Global methodology for assessing and reporting runway surface conditions

ICAO ESAF

Regional Office Nairobi

Keziah Ogutu   RO.ATM/SAR

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Overview

- General provision for ATM and AIM

- Definition - SNOWTAM

- ATM Provisions for GRF

- AIM Provision for GRF

- Training

- Coordination/Recommendations

GRF related provision for ATM and AIM

- GRF-related provisions contained in the **Procedures for Air Navigation Services (PANS),** which included amendments to the: **a) Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444); and b) Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066).**

- **Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981)**
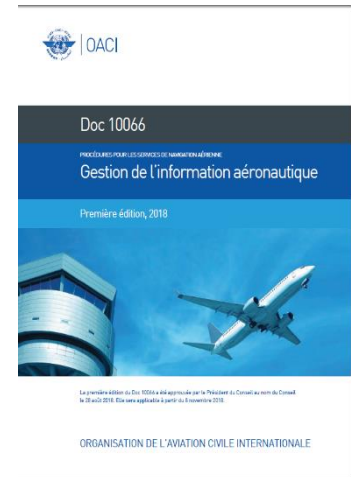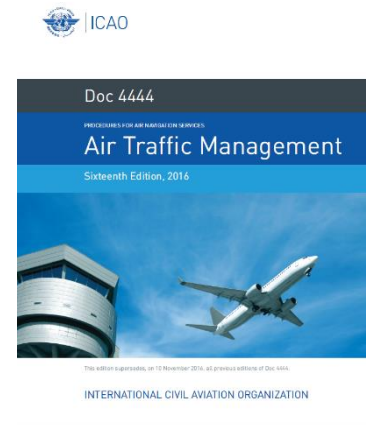
Changes in SNOWTAM Definition

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.
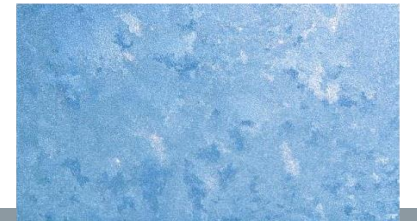
ATM

Situational awareness – understanding the environment

- Anticipation of CREW REACTION/BEHAVIOUR (go-around/aborted takeoff/runway occupancy time)

- Planning purposes, trends

- Facilitating the flow of air traffic (increased separation etc)

- Safety

WHY is the Report important for ATC ?

Pilots and ATC operate in a critical time based conditions which require:

Message has to be 100% clear -

- •Precise idea of what the runway will look like for the crew
- • Controllers (and crews) expect a certain format, in a certain order
- •No room for mis-interpretation

WHY is the Report important for ATC ?

- To anticipate and manage the flow of air traffic

- To help minimize delays

- To manage staffing, sectors openings, etc.

- Identify which airports remain valid alternates

- Assist crews in their decision making process

Dissemination information

Through the **AIS** and **ATM 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.

ATS

Voice
ATIS

Air traffic services (ATS): convey the information received via the RCR and/or special air-reports (AIREP) to end users (voice communications, ATIS, CPDLC)

Annex 11 – Chap 4

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

a)   *name of aerodrome;*

b)   *time of observation;*

c)   *landing runway;*

d)   *significant runway surface conditions and, if appropriate, braking action;*

e)   *changes in the operational state of the radio navigation services, if appropriate;*

f)   *holding delay, if appropriate;*

g)   *surface wind direction and speed; if appropriate, maximum wind speed;*

PANS ATM

ESSENTIAL INFORMATION ON AERODROME CONDITIONS

7.5.2   Essential information on aerodrome conditions shall include information relating to the following:

a)   construction or maintenance work on, or immediately adjacent to the movement area;

b)   rough or broken surfaces on a runway, a taxiway or an apron, whether marked or not;

c)   snow, slush or ice on a runway, a taxiway or an apron;

d)   water on a runway, a taxiway or an apron;

e)   snow banks or drifts adjacent to a runway, a taxiway or an apron;

f)   other temporary hazards, including parked aircraft and birds on the ground or in the air;

g)   failure or irregular operation of part or all of the aerodrome lighting system;

h)   any other pertinent information.

7.5.3   Essential information on aerodrome conditions shall be given to every aircraft, except when it is known that the aircraft already has received all or part of the information from other sources. The information shall be given in sufficient time for the aircraft to make proper use of it, and the hazards shall be identified as distinctly as possible.

Note.— "Other sources" include NOTAM, ATIS broadcasts, and the display of suitable signals.

PANS ATM

6.6.5   During final approach, the following information shall be transmitted without delay:

a)   the sudden occurrence of hazards (e.g. unauthorized traffic on the runway);

b)   significant variations in the current surface wind, expressed in terms of minimum and maximum values;

c)   significant changes in runway surface conditions;

d)   changes in the operational status of required visual or non-visual aids;

Reporting of RWYCC from ATS to flight crew

Reporting of runway condition code from ATS to flight crew for runway thirds/Reporting of runway condition code for runway thirds from ATS to flight crew on a runway with displaced threshold/ /Reporting of runway condition code for runway thirds from ATS to flight crew on a change of runway

= from the lowest value
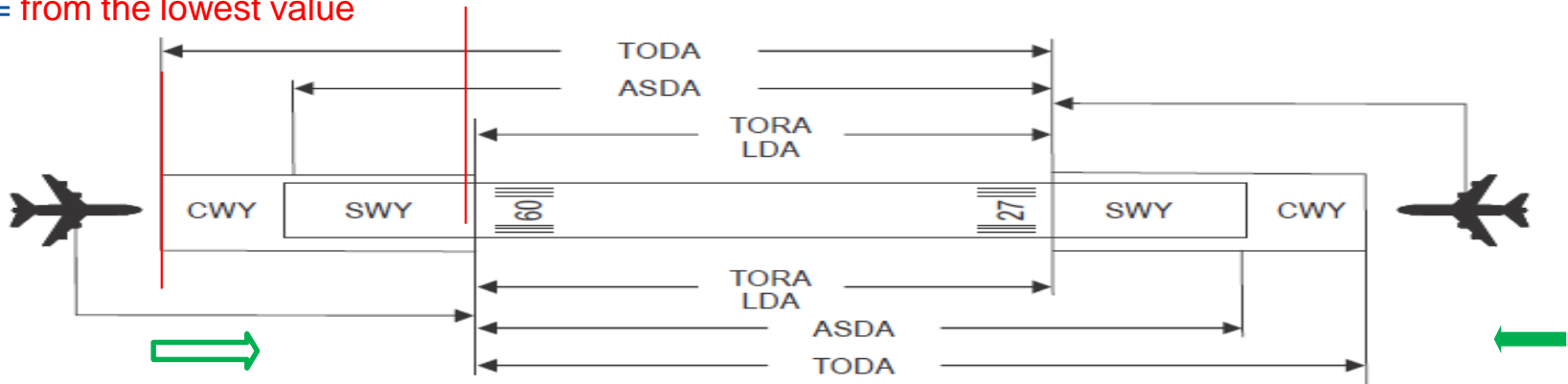
ATIS

In addition to normal operational and weather information, the following information should be mentioned about the runway condition whenever runway is not dry (RWYCC 6)

Performance section

- operational runway in use at time of the issuance;
- RWYCC for operational RWY for each third in the operational direction;
- condition description, coverage and depth (for loose contaminant);
- width of the operational RWY to which RWYCC apply if less than published;
- reduced length if less than published;

Situational awareness section

- loose sand;
- RWY exits, taxiways and apron if POOR; and
- any other remarkable information in short plain language.

Reporting from flight crew to ATS

- The pilot-in-command shall / should **report the runway braking action special air-report (AIREP)** when the runway braking action encountered is not as good as reported.

- *When receiving special air-reports by voice communications concerning braking action encountered that is not as good as that reported, air traffic service units shall forward them without delay to the appropriate aerodrome operator.*

Annex 6 Part I (Part II), 4.4 In-flight procedures

AIM

Dissemination of information

AIS

SNOWTAM

- **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.

Aeronautical information services (AIS): provide the information received in the RCR to end users (SNOWTAM)

SNOWTAM Provisions

Major changes of amendment 39B

- SNOWTAM Definition

- SNOWTAM Provisions

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


- 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.

MAJOR CHANGES ON SNOWTAM PROVISION (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:
    - 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 (when runway condition code is reported 1- 5)

SNOWTAM

OLD
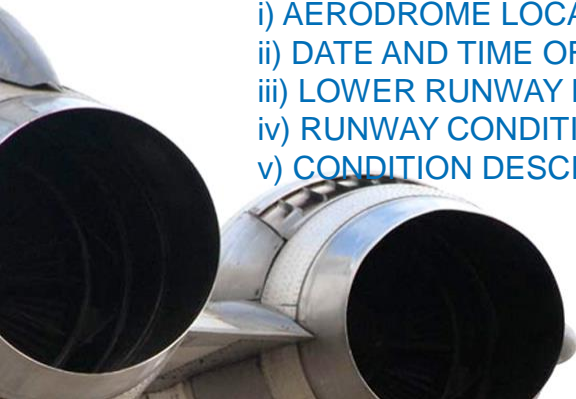
- G~~ ~~MZQZX EDR~~~~X EKCHZQZX
- ~~ ~~~~HYNY~~
- S~~ ~~
- (SN~~ ~~
- A) LS~~ ~~
- B) ~~ ~~
- ~~ ~~
- ~~ ~~C) 12~~ ~~
- R)~~ ~~S) 11070920
- T) DEICING

NEW

- GG EADBZQZX EADNZQZX EADSZQZX
- 170350 EADDYNYX
- SWEA0149 EADD 02170345
- (SNOWTAM 0149
- EADD 02170345 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET
- EADD 02170134 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH
- EADD 02170225 09C 3/2/1 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.)

TRAINING

- **Air Traffic Controller Required Training**
  - **Develop Training and Training Guidance** Appropriate timelines and methods must be established
  - Training and updates must be consistent state-wide
  - Recommend establishing a training framework/template for standardization
  -
  - **Brief Procedural Changes to All Controllers** Terminal facilities
  - EnRoute facilities
  - Both state run and non-government facilities

Emphasize Controller Procedures <u>NOT</u> Affected

- **Controllers will** still solicit braking action reports from pilots after/upon landing
- **Controllers will** disseminate to Airport Operators, and pilots, pertinent changes to surface/landing conditions received via AIREPS/NOTAMS
- **Controllers will** disseminate new information via ATIS broadcasts like Runway Condition Codes.

TRAINING

- AIS officers require to understand the new changes to the SNOWTAM format

- The requirements for issuing SNOWTAM

- New Coordination procedures for dissemination of information

- New changes in the AIM system (if any)

COORDINATION and OTHER RECOMMENDATIONS

- Updating State's regulatory framework

– updating National regulations (transposition of ICAO provisions to the national regulations)

– filing differences in EFOD / publishing significant differences in AIP (if required)

- Establishment of a national implementation team & plan that takes into account the modified ICAO provisions; training, awareness, education;

- Coordination between ATS units, AIS, affected aerodromes, and Users (operators/airlines) of the new requirements and changes (through circular, etc.);

- Revision/updating of the software/templates used to issue/receive SNOWTAM (NOTAM/SNOWTAM system);

- Updating the letters of agreements/MOUs between ATS, aerodromes and AIS; and

- Publication of an aeronautical information circular (AIC) for awareness and readiness of all stakeholders.

- HANDS ON EXERCISE to test the coordination process