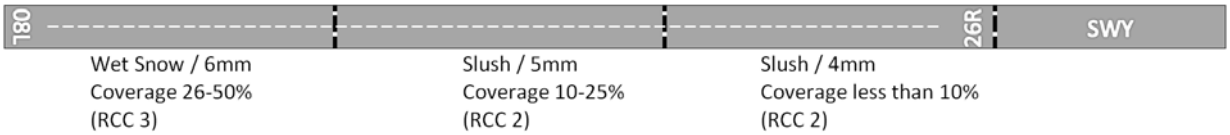
– *dry snow, values to be reported 03, then assessed value.*

Values less than the above mentioned need not to be reported (i.e. if standing water is less than 4mm or slush, wet snow or dry snow is less than 3mm, it is not reported).

Note 2.— When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

Note 3.— NR also includes the situations when the depth of the contaminant is less than the minimum values to be reported (as indicated above) or that part of runway is dry, etc.

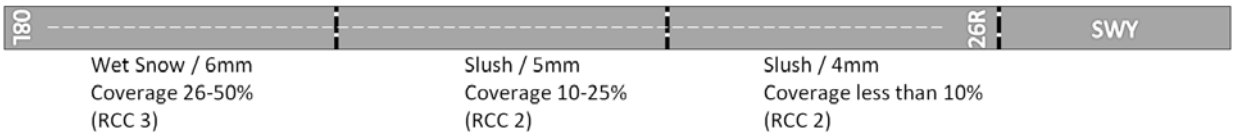
Example: **06/05/04** : *depth of the contaminant in the first part of runway is 6mm, in the second part 5mm and in the third part 4mm.*



Item G – Condition description for each runway third. Insert any of the following condition descriptions for each runway third, separated by an oblique stroke:

- COMPACTED SNOW
- DRY SNOW
- DRY SNOW ON TOP OF COMPACTED SNOW
- DRY SNOW ON TOP OF ICE
- FROST
- ICE
- SLUSH
- STANDING WATER
- WATER ON TOP OF COMPACTED SNOW
- WET
- WET ICE
- WET SNOW
- WET SNOW ON TOP OF COMPACTED SNOW
- WET SNOW ON TOP OF ICE
- DRY (only reported when there is no contaminant)

Example: **WET SNOW/SLUSH/SLUSH** : *condition description is "Wet snow" for the first part of runway, "Slush" for the second and third parts of runway.*



Item H – Width of runway to which the runway condition codes apply. Insert the width in metres (without units of measurement), if it is less than the published runway width.

Example: **35** : *published width of RWY 08L/26R is 45m and the RCR applies to 35m of it.*

SECTION 2: SITUATIONAL AWARENESS SECTION

Note 1.— Elements in the situational awareness section end with a full stop.

Note 2.— Elements in the situational awareness section for which no information exists, or where the conditional circumstances for publication are not fulfilled, are left out completely.

Item I − Reduced runway length. Insert the applicable [lower] runway designator and available length in meters (example: RWY nn [L] or nn [C] or nn [R] REDUCED TO [n]nnn).

Note 1.— This information is conditional when a NOTAM has been published with a new set of declared distances, i.e. when the runway length is reduced, this item should be included in the SNOWTAM and a NOTAM should also be issued with the new available declared distances (TORA, TODA, ASDA and LDA).

Example: **RWY 08L REDUCED TO 2800.**

Item J − Drifting snow on the runway. When reported, insert "DRIFTING SNOW".

Note 1.— Drifting snow is an ensemble of snow particles raised by the wind to small heights above the ground (WMO definition). Drifting snow in SNOWTAM refers to the airport (the whole movement area), not a specific runway.

Example: **DRIFTING SNOW.**

Item K − Loose sand on the runway. When loose sand is reported on the runway, insert the lower runway designator and with a space "LOOSE SAND" (RWY nn or RWY nn[L] or nn[C] or nn[R] LOOSE SAND).

Example: **RWY 08L LOOSE SAND.**

Item L − Chemical treatment on the runway. When chemical treatment has been reported applied, insert the lower runway designator and with a space "CHEMICALLY TREATED" (RWY nn or RWY nn[L] or nn[C] or nn[R] CHEMICALLY TREATED).

Example: **RWY 08L CHEMICALLY TREATED.**

Item M − Snow banks on the runway. When snow banks are reported present on the runway, insert the lower runway designator and with a space "SNOW BANK" and with a space left "L" or right "R or both sides "LR", followed by the distance in metres from centre line separated by a space FM CL (RWY nn or RWY nn[L] or nn[C] or nn[R] SNOW BANK Lnn or Rnn or LRnn FM CL).

Example: **RWY 08L SNOW BANK L12 FM CL.**

Item N − Snow banks on a taxiway. When snow banks are present on a taxiway, insert the taxiway designator and with a space "SNOW BANK" (TWY [nn]n SNOW BANK).

Example: **TWY B SNOW BANK.**

Item O − Snow banks adjacent to the runway. When snow banks are reported present penetrating the height profile in the aerodrome snow plan, insert the lower runway designator and "ADJ SNOW BANKS" (RWY nn or RWY nn[L] or nn[C] or nn[R] ADJ SNOW BANKS).

Example: **RWY 08R ADJ SNOW BANKS.**

Item P − Taxiway conditions. When taxiway conditions are reported as poor, insert the taxiway designator followed by a space "POOR" (TWY [n or nn] POOR or ALL TWYS POOR).

Example: **TWY C POOR.**

Item R − Apron conditions. When apron conditions are reported as poor, insert the apron designator followed by a space "POOR" (APRON [nnnn] POOR or ALL APRONS POOR).

Note 1.— Aprons are named differently in different aerodromes (e.g. Apron 1, Cargo Apron, Apron Main, Apron XXX, Military Ramp, etc.). The Apron designator/name in the SNOWTAM should be the one indicated in the Aerodrome Chart and/or AIP.

Example: **APRON 1 POOR.**

Item S − Measured friction coefficient. Where reported, insert the measured friction coefficient and friction measuring device.

Note 1.— This will only be reported for States that have an established programme of runway friction measurement using a State-approved friction measuring device.

Item T − plain language remarks.

5. EXAMPLES OF SNOWTAM

Example 1:

```
GG EADBZQZX EADNZQZX EADSZQZX
170140 EADDYNYX
SWEA0150 EADD 02170135
(SNOWTAM 0150 EADD
02170055 09L 5/4/4 100/100/100 NR/03/03 WET/WET
SNOW/COMPACTED SNOW
02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
40
```

Example 2:

```
GG EADBZQZX EADNZQZX EADSZQZX
```

170229 EADDYNYX
SWEA0151 EADD 02170225
(SNOWTAM 0151 EADD
02170055 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/WET SNOW
02170135 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW
RWY 09L SNOW BANK R20 FM CL. RWY 09R ADJ SNOW BANKS. TWY B POOR. APRON NORTH POOR)

Example 3:

GG EADBZQZX EADNZQZX EADSZQZX
170350 EADDYNYX
SWEA0152 EADD 02170345
(SNOWTAM 0152 EADD
02170345 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/SLUSH
02170134 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170225 09C 2/3/3 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW 35
DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

Example 4:

GG EADBZQZX EADNZQZX EADSZQZX
170440 EADDYNYX
SWEA0153 EADD 02170435
(SNOWTAM 0153 EADD
02170435 09L 5/5/5 100/100/100 NR/NR/03 WET/WET/SLUSH
02170415 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH
02170400 09C 2/3/3 75/75/50 06/12/12 SLUSH/SLUSH/SLUSH 40
DRIFTING SNOW. RWY 09L LOOSE SAND. RWY 09L CHEMICALLY TREATED. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED. TWY A and TWY B CLOSED.)

6. RECOMMENDATIONS AND CONCLUSIONS

3.12. NOFs (AISs) and airport authorities must ensure that appropriate means for the submission of information from airports to the NOF (e.g. RCR form developed by airport authority, communication lines, etc.) are available and the relevant process/procedures are established and well-coordinated with all concerned airports.

3.13. The format and content of the RCR form prepared by the airport authority should be in conformity with the SNOWTAM format in order to be easily readable and transformable to a SNOWTAM by NOF personnel. This must eliminate any risk of misinterpretation or misunderstanding of the information provided through RCR.

3.14. When RCR is provided by airports to NOF, the NOF should carry out an initial quality check to verify the following:

- All mandatory information items (items A, B, C, D and G) are included in the RCR as a minimum (completeness)
- Information provided is in accordance with the criteria explained above (in terms of units of measurement, format of data, etc.)
- Information is in conformity with other sources (date/time with the Gregorian calendar/UTC; runways, taxiways and aprons designators, width and length as per the published ones in AIP, etc.)

Note 1. – airport authorities should designate POC (point of contact) in case if NOF needs clarification on the information received through RCR.

Note 2. – accuracy of RCR data is the responsibility of airport authority, as NOFs are normally unable to verify if the data collected is correct against the actual runway condition.

Note 3. – NOFs should carry out quality checks at different stages, including before issuance of the SNOWTAM to ensure that the SNOWTAM reflects the same information as was originally received from the airport authority through RCR.

3.15. NOF/AIS personnel should be sufficiently trained with the new SNOWTAM format.

3.16. The software/templates used to issue/receive SNOWTAM (NOTAM/SNOWTAM system) should be updated, as applicable, to enable issuing, receiving, storing and retrieval of SNOWTAM in the new format.

3.17. The State's national GRF implementation team (including airport authorities, ATS, CAA, users, AIS/NOF, etc.) should ensure that the required coordination, awareness, training, processes, procedures, etc. are in place.

3.18. The national GRF implementation team may elect to publish an Aeronautical Information Circular (AIC) through the Aeronautical Information Services (AIS) to: - *provide a summary of the implementation process and mechanisms; - raise awareness among all stakeholders by providing information about the GRF and the new SNOWTAM format; - detail responsibilities of each stakeholders involved (airports, NOF, ATS, users, etc.); - explain coordination processes between airports, NOF, ATS,*

etc.; - provide implementation plan/timelines; - prepare for tests, if any; and – provide any other information that could be useful to facilitate the implementation.

*Note 1. – a sample AIC Template is provided at **Attachment B** to this document. However, the content of the AIC depends on the information and the arrangements required in each State.*

REFERENCES:

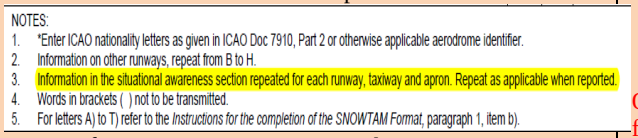
- *Procedures for Air Navigation Services (PANS) — Aeronautical Information Management* (PANS-AIM, Doc 10066)
- *Procedures for Air Navigation Services (PANS) — Aerodromes* (PANS-Aerodromes, Doc 9981)
- *Assessment, Measurement and Reporting of Runway Surface Conditions* (ICAO Circular 355)

Attachment A:
Issues related to the SNOWTAM format

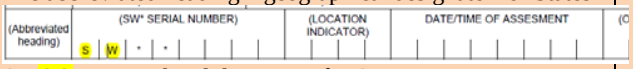
(Items highlighted in orange are AIS-related issues which need immediate attention)

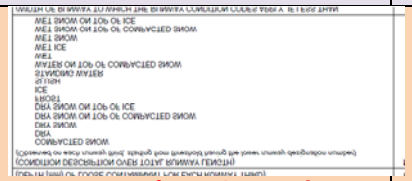
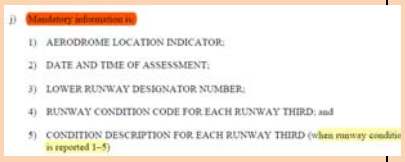
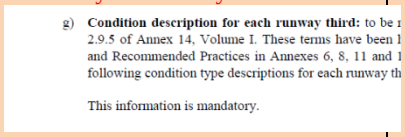
	Question/Issue	**Comment/Initial analysis**	**Remarks** **(Impact, if the issue is not resolved)**	**EAD implementations policy/approach**
1	Old SNOWTAM format (availability after 5 NOV 2020) - Will **all** States issue the SNOWTAM under the new format?	Clarification needed (linked to item 2 below)	Possible rejection by regional and national AIS databases and users if some States continue to issue the SNOWTAM in the old format after 5 November 2020	For EAD-migrated clients (B2B and B2C), ONLY the new format will be available. For non-migrated clients (WW SNOWTAM received via AFTN), EAD will also accept the OLD format, which will be automatically converted to the new format in the following way: - SNOWTAM header, including number - Item A) – Aerodrome Location Indicator - Item B) – Date/Time of assessment (without repetition) - Item C) – RWY designation number (without repetition) - Copy of the original SNOWTAM text, from Item B) to Item T) – Plain language remark - No validation Example of old format processing: Original SNOWTAM in OLD Format SWED0012 EDDK 11042330 (SNOWTAM 0012 A) EDDK B) 11042330 C) 14L F) 2/2/2 G) 30/30/40 H) 5/5/5 B) 11042325 C) 14R F) 5/5/5 G) 30/30/40 H) 3/3/3 B) 11042320 C) 07 F) 5/5/5 G) 40/30/30 H) 2/3/2 R) 2 S) 12300800 T) RWY CONTAMINATION 100 PERCENT. SNOW REMOVAL IN PROGRESS) SNOWTAM autostored in EAD

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
				SWED0012 EDDK 11050145 (SNOWTAM 0012 EDDK 11050145 14L THIS SNOWTAM WAS PUBLISHED BY ORIGINATOR IN OLD FORMAT. SNOWTAM STORED IN EAD DATABASE WITHOUT ANY VALIDATION CHECKS. TEXT PROVIDED FOR SAFETY REASON ONLY. QUOTE B) 11042330 C) 14L F) 2/2/2 G) 30/30/40 H) 5/5/5 B) 11042325 C) 14R F) 5/5/5 G) 30/30/40 H) 3/3/3 B) 11042320 C) 07 F) 5/5/5 G) 40/30/30 H) 2/3/2 R) 2 S) 12300800 T) RWY CONTAMINATION 100 PERCENT. SNOW REMOVAL IN PROGRESS) UNQUOTE
2	Worldwide implementation status monitoring and reporting	How will States' plans and eventually their status of implementation be monitored? (linked to item 1 above) It is proposed to establish an online dashboard to monitor States' plans and their implementation status.	This may lead to the circumstances detailed in item 1 above. It may lead to non-harmonised implementation by various States.	
3	Transition concept => At 00.00 UTC, 5 NOV 2020 - What happens to the validity of SNOWTAM messages issued on 4 NOV? - From 5 NOV – 8H (instead of 24H) - What shall be the Validity for SNOWTAM that are received in the OLD Format after 5th NOV 2020?	From 5 November 2020 at 0000 UTC, all SNOWTAMs will be valid for 8 hours. States should issue an old-format SNOWTAM at the end of 4.11.20 (2359 UTC) to cancel the old-format SNOWTAM and then issue a new SNOWTAM in the new format instead immediately after 0000 UTC This should be clarified by ICAO and be included in guidance material.	If this is not done, there will be both old- and new-format SNOWTAMS on 5 November, which could lead to some of the old SNOWTAMs being missed (because the systems will execute the new rules after 0000 UTC). Guidance on this could be included in *"SNOWTAM Guidance"*.	After 5th NOV, the validity of SNOWTAM in EAD will be 8H regardless of the format. With that in mind SNOWTAMs will be automatically invalidated (will not appear in the PIB) after 8 hours based on observation time indicated in an Abbreviated Heading **<u>EAD Transition concept</u>** EAD will start to automatically convert stored valid OLD SNOWTAMs from one day prior to the activation date. The automatic conversion will follow the same process as described under P.1 above. These automatically converted SNOWTAMs will be stored in the database but

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
				not used for production (they will not appear on the Saved SNOWTAM list nor in the PIB) until the activation of the NEW format. As soon as the NEW format is activated, the system will use the previously auto-converted SNOWTAMs for production use (i.e. they will show in the Saved SNOWTAM list and be used in the PIB). As the CONVERTED SNOWTAMs (like the NEW ones) are valid for 8 hours, OLD SNOWTAMs created more than 8 hours before the activation date (00.00 UTC, 5 NOV 2019) will no longer be valid on the activation date (regardless of their initial 24-hour validity at the time of their creation). SNOWTAMs created after 5 NOV 2019 will automatically replace and invalidate SNOWTAMs existing for the same Aerodrome regardless of the message format: • NEW SNOWTAM stored after 5.11.20 will also replace OLD/CONVERTED/NEW-format SNOWTAMs for the same Aerodrome • OLD SNOWTAMs processed as CONVERTED after 5.11. 20 will also replace OLD/CONVERTED/NEW-format SNOWTAMs for the same Aerodrome.
4	Repeating of the items in the Situational Awareness section (lLimitation of the ICAO specifications) No clear guidance on the repeating of the items in the Situational Awareness section except for this note:  NOTES: 1. *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier. 2. Information on other runways, repeat from B to H. 3. Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported. 4. Words in brackets ( ) not to be transmitted. 5. For letters A) to T) refer to the *Instructions for the completion of the SNOWTAM Format*, paragraph 1, item b). - Room for various interpretations on how to repeat items	Option 1. Repeat whole group of Item I) to Item S) for each runway separately. - Only some of items in the situational awareness section are related to runways, others are not (e.g. Items N, P, R). Option 2. Repeat each item (Item I) for different runways, then next item for different runways, up to item S)). - Items I) to S) occur one after the other (in the given order) but each item can be repeated for different runways.	If not clarified, there would be different ways of ordering the items in the situational awareness section, which may lead to confusion and difficulty of understanding among users. Clarification could be included in *"SNOWTAM Guidance"*. This guidance material should include several examples for different items of SNOWTAMs.	Incoming SNOWTAMs EAD will accept any order of Items in Situational Awareness Section on receiving SNOWTAMs. Outgoing SNOWTAMs The Situational Awareness Section text will be **automatically regenerated** with the following structure: **1. Runway groups** Runway-related items repeated as a group. Provided more runways are reported, the output will be sorted by runway designator (ascending

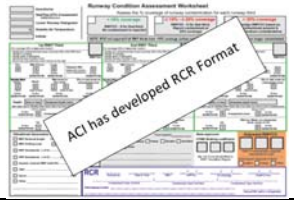
	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
		Option 3. Items appear in no particular order (except for Item T, being the last). - Option 3 is the **most flexible and preferable** approach as it would also accept examples from options 1 and 2.		number, identical numbers in the order L, C, R) (e.g. items for 09L, 09C, 09R). Note: Item I) (Reduced Runway Length) may also contain the other runway direction (not the lower number). Item I), however, will still be in the same group as the other items related to this runway (even though they are using the lower number). **2. Drifting Snow** Note that the DRIFTING SNOW (Item J)) information is provided only once as it is not runway-specific. This, however, depends on the EAD system parameter {SNOWTAM_2020_DRIFTING_PER_RWY}. If the parameter value is changed from the default "N" to "Y", then Item J) is also generated inside each runway group with a similar text structure as the other items: RWY nn [L] or nn [C] or nn [R] DRIFTING SNOW **3. Taxiway groups** If items N) and P) are provided for a taxiway, they will be reported in that order. For unrelated N) and P) items, the N) items will be reported first, followed by the P) items. This is also valid for cases where Item P) contains ALL TWYS POOR. The sorting will also follow the taxiway designators, whereas ALL TWYS POOR will be the last item. **4. Aprons groups** **5. Item S)** **6. Item T)**
5	Item J) says to simply insert "DRIFTING SNOW" (when reported) without the RWY designator. Nevertheless Item K) says to insert the lower RWY designator and with a space "LOOSE SAND" (if LOOSE SAND is reported on the RWY). What is the logic behind the two different cases, one with the RWY designator and the other without? *Ref.: PANS-AIM 10066, Appendix 4 SNOWTAM Format applicable on 5 November 2020, Instructions for Item J) and*	Is RWY Designator needed for Drifting Snow (as for the loose sand)? (This item has a link with item 6 above.)	Drifting snow is an ensemble of snow particles raised by the wind to small heights above the ground (WMO definition). Drifting snow refers to the airport (whole movement area) not to a specific runway.	EAD will implement the EAD system parameter {SNOWTAM_2020_DRIFTING_PER_RWY}. By default, this parameter will be set to "N". In this case, DRIFTING SNOW (Item J)) information is provided only once as it is not runway-specific. If ICAO decides that the RWY ID must be presented, the EAD parameter will be changed

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
	Item K)			from the default "N" to "Y" and then Item J) will also be generated inside each runway group with a similar text structure as the other items: RWY nn [L] or nn [C] or nn [R] DRIFTING SNOW
6	The abbreviated heading – geographical designator for States  SW**AA**: geographical designator for States, e.g. LF = FRANCE - Three States (Australia, Canada and USA) have **ONLY ONE** nationality letter: C (Canada), Y (Australia), K (US) - What second letter shall be used for Canada, Australia and the US?	- "X" could be used as a second letter for Canada (CX) and Australia (YX). - For the USA -> KX cannot be applied as they use different NOFs for the time being. Clarification needed by ICAO	Possible rejection of SNOWTAMs The NACC Office should look into this to see what is the current practice for Canada and the USA.	EAD recommends use of "X" as the second letter for Canada (CX) and Australia (YX). However, for the USA -> KX cannot be applied, as they use different NOFs.
7	Apron/TWY designators: - What characters are allowable? i. Alphanumeric characters ii. Symbols (hyphen, underscore, space, etc.) - Is there any length limitation (similar to AIXM)?	Examples from some AIPs: Apron: APRON, APRON 2, APRON II, SAULT COLLEGE APRON, 1, II, IV, APRON II (MNR), CANADIAN WARPLANE HERRITAGE MUSEUM APRON, 51B, DE-ICING, APRON MAINTENANCE_WEST, APRON (POS. 26-28) Taxiway: TWY, TWY A, TWYA, TWY1, TWY 1, A2, A, B-1, WEST, BA, K4 CATIII-RWY, NNORTH, D THR24-RWY14L, B NORTH 10/28, 08/26, W II, TWY C10/STAND102, TWY-1 **Recommendations** - These items should be flexible and accept both alphanumeric characters and symbols.	Possible rejection of SNOWTAMs Clarification could be provided in *"SNOWTAM Guidance"*.	EAD will accept only AIS-compatible characters. This means that Apron/TWY designators will be the same as those stored in the EAD SDO {National AIP}.
8	There seems to be a discrepancy between the 'general descriptions', where the 'CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (Item G)' is mandatory only when RWYCC is 1-5, and the 'field descriptions' where 'CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (Item G)' is always mandatory. The question is when is the 'CONDITION DESCRIPTION	PANS AIM (there is a discrepancy in PANS AIM): - The SNOWTAM form indicates that Item G is mandatory and not conditional.	Confusion for AISs/NOFs Corrections to these provisions could be provided in *"SNOWTAM Guidance"*.	In EAD, Item G is Mandatory regardless RWYCC values.

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
	FOR EACH RUNWAY THIRD (Item G)' mandatory?	 - Description of Item G states that Item G is mandatory and not conditional.  Item G — Condition description for each runway third. Insert any of the following conditi each runway third, separated by an oblique stroke. COMPACTED SNOW DRY SNOW DRY SNOW ON TOP OF COMPACTED SNOW DRY SNOW ON TOP OF ICE FROST ICE SLUSH STANDING WATER WATER ON TOP OF COMPACTED SNOW WET WET ICE WET SNOW WET SNOW ON TOP OF COMPACTED SNOW WET SNOW ON TOP OF ICE DRY (only reported when there is no contaminant) *Note.— When the conditions are not reported, this will be signified by the insertion appropriate runway third(s).* - The general descriptions says that Item G is mandatory and then includes this condition in a bracket.  j) Mandatory information is: 1) AERODROME LOCATION INDICATOR; 2) DATE AND TIME OF ASSESSMENT; 3) LOWER RUNWAY DESIGNATOR NUMBER; 4) RUNWAY CONDITION CODE FOR EACH RUNWAY THIRD; and 5) CONDITION DESCRIPTION FOR EACH RUNWAY THIRD (when runway conditio is reported 1–5) PANS Aerodrome says that item G is mandatory without any condition.  g) **Condition description for each runway third:** to be r 2.9.5 of Annex 14, Volume I. These terms have been l and Recommended Practices in Annexes 6, 8, 11 and 1 following condition type descriptions for each runway th This information is mandatory. Clarification needed by ICAO (Should it be mandatory – with no condition – everywhere in PANS AIM as well?)		
9	Need for an AIC template (sample) for AISPs in order to use it for announcement of their plans and details on the	The AIC will be a good tool for States to put their national plan together and	Lack of awareness of stakeholders of the implementation	

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
	implementation of GRF and the new SNOWTAM format	carry out the necessary coordination among their national stakeholders. It will provide good evidence for ICAO to monitor the situation with the various States. It will also be useful for users. Some States have started developing an AIC template. It is possible to work with those States to make a general template to be used by all States.	Some States already have their own AICs which could be distributed to all States. Provided as part of the *SNOWTAM Guidance*	
10	Need for guidance material (as part of Doc 8126 or any type of GM) describing the implementation guidelines and explaining the SNOWTAM format and elements in more detail	As a first step (quick action), a brief document could be developed (by a group of volunteers) to include the following: - the missing codes of the SNOWTAM format and the clarifications needed as explained in the items above; - details on each element of the SNOWTAM format; - some implementation guidelines. This document should be published by ICAO as a matter of priority through a mechanism which does not involve a long process (this should be issued as soon as possible but not later than December 2019). The second step would be for ICAO to later include the provisions of this document in the PANS AIM and Doc 8126, as appropriate.	Confusion and lack of sufficient knowledge and information for NOFs may lead to non-implementation or difficulties for AISPs. Development of *"SNOWTAM Guidance for SNOWTAMs"* would form the basis for future inclusion in DOC 8126	
11	There is a need for training material and a course specifically for AIS staff.	ACI has developed a course for airport operators. IATA is developing course for airline operators. No specific course exists for AIS. A half-day CBT course is proposed for development by ICAO (to be available as soon as possible) (or classroom course – tbd). The volunteer group (mentioned in item 10) could put the training	Lack of sufficient knowledge among AIS staff and difficulty with implementation (as raised by many States' AISPs) Development of *"SNOWTAM Guidance"* would help.	Web-based training prepared by EUROCONTROL concerning general information related to the changes with a **new** SNOWTAM form might be provided.

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
		materials together using the current PANS AIM and PANS Aerodrome provisions as well as the guidance material which they develop (referred to in the previous item).		
12	The Validity of SNOWTAMs after 5 November 2020 is 8 hours and before that it was 24 hours. After the publication of the PANS AIM, the validity of both SNOWTAM formats (the one up to 5 NOV and the one after 5 NOV) are both written as 8 hours (probably because of a printing error). *Ref.: PANS-AIM Doc 10066, Appendix 4 SNOWTAM Format (applicable until 4 November 2020), page App. 4-2, 1. General-item d)*	This item should be 24 hours. This must be a typographical error.	To be corrected in the *"SNOWTAM Guidance"*	
13	Conditional Fields, Items E), F): What has to be inserted for the other two thirds if the condition applies only to one third of the RWY (and the other two thirds are dry and clean)? Example: C) Runway 09 D) RWYCC 6/6/5, G) DRY/DRY/STANDING WATER: Question for E) und F): E) ?/?/100, F) ?/?/04 *Ref.: PANS-AIM Doc 10066, Appendix 4 SNOWTAM Format applicable on 5 November 2020, Instructions 2. Item E) Note 1 and 2; Item F) Note 1 and 2*	According to PANS AD, Item E is not reported for one runway third if it is dry or less than 10% covered. Examples: 25/50/100 NR/50/100 if contaminant coverage is less than 10% in the first third, 25/NR/100 if contaminant coverage is less than 10% in the middle third, 25/50/NR if contaminant coverage is less than 10% in the last third.	The problem has been resolved (closed).	
14	Item F) (Depth of loose contaminant): The field condition is not clear in case of a depth below the minimum values for the contamination of slush, wet snow and dry snow. Which values have to be inserted in those cases in item F) and G). *Ref.: PANS-Aerodromes II-I-13 Table II-I-2, Notes 1-3*	According to PANS AD, the value could be below the minimum in the case of significant changes. Here are examples from 9981: 04/06/12 [STANDING WATER] 02/04/09 [SLUSH] 02/05/10 [WET SNOW or WET SNOW ON TOP OF ...] 02/20/100 [DRY SNOW or DRY SNOW ON TOP OF]	The problem has been resolved (closed).	
15	Validity 8 hours: It is not clear whether a series of SNOWTAMs should end with a final SNOWTAM reporting "DRY – RWYCC 6", or if no SNOWTAM is issued after 8 hours, does it mean that there is no longer any contamination. What is the valid status of the contamination if no SNOWTAM is issued after 8 hours? *Ref.: PANS-Aerodromes Doc 9981, Part II, Chapter 1*	Either the reported runway surface condition ends as a result of the issuing of a SNOWTAM reporting RWYCC 6, or the SNOWTAM expires after 8 hours. If no SNOWTAM is issued after 8 hours, the previous SNOWTAM is	The problem has been resolved (closed).	

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
	applicable on 5 November 2020, 1.1.3.2	considered to have "expired" and it should be understood that there is no longer any contaminant on the runway.		
16	The new ICAO SNOWTAM FORMAT cannot be used for manual entries in the form (owing to lack of space). How should a manual entry be made in practice, e.g. in field G), or if several entries have to be mad in the Situational Awareness Section? *Ref.: PANS-AIM Doc 10066, Appendix 4 SNOWTAM Format applicable on 5 November 2020*	Airport operators should develop their own form (Runway Condition Report – RCR) to collect runway surface condition data (based on the GRF provisions). When the RCR is filled in, it should be sent to the NOF. The RCR form should be in line with the SNOWTAM format (so as to be easily understandable for NOF personnel and able to be copied into SNOWTAM format by the NOF) On the NOF side, the NOTAM/SNOWTAM system should be updated in line with the new format, in order to accept the new entries. ICAO may provide a sample RCR form for airport operators. 	This is an airport operator problem (not an AIS-related problem).	
17	The Acronym "SNOWTAM" is obviously not applicable to those conditions which are related only to water/standing water or loose sand – especially in regions which never have snow and have therefore never issued a SNOWTAM. A new acronym which is better related to RWY conditions should be created.	The new SNOWTAM could also be issued where there is standing water not necessarily associated with snow. However, there is no short plan currently to change the acronym. The IMP (WG-A) is conducting a thorough review of the NOTAM system. WG-A should be informed of this comment.	This is not an immediate problem (but should be considered by the IMP in future NOTAM improvements).	
18	Item F) (Depth of loose contaminant): Significant changes for	Clarification needed	This is an airport operator problem	

	Question/Issue	Comment/Initial analysis	Remarks (Impact, if the issue is not resolved)	EAD implementations policy/approach
	standing water and slush: What is the reason for the upper limit for the significant change? What action is to be taken if a change of more than the upper limit occurs? *Ref.: PANS-Aerodromes II-I-13 Table II-I-2*		(not an AIS-related problem).	
19	Item G) (Condition Description): It is clear that there could be different conditions on each third of the RWY. It is not clear whether it is possible to insert more than one condition on a single third of the RWY. If this is the case (contrary to our expectations), how must those conditions be inserted? (Syntax!) *Ref.: PANS-AIM Doc 10066, Appendix 4 SNOWTAM Format applicable on 5 November 2020, Instructions for Item G)*	The dominant contamination or the one which may have the most severe safety consequences should normally be reported. (Please read ICAO Circular 355, paragraph 4.47, for more details on "Multiple Contaminants".)	The problem has been partially resolved.	
20	Item I) – Reduced runway length: conditional: only when a NOTAM has been published with a new set of declared distances. Does this mean that a NOTAM containing the new RWY length has to be issued in addition to the SNOWTAM if the clearance does not cover the whole length of the RWY, or does it mean that the reduced RWY length has to be inserted if a NOTAM was published concerning the reduced RWY length (of the dry RWY)? *Ref.: PANS-AIM Doc 10066, Appendix 4 SNOWTAM Format applicable on 5 November 2020, Instructions for Item I), in particular Note to Item)*	It can be understood from the note to Item I) that: when runway length is reduced owing to the closure of part of a runway (as a result of contaminant on the runway which has not been cleared), a SNOWTAM should be issued with the new runway length (Item I) and a NOTAM should also be issued together with the SNOWTAM to indicate the new declared distances. The SNOWTAM is not the consequence of the NOTAM or vice versa. Both should be issued as a consequence of the closure of part of a runway due to a contaminant. The wording of the note may have caused confusion (ICAO to consider).	The problem has been partially resolved.	
21	MEASURED FRICTION COEFFICIENT (Item S) a. In order to be able to recognise Item S and not to confuse it with Item T (text) during SNOWTAM processing/parsing, it is necessary to know the format of Item S. In the current Annex 15, it is a single digit for each third of the runway, separated by an oblique stroke (/): 5/5/5. Will this format remain the same?	Automated systems might need to have a defined format for Item S in order for this item to be recognised and also to allow Item S and the next item (Item T) to be distinguished. Clarification needed by ICAO	Confusion for automated systems to recognize and analyse SNOWTAM messages	

Attachment B:
Sample AIC Template

[AIC HEADER]	AIC n /2020 1 XXX 20

SUBJECT: IMPLEMENTATION OF THE GLOBAL REPORTING FORMAT (GRF)

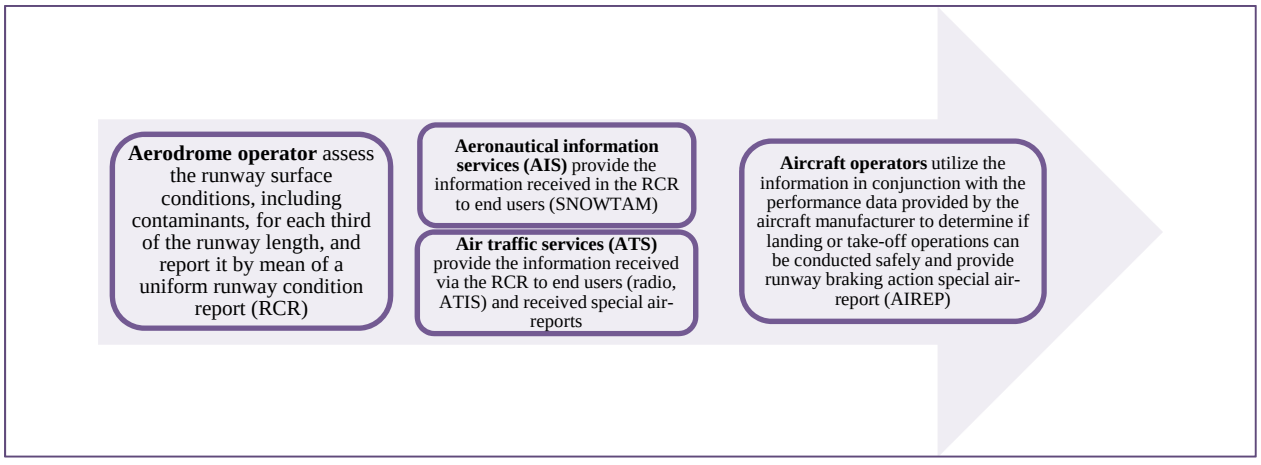
1. INTRODUCTION:

1.1. The new ICAO methodology for assessing and reporting runway surface conditions, commonly known as the Global Reporting Format (GRF), enables the harmonized assessment and reporting of runway surface conditions and a correspondingly improved flight crew assessment of take-off and landing performance.

The GRF, applicable on **5 November 2020**, is described through amendment 13-B to Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*; Annex 3 — *Meteorological Service for International Air Navigation*; Annex 6 — *Operation of Aircraft*, Part I — *International Commercial Air Transport — Aeroplanes and Part II — International General Aviation — Aeroplanes*; Annex 8 — *Airworthiness of Aircraft*; Annex 15 — *Aeronautical Information Services* and *Procedures for Air Navigation Services* (PANS) — *Aerodromes* (PANS-Aerodromes, Doc 9981), *Aeronautical Information Management* (PANS-AIM, Doc 10066) and *Air Traffic Management* (PANS-ATM, Doc 4444).

In addition, supporting material is available in Circular 355, *Assessment, Measurement and Reporting of Runway Surface Conditions* and in the Doc 10064 *Aeroplane Performance Manual* (in preparation).

2. FLOW OF INFORMATION:



2.1 **Collection of information:** *aerodrome operator* is responsible to assess the condition of the runway for each third of the runway and issue a Runway Condition Report (RCR). This report contains the RWYCC (Runway Condition Code) and information which describes the runway surface condition:

type of contamination, depth, coverage for each third of the runway, etc. and other relevant information. This code is derived from the Runway Condition Assessment Matrix (RCAM).
Note – Details of the Global Reporting Format is contained in the Procedures for Air Navigation Services (PANS) — Aerodromes (PANS-Aerodromes, Doc 9981) and ICAO Circular 355 (Assessment, Measurement and Reporting of Runway Surface Conditions).

Runway condition assessment matrix (RCAM)			
Assessment		**Downgrade assessment criteria**	
Runway condition code	**Runway surface description**	**Aeroplane deceleration or directional control observation**	**Pilot report of runway braking action**
6	• DRY	---	---
5	• FROST • WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) ***Up to and including 3 mm depth:*** • SLUSH • DRY SNOW • WET SNOW	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD
4	***−15ºC and Lower outside air temperature*:** • COMPACTED SNOW	Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	• WET (“slippery wet” runway) • DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW ***More than 3 mm depth:*** • DRY SNOW • WET SNOW ***Higher than −15ºC outside air temperature*:** • COMPACTED SNOW	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM
2	***More than 3 mm depth of water or slush:*** • STANDING WATER • SLUSH	Braking deceleration OR directional control is between Medium and Poor.	MEDIUM TO POOR
1	• ICE	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR
0	• WET ICE • WATER ON TOP OF COMPACTED SNOW • DRY SNOW or WET SNOW ON TOP OF ICE	Braking deceleration is minimal to non- existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR

2.2 **Dissemination of information:**

- *Aeronautical information services (AIS)* provide the information received in the RCR to end users through SNOWTAM in the new format.

  Note – Details of the new SNOWTAM format is contained in the Procedures for Air Navigation Services (PANS) — Aeronautical Information Management (PANS-AIM, Doc 10066). Additional information on the SNOWTAM format could be found in the ICAO EUR/NAT Guidance on the Issuance of SNOWTAM (EUR Doc xxx).

- *Air traffic services (ATS)* provide the information received via the RCR to end users through radio, ATIS, etc. and received special air-reports.

2.3 **Using the information:** *Aircraft operators* utilize the information in conjunction with the

performance data provided by the aircraft manufacturer to determine if landing or take-off operations can be conducted safely and provide runway braking action special air-report (AIREP).

3. IMPLEMENTATION PLAN:

Date of implementation

3.1. The new ICAO GRF including the new SNOWTAM format will be implemented in [*Name of State*] on 5 November 2020 at 0000 UTC.

3.2. The National GRF Implementation Plan of [*Name of State*] is contained at **Attachment** to this AIC.

National GRF implementation Team

3.3. [*provide some information about your national GRF implementation team which is in charge of planning and implementation of GRF at the national level*]

Stakeholders involved

3.4. The following stakeholders in [*Name of State*] are involved in the implementation of the GRF:

- Aerodromes:
  - [*Name of concerned aerodromes*]
  - [*Name of concerned aerodromes*]
  - [*Name of concerned aerodromes*]
- Air Traffic Services (ATCOs)
- Aeronautical Information Services (International NOTAM Office)
- Airlines (flight operations departments, dispatchers, pilots)
- Civil Aviation Authority

Coordination between aerodromes, AIS (NOF) and ATS units

3.5. [*explain the mechanisms and processes of coordination between aerodromes, ATS and AIS, point of contacts, etc. or refer to the other local procedure that contains this information, if available*]

Training and awareness

3.6. [*explain the awareness, training and promotion activities on GRF, SNOWTAM and other relevant provisions that are planned for different stakeholders*]

Tests and trials

3.7. [*insert information about your planned tests and trials, if any*]

Other information

3.8. [*include any other information that may be useful*]

GRF Implementation Plan/Checklist (Sample)

ID	TASK	WHO	WHEN	REMARKS
GRF 1	**Establish a *GRF implementation team*** at the State Level	State GRF implementation team - CAA (*responsible entity for implementation*) - Aerodromes (*name of the concerned ADs*) - ANSP/ATS (*name it*) - Airlines (*name of airlines concerned*) - AIM (NOF)	[*planned date*]	
GRF 2	**Educate** by reviewing the following **documentation**: - ICAO Circular 355 - Annex 14 - PANS ADR - ICAO GRF Symposium presentations - ICAO Doc 10064 - ICAO Doc 10066 - EUR Doc xxx (SNOWTAM) **Educate** by **attending**: - ICAO Regional Workshops **Educate** by **conducting**: - State Level Workshops/Seminars	State GRF implementation team - In coordination with national bodies representing airports, ANSPs, Airlines, AIM, etc.	[*planned date*]	
GRF 3	**Promote** GRF in context of safety by developing: - brochures - website material	State GRF implementation team - distribution should also include GA/BA and Military	[*planned date*]	
GRF 4	**Train relevant stakeholders on GRF** (likely computer based training as provided by e.g. ACI) **Train relevant groups that interface with customers on GRF** so they can brief their customers when on audit/inspections	Relevant stakeholders: - ACI - IATA - IFATCA - IFALPA State GRF implementation team assures training for: - ADR/ATM - FO inspectors	[*planned date*]	

ID	TASK	WHO	WHEN	REMARKS
GRF 5	**Update SNOWTAM Format**	State GRF implementation team assures SNOWTAM template is updated by: - AIM	[*planned date*]	
GRF 6	**Train on SNOWTAM Format**	State GRF implementation team assures training on SNOWTAM format by: - AIM	[*planned date*]	
GRF 7	**Update AIP**	State GRF implementation team assures AIP is updated by: - AIM	[*planned date*]	
GRF 8	**Conduct parallel test of GRF**, if applicable **Conduct analysis** using archives of SNOWTAM & AIREPS (this should also be considered after implementation to identify errors)	State GRF implementation team coordinates parallel test with the necessary stakeholders: - Airport operators - ANSP - CAA - Airlines - AIS	[*planned date*]	
GRF 9	xxx	-	[*planned date*]	
GRF 10	xxx	-	[*planned date*]	

- END -