GUIDANCE MATERIAL ON THE ISSUANCE OF SNOWTAM

CAAT-ANS-GM1-SNOWT

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Approval by

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0.   INTRODUCTION

0.1   Background

The Amendment 39-B to Annex 15 of Chicago Convention concerning the use of a Global Reporting Format (GRF) for assessing and reporting runway surface condition and introducing a new SNOWTAM format, based on the recommendations of the Friction Task Force of the Aerodrome Design and Operations Panel (ADOP).

The Amendment 39-B to Annex 15 was adopted on 9 March 2018 with the applicable date of 5 November 2020. By the Amendment 42 to Annex 15, the applicable date has been postponed to 4 November 2021 due to the on-going COVID-19 pandemic and the associated challenges facing the aviation industry.

According to a Global Reporting Format (GRF), the significant information related to runway surface condition must be disseminate through SNOWTAM in a new format by State AIS/NOF.

To introduce a new SNOWTAM format in Thailand where snow and ice conditions do not exist is a significant change. Therefore, Guidance Material on the Issuance of SNOWTAM is developed to assist the State AIS/NOF to issue SNOWTAM in the new format and support the GRF implementation.

0.2   Purpose

This Guidance Material has been developed to provide explanation and examples for issuing SNOWTAM in the new format (as of 4 November 2021) in support of GRF implementation at State's AIS/AIM level

0.3   Applicability

This Guidance Material applies for Air Navigation Service Providers and Airport Operators.

0.4   Effective Date

4 November 2021

0.5   Reference

a) The Requirements of the Civil Aviation Authority of Thailand No. 14 – Aerodrome Standards

b) Regulation of The Civil Aviation Authority of Thailand on Aeronautical Information Services Standards

c) The Civil Aviation Authority of Thailand Rules on Manual of Standards of Aeronautical Information Services

d) Annex 14 to the Convention on International Civil Aviation, Volume 1 – Aerodrome Design and Operations

e) Procedures for Air Navigation Services (PANS) — Aeronautical Information Management (PANS-AIM, Doc 10066)

f) Procedures for Air Navigation Services (PANS) — Aerodromes (PANS-Aerodromes, Doc 9981)

g) Assessment, Measurement and Reporting of Runway Surface Conditions (ICAO Circular 355)

h) Guidance on the issuance of SNOWTAM, developed by the ICAO European and North Atlantic (EUR/NAT) Regional Office, in collaboration with EUROCONTROL (AIM/SWIM Team and EAD)

1. GENERAL PROVISIONS OF SNOWTAM

According to the definition of SNOWTAM in Amendment 42[1] to Annex 15 of Chicago Convention, SNOWTAM means 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.

1.1. 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 of measurement are metric but is not reported in the message.

1.2. As of 4 November 2021, 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 is assumed that there is no more significant runway surface condition to be reported.

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

Note 1 – prior arrangement between AIS/NOF and the aerodrome operator is required to specify the means and process of submission of the Runway Condition Report (RCR)/initiation of SNOWTAM.

Note 2 – If there is a valid SNOWTAM in the old format (with 24 hours validity) issued on 3 November 2021, it is recommended to issue a new SNOWTAM with the new format, right after 0000 UTC to replace the old format SNOWTAM.

1.4. 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).

1.5. With reference to the SNOWTAM format (see Chapter 2), the letters used to indicate items (A to T; third column of the SNOWTAM template) are only used for reference purpose and

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[1] Applicable as of 4 November 2021

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 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH**

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

- *SW* = data designator for SNOWTAM;
- *VT* = geographical designator for Thailand (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 Bangkok/Suvarnabhumi Intl Airport, measurement/observation of 7 November at 0620 UTC: **SWVT0149 VTBS 11070620**

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

1.7.   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).

1.8.   <u>**Repeating information in the aeroplane performance calculation section for more than one runway:**</u> 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 5/2/2 100/75/75 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 3/3/3 50/50/75 08/15/10 WET SNOW/WET SNOW/WET SNOW 40
```

1.9. **Repeating information in the situational awareness section:** When reported, the information in the situational awareness section could be repeated, as applicable, for each runway, taxiway and apron.

Note 1.— Option 1: it is recommended that the items of situational awareness section be kept in alphabetical 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.)
```

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.)
```

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.).

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

1.11. 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. — When no information is to be reported, insert "NR" at its relevant position in the message to indicate to the user that no information exists (/NR/).

Example: a SNOWTAM with the minimum (mandatory) information

```
GG ZZZZZTZX …
111045 VTBDYNYX
SWVT0124 ZZZZ 01111035
(SNOWTAM 0124
ZZZZ
01111035 09R 5/4/4 NR/NR/NR NR/NR/NR SLUSH/COMPACTED SNOW/COMPACTED
SNOW)
```

2.   DESCRIPTION OF SNOWTAM ITEMS

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

SNOWTAM FORMAT

(applicable as of 4 November 2021)

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSES)						<≡
	(DATE AND TIME OF FILING)		(ORIGINATOR'S INDICATOR)					<≡

(Abbreviated heading)	(SWAA* SERIAL NUMBER)		(LOCATION INDICATOR)		DATE/TIME OF ASSESMENT		(OPTIONAL GROUP)	
	S	W	*	*				<≡(

| 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)*

2.1   Section 1: Aeroplane Performance Calculation Section

2.1.1. **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: **VTBS** = *Bangkok/Suvarnabhumi INTL Airport*

2.1.2. **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)

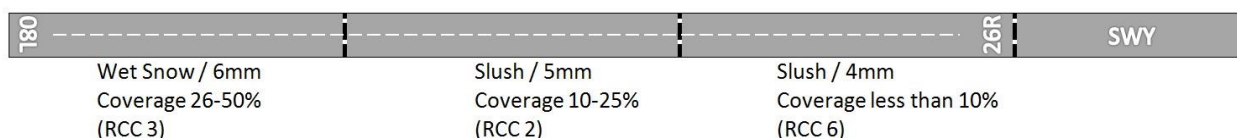2.1.3. **Item C** — Lower runway designator number (nn[L] or nn[C] or nn[R])

Note.1 — 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)*

2.1.4. **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, for the second part is 2 and for the third parts is 2.*

Wet Snow / 6mm	Slush / 5mm	Slush / 4mm
Coverage 26-50%	Coverage 10-25%	Coverage less than 10%
(RCC 3)	(RCC 2)	(RCC 6)

Runway condition assessment matrix (RCAM)

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

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).

2.1.5. **Item E** — Per cent coverage 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 shall be reported by inserting "NR".

Note 4. – When no information is to be reported, insert "NR" at its relevant position in the message to indicate to the user that no information exists (/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.*
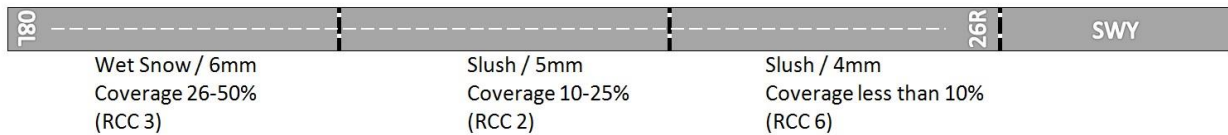
2.1.6. **Item F** — Depth of loose contaminant for each runway third. When provided, insert in millimetres for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn). Depth should be reported in 2 or 3 digits (i.e. 05 for 5mm, 115 for 115mm, etc.) and the units of measurement (mm) 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.*

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.

Note 4. – For contaminants other than STANDING WATER, SLUSH, WET SNOW or DRY SNOW, the depth is not reported. The position of this type of information in the information string is then identified by /NR/.

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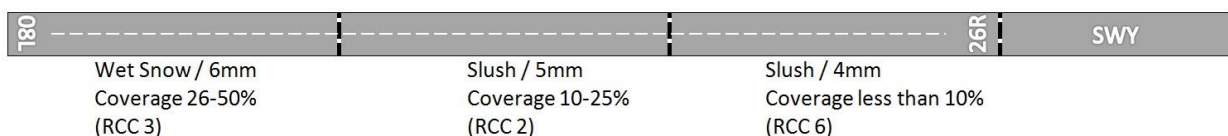
2.1.7. **Item G** — **Condition** description for each runway third. Insert any of the following condition descriptions for each runway third, separated by an oblique stroke:

- 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)

Note 1. — When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

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.*

2.1.8. **Item H** — Width of runway to which the runway condition codes apply. Insert the width in meters (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.*

2.2 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.

Note 3. — The situational awareness section shall be separated from the aeroplane performance calculation section by an empty line.

2.2.1. **Item I** — Reduced runway length. Insert the applicable 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.`

2.2.2. **Item J** — Drifting snow on the runway. When reported, insert "DRIFTING SNOW".

> *Example:* `DRIFTING SNOW.`

> *Note 1. — Drifting snow is an ensemble of snow particles raised by the wind to small heights above the ground (WMO definition).*

> *Note 2. – Drifting snow in the SNOWTAM format refers to the airport (the whole movement area), not a specific runway. However, for large airports with several runways where drifting snow could exist in one or some runways (not all), item J) might be reported with relevant runway designator, e.g.* `RWY 08 DRIFTING SNOW`

2.2.3. **Item K** — Loose sand on the runway. When 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.`

2.2.4. **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.`

2.2.5. **Item M** — Snow banks on the runway. When snow banks are 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.`

2.2.6. **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.`

Note 1. — when there are snow banks on every taxiway, "ALL TWYS SNOWBANKS" might be used.

2.2.7. **Item O** — Snow banks adjacent to the runway. When snow banks are 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.`

2.2.8. **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.`

2.2.9. **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.`

2.2.10. **Item S** — Measured friction coefficient. Where reported, insert the measured friction coefficient and friction measuring device.

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

2.2.11. **Item T** — plain language remarks.

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3.   EXAMPLES OF SNOWTAM

Example 1:

GG …

170140 VTBDYNYX

SWVT0150 ZZZZ 02170135

(SNOWTAM 0150

ZZZZ

02170055 09L 5/5/4 100/100/100 NR/03/03 WET/WET SNOW/COMPACTED SNOW

02170135 09R 5/2/2 75/50/75 NR/06/06 WET/SLUSH/SLUSH 40)

Example 2:

GG …

170229 VTBDYNYX

SWVT0151 ZZZZ 02170225

(SNOWTAM 0151

ZZZZ

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 …

170350 VTBDYNYX

SWVT0152 ZZZZ 02170345

(SNOWTAM 0152

ZZZZ

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 …

170440 VTBDYNYX

SWVT0153 ZZZZ 02170435

(SNOWTAM 0153

ZZZZ

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 2/2/2 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.)

Example 5:

GG …

170540 VTBDYNYX

SWVT0154 ZZZZ 02170535

(SNOWTAM 0154

ZZZZ

02170535 09L 6/6/6 NR/NR/NR NR/NR/NR DRY/DRY/DRY

02170515 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH

02170500 09C 2/2/2 75/75/50 06/12/12 SLUSH/SLUSH/SLUSH 40

DRIFTING SNOW. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

4. CONCLUSIONS

4.1. Appropriate means of communication between the airport operators (the originators of the runway condition reports through RCR) and the AIS/NOF (responsible to disseminate information through SNOWTAM according to the information received by RCR) must be ensured.

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

- All mandatory information items (items A, B, C, D and G, as appropriate) are provided
- Items E, F and G are not empty (values to be provided) or the position of this type of information in the information string would be identified by NR
- The syntax requirement of SNOWTAM in PANS-AIM is strictly adhered
- Information provided is in accordance with the criteria explained above (in terms of units of measurement, format of data, etc.)
- Information conforms to 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. – in case AIS/NOF needs clarification on the information received through RCR, necessary coordination should be made with the relevant airport operators.

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

Note 3. – AIS/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 operators through RCR.

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

4.4. 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.

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

4.6. 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, AIS/NOF, ATS, users, etc.); - explain coordination processes between airports, AIS/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 of AIC Template is provided at **Appendix A**: Sample AIC Template *to this Guidance Material. However, the content of the AIC depends on the information and the arrangements required by concerned stakeholders in State.*

Appendix A: Sample AIC Template

Phone: +662 568 8831 Fax: +662 576 1903 AFTN: VTBAYOYX E-mail: aisthai@caat.or.th ais@caat.or.th	**THE CIVIL AVIATION AUTHORITY OF THAILAND** **Aeronautical Information Services Department** **333/105 Lak Si Plaza, Khamphaeng Phet 6 Rd.,** **Talat Bang Khen, Lak Si, Bangkok 10210 Thailand**	AIC xx/21 xx xxx 2021

IMPLEMENTATION OF THE GLOBAL REPORTING FORMAT

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 **4 November 2021**, is described through

- Annex 14 — Aerodromes, Volume I — *Aerodrome Design and Operations*;
- Annex 3 — Meteorological Service for International Air Navigation;
- Annex 6 — Operation of Aircraft;
  - o Part I — International Commercial Air Transport — Aeroplanes and
  - o Part II — International General Aviation — Aeroplanes;
- Annex 8 — Airworthiness of Aircraft;
- Annex 15 — *Aeronautical Information Services;*
- *Procedures for Air Navigation Services* (PANS) — *Aerodromes* (PANS-Aerodromes, Doc 9981),
- *Procedures for Air Navigation Services* (PANS) — *Air Traffic Management* (PANS-ATM, Doc 4444),
- *Procedures for Air Navigation Services* (PANS) — *Aeronautical Information Management* (PANS-AIM, Doc 10066)

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:
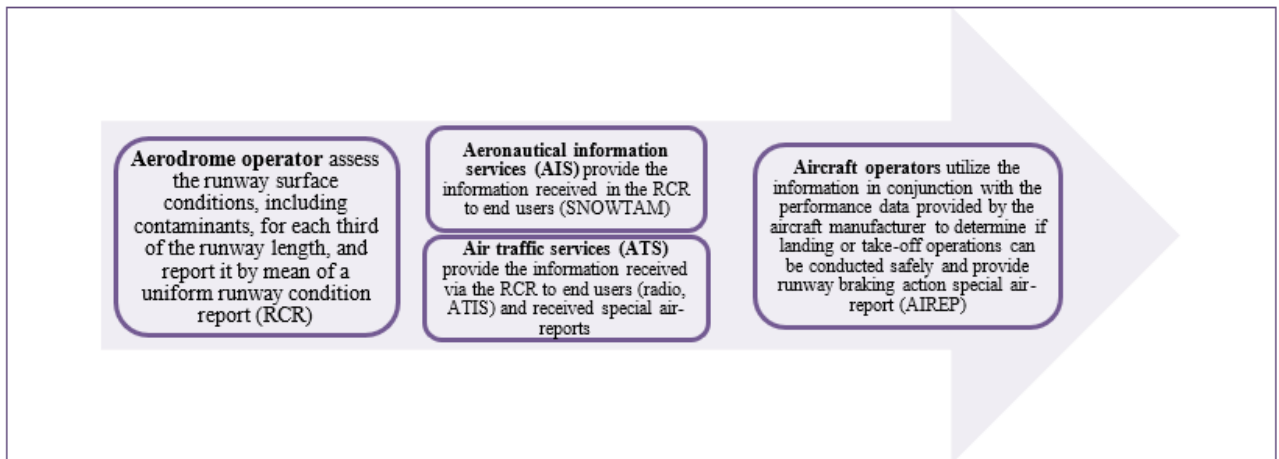
2.1. Collection of information:

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) and associated procedures for downgrading and upgrading.

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

Runway condition assessment matrix (RCAM)			
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

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).

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 CAAT Guidance on the Issuance of SNOWTAM.*

• *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 Thailand on **4 November 2021** at 0000 UTC.

3.2. The National GRF Implementation Plan of Thailand 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 Thailand are involved in the implementation of the GRF:

- Aerodromes:
  - o [*Name of concerned aerodromes*]
  - o [*Name of concerned aerodromes*]
  - o [*Name of concerned aerodromes*]

- Air Traffic Services (ATCOs)
- Aeronautical Information Services (International NOTAM Office)
- Airlines (flight operations departments, dispatchers, pilots)
- Civil Aviation Authority of Thailand

Coordination between aerodromes, AIS/NOF and ATS units

3.5. [*explain the mechanisms and processes of coordination between aerodromes, ATS and AIS/NOF, 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 test and trials if any*]

Other information

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

Attachment to AIC Template:
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*) • AIS/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 • State Guidance on 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, AIS/NOF, etc.	[*planned date*]	

ID	TASK	WHO	WHEN	REMARKS
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*]	
GRF 5	Update SNOWTAM Format	State GRF implementation team assures SNOWTAM template is updated by: • AIS/NOF	[*planned date*]	
GRF 6	Train on SNOWTAM Format	State GRF implementation team assures training on SNOWTAM format by: • AIS/NOF	[*planned date*]	

ID	TASK	WHO	WHEN	REMARKS
GRF 7	Update AIP	State GRF implementation team assures AIP is updated by: • AIS/NOF	[*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*]	