# **AD 1.2.2 SNOW PLAN** (applicable from 4 November 2021)

# 1. Organization of winter service.

- 1.1. During the winter period BTN 01 NOV and 01 APR, the Aerodrome Service at the aerodromes listed below will conduct the following duties:
  - i. surveillance regarding ice, snow or slush removal on maneuvering area and apron;
  - ii. braking action estimation when more than 10% of the area of the runways, taxiways and aprons are covered with ice, snow and/or slush;
  - iii. measures taken for the usability of the runways, taxiways and aprons;
  - iv. reporting of the above mentioned conditions in the i) to iii) points.
- 1.2. Aerodrome operators are responsible for snow clearance and for assessing, improving and reporting runway surface conditions.
- 1.3. General policy concerning operational priorities established for the clearance of movement areas is:
  - i. Information on the condition of the movement area and the operational status of related facilities is providing to the appropriate aeronautical information services units, and similar information of operational significance to the air traffic services units, to enable those units to provide the necessary information to arriving and departing aircraft. The information is keeping up to date and changes in conditions reported without delay.
  - ii. Snow, slush, ice, standing water, mud, dust, sand, oil and other contaminants are removing from the surface of runways in use as rapidly and completely as possible to minimize accumulation.
- 1.4. The general policy concerning trend monitoring of surface friction characteristics, and what constitutes a complete survey:
  - i. the condition of the movement area and the operational status of related facilities are monitored, and reports on matters of operational significance affecting aircraft and aerodrome operations are provided in order to take appropriate action, particularly in respect of the following:
    - construction or maintenance work;
    - rough or broken surfaces on a runway, a taxiway or an apron;
    - water, snow, slush, ice, or frost on a runway, a taxiway or an apron;
    - anti-icing or de-icing liquid chemicals or other contaminants on a runway, taxiway or apron;
    - snow banks or drifts adjacent to a runway, a taxiway or an apron;
    - other temporary hazards, including parked aircraft;
    - failure or irregular operation of part or all of the aerodrome visual aids; and
    - failure of the normal or secondary power supply.
  - ii. the following inspections are carried out each day:
    - for the movement area at least twice where the aerodrome reference code number is 3 or 4; and
    - for the runway(s), inspections in addition to a) whenever the runway surface conditions may have changed significantly due to meteorological conditions;
  - iii. personnel assessing and reporting runway surface conditions are trained and competent to perform their duties.
- 1.5. Services provided during winter season are established at the following airports:
  - LUKK CHISINAU:
  - LUBM MARCULESTI.

#### 2. Surveillance of movement areas:

## For LUKK:

To maintain acceptable operation conditions in precipitation, the pavement is cleaned from contaminants. To determine when to commence the cleaning work at the aerodrome, the condition of the pavement is monitored around the clock and the braking capability is assessed at a frequency of at least once per 3 hours in the absence of precipitation, as well as:

- when falling or changing the intensity of precipitation;
- in case of extreme low or high temperature conditions in winter period every 30 minutes;
- if the actually observed meteorological conditions are worsening the braking capability every 30 minutes, starting from the time indicated in the aerodrome warning. In this case, the assessment is commencing no later than 10 minutes after the commence of the aerodrome warning, the next assessment is commencing no later than 30 minutes after the last assessment cycle was conducted and do it with such frequency throughout the entire period of the aerodrome warning.

#### For LUBM:

To maintain acceptable operating conditions in precipitation, the pavement is cleaned from contaminants. To determine when to commence the cleaning work at the aerodrome, the condition of the pavement is monitored daily, during flights at least once every 3 hours in the absence of precipitation, and also:

- when falling or changing the intensity of precipitation;
- in case of extreme low or high temperature conditions in winter period;
- if the actual observed meteorological conditions are worsening the braking capability, from the time indicated in the aerodrome warning.

# 3. Surface condition assessment methods used:

- 3.1.1.On a global level, movement areas are exposed to a multitude of climatic conditions and consequently a significant difference in the condition to be reported. The runway condition report (RCR) describes a basic methodology applicable for all these climatic variations and is structured in such a way that States can adjust them to the climatic conditions applicable for that State or region.
- 3.1.2. The concept of the RCR is premised on:
  - a. an agreed set of criteria used in a consistent manner for runway surface condition assessment, aeroplane (performance) certification and operational performance calculation:
  - b. a unique runway condition code (RWYCC) linking the agreed set of criteria with the aircraft landing and takeoff performance table, and related to the braking action experienced and eventually reported by flight crews;
  - c. reporting of contaminant type and depth that is relevant to take-off performance;
  - d. a standardized common terminology and phraseology for the description of runway surface conditions that can be used by aerodrome operator inspection personnel, air traffic controllers, aircraft operators and flight crew; and
  - e. globally-harmonized procedures for the establishment of the RWYCC with a built-in flexibility to allow for local variations to match the specific weather, infrastructure and other particular conditions.
- 3.1.3. These harmonized procedures are reflected in a runway condition assessment matrix (RCAM) which correlates the RWYCC, the agreed set of criteria and the aircraft braking action which the flight crew should expect for each value of the RWYCC.
- 3.1.4. Procedures which relate to the use of the RCAM are provided in the PANS-Aerodromes (Doc 9981).

- 3.1.5.It is recognized that information provided by the aerodrome's personnel assessing and reporting runway surface condition is crucial to the effectiveness of the runway condition report. A misreported runway condition alone should not lead to an accident or incident. Operational margins should cover for a reasonable error in the assessment, including unreported changes in the runway condition. But a misreported runway condition can mean that the margins are no longer available to cover for other operational variance (such as unexpected tailwind, high and fast approach above threshold or long flare).
- 3.1.6. This is further amplified by the need for providing the assessed information in the proper format for dissemination, which requires insight into the limitations set by the syntax for dissemination. This in turn restricts the wording of plain text remarks that can be provided.
- 3.1.7.It is important to follow standard procedures when providing assessed information on the runway surface conditions to ensure that safety is not compromised when aeroplanes use wet or contaminated runways. Personnel should be trained in the relevant fields of competence and their competence verified in a manner required by the State to ensure confidence in their assessments.
- 3.2. Using of Runway Condition Assessment Matrix is described in para 5 below.

# 4. Actions taken to maintain the usability of movement areas:

## For LUKK:

- 4.1. Clearance is organized in three stages:
  - I stage RWY, main TWY, aircraft stands, providing schedule, access to emergency and rescue equipment;
  - II stage remained TWY, apron, roads to fuel stations;
  - III stage roads within the aerodrome perimeter.
- 4.2. The airport aerodrome service continuously monitors the condition of the pavements at the intervals specified in 2 Surveillance of movement areas. During this monitoring are assessed:
  - type of contaminants;
  - thickness of the contaminant's layer;
  - area of contamination in percent;
  - runway surface condition.
- 4.3. Monitoring and control of the aircraft and vehicle movement on the maneuvering area is carried out by ATC provider "MoldATSA" SE, which providing monitoring and control of the aircraft movements and on the apron. The airport operational service supervises and manages the vehicle movement on the apron.
- 4.4. To maintain of pavements in usable condition, the clearance of pavements is carried out by special clearing equipment (see available types of equipment in LUKK AD 2.7, AIP Moldova).
- 4.5. To ensure suitability of the movement area a detachment of special machines is used. Snow and slush clearing and removing of standing water is carried out by Jet Sweepers Type CJS 914 Super II. To prevent the formation of ice or compacted snow, the next types of chemicals are used:
  - UNISALT PF (solid),
  - UNISALT SF (liquid) based on potassium formates, which are applied by Spreaders (OP-4000, RMG-4B, Combi de-icer GILETTA).
- 4.6. Solid chemicals are mainly used the "Under the snow" method. Liquid ones are used to predict ice formation. To remove ice formations, the same chemicals are used with a dosage depending on the thickness of the contaminant. When chemicals interact, the structure of ice formations is destroyed. The remaining slush is removed by sweeping machines and the coating is blown out of water.

## For LUBM:

- 4.1. Clearance is organized in three stages:
  - I stage RWY, TWY B, TWY E, central apron;

- II stage TWY C, TWY D, TWY A;
- III stage east apron, long-term parking places.
- 4.2. The airport aerodrome service continuously monitors the condition of the pavements at the intervals specified in 2 Surveillance of movement areas. During this monitoring are assessed:
  - type of contaminants;
  - thickness of the contaminant's layer;
  - area of contamination in percent;
  - runway surface condition.
- 4.3. Monitoring and control of the aircraft and vehicle movement on the maneuvering area is carried out by ATC provider "MoldATSA" SE, which providing monitoring and control of the aircraft movements and on the apron. The airport management service supervises and manages the vehicle movement on the apron.
- 4.4. To maintain of pavements in usable condition, the clearance of pavements is carried out by special clearing equipment.

# 5. System and means of reporting:

#### 5.1. General

- 5.1.1.Information on runways conditions will be disseminated directly from the Aerodrome Service.
- 5.1.2. Assessing and reporting the condition of the movement area and related facilities is necessary in order to provide the flight crew with the information needed for safe operation of the aeroplane. The runway condition report (RCR) is used for reporting assessed information;
- 5.1.3. The aerodrome operator assesses the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway. From this assessment, a runway condition code (RWYCC) and a description of the runway surface are reported which can be used by the flight crew for aeroplane performance calculations;
- 5.1.4. The RWYCC reflects the runway braking capability as a function of the surface conditions. With this information, the flight crew can derive, from the performance information provided by the aeroplane manufacturer, the necessary stopping distance of an aircraft on the approach under the prevailing conditions.
- 5.1.5. 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, the runway condition report should be disseminated through the AIS and ATS services. When the runway is wet, not associated with the presence of standing water, snow, slush, ice or frost, the assessed information should be disseminated using the runway condition report through the ATS only.
- 5.1.6. The operational practices describe procedures to meet the operationally needed information for the flight crew and dispatchers for the following sections:
  - a. aeroplane take-off and landing performance calculations:
    - i. dispatch pre-planning before commencement of flight:
      - take-off from a runway; and
      - landing on a destination aerodrome or an alternate aerodrome;
    - ii. in flight when assessing the continuation of flight; and
      - before landing on a runway; and
  - b. situational awareness of the surface conditions on the taxiways and aprons.

# 5.2. Objectives

- 5.2.1. The RWYCC is reported for each third of the runway assessed.
- 5.2.2. The assessment process includes:
  - assessing and reporting the condition of the movement area;
  - providing the assessed information in the correct format; and
  - reporting significant changes without delay.

- 5.2.3. The information to be reported is compliant with the RCR which consists of:
  - a. aeroplane performance calculation section; and
  - b. situational awareness section.
- 5.2.4. The information included in an information string in the following order using only AIS compatible characters:
  - a. aeroplane performance calculation section:
    - aerodrome location indicator;
    - ii. date and time of assessment:
    - iii. lower runway designation number;
    - iv. RWYCC for each runway third;
    - v. per cent coverage contaminant for each runway third;
    - vi. depth of loose contaminant for each runway third;
    - vii. condition description for each runway third; and
  - viii. width of runway to which the RWYCCs apply if less than published width.
  - b. situational awareness section:
    - i. reduced runway length;
    - ii. drifting snow on the runway;
    - iii. loose sand on the runway;
    - iv. chemical treatment on the runway;
    - v. snowbanks on the runway;
    - vi. snowbanks on the taxiway;
    - vii. snowbanks adjacent to the runway;
  - viii. taxiway conditions;
  - ix. apron conditions;
  - x. State-approved, and published use of, measured friction coefficient; and
  - xi. plain language remarks.
- 5.2.5. The syntax for dissemination as described in the RCR template in the Procedures for Air Navigation Services Aeronautical Information Management (PANS-AIM, Doc 10066), Appendix 4, is determined by the operational need of the flight crew and the capability of trained personnel to provide the information arising from an assessment.
- 5.2.6.The syntax requirement in 5.2.5 is strictly adhered to when providing the assessed information through the RCR.

## 5.3. Operational practices

- Note.— This section covers the specific operational practices and the ways in which they are applied in order to achieve the basic principles defined in 5.2 Objectives.
- 5.3.1.Reporting, in compliance with the runway condition report, is commence when a significant change in runway surface condition occurs due to water, snow, slush, ice or frost.
- 5.3.2.Reporting of the runway surface condition should continue to reflect significant changes until the runway is no longer contaminated. When this situation occurs, the aerodrome will issue a runway condition report that states the runway is wet or dry as appropriate.
- 5.3.3.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 1;
  - d. any change in contaminant depth according to Table 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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### Runway Condition Report — Aeroplane performance calculation section

5.3.4. The aeroplane performance calculation section is a string of grouped information separated by a space "" and ends with a return and two line feed "≪≡". This is to distinguish the aeroplane performance calculation section from the following situational awareness section or the following aeroplane performance calculation section of another runway.

The information to be included in this section consists of the following;

a) **Aerodrome location indicator:** a four-letter ICAO location indicator in accordance with Doc 7910, *Location Indicators*.

This information is mandatory.

Format: nnnn Example: ENZH

b) **Date and time of assessment:** date and time (UTC) when the assessment was performed by the trained personnel.

This information is mandatory.

Format: MMDDhhmm Example: 09111357

c) **Lower runway designation number:** a two- or three-character number identifying the runway for which the assessment is carried out and reported.

This information is mandatory.

Format: nn[L] or nn[C] or nn[R]

Example: 09L

d) Runway condition code for each runway third: a one-digit number identifying the RWYCC assessed for each runway third. The codes are reported in a three-character group separated by a "/" for each third. The direction for listing the runway thirds is indicated in the direction as seen from the lower designation number.

This information is mandatory.

When transmitting information on runway surface conditions by ATS to flight crews, the sections are, however, referred to as the first, second or third part of the runway. The first part always means the first third of the runway as seen in the direction of landing or take-off as illustrated in Figures 1 and 2 and detailed in PANS-ATM (Doc 4444).

Format: n/n/nExample: 5/5/2

Note 1.— A change in RWYCC from, say, 5/5/2 to 5/5/3 is considered significant. (See further examples below).

Note 2.— A change in RWYCC requires a complete assessment taking into account all information available.

*Note 3.— Procedures for assigning a RWYCC are available in 2.1.3.12 to 2.1.3.16.* 

e) **Per cent coverage contaminant for each runway third:** a number identifying the percentage coverage. The percentages are to be reported in an up-to-nine character group separated by a "/" for each runway third. The assessment is based upon an even distribution within the runway thirds using the guidance in Table 1.

This information is conditional. It is not reported for one runway third if it is dry or covered with less than 10 per cent.

Format: [n]nn/[n]nn/[n]nn

Example: 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

With uneven distribution of the contaminants, additional information is to be given in the plain language remark part of the situational awareness section of the runway condition report. Where possible, a standardized text should be used.

Note.— 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/).

f) Depth of loose contaminant: dry snow, wet snow, slush or standing water for each runway third: a two- or three-digit number representing the assessed depth (mm) of the contaminant for each runway third. The depth is reported in a six to nine character group separated by a "/" for each runway third as defined in Table 2. The assessment is based upon an even distribution within the runway thirds as assessed by trained personnel. If measurements are included as part of the assessment process, the reported values are still reported as assessed depths, as the trained personnel have placed their judgment upon the measured depths to be representative for the runway third.

Format: [n]nn/[n]nn/[n]nn

Examples: 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] NR/NR/100 [DRY SNOW in the last third only]

This information is conditional. It is reported only for DRY SNOW, WET SNOW, SLUSH and STANDING WATER.

## Example of reporting depth of contaminant whenever there is a significant change

1) After the first assessment of runway condition, a **first runway condition report** is generated. The initial report is:

5/5/5 100/100/100 02/02/02 SLUSH/SLUSH/SLUSH

*Note.*— *The full information string is not used in this example.* 

With continuing precipitation, a new runway condition report is required to be generated as subsequent assessment reveals a change in the runway condition code. A second runway condition report is therefore created as:

#### 2/2/2 100/100/100 03/03/03 SLUSH/SLUSH/SLUSH

- 3) With even more precipitation, further assessment reveals the depth of precipitation has increased from 3 mm to 5 mm along the entire length of the runway. However, a new runway condition report is not required because the runway condition code has not changed (change in depth is less than the significant change threshold of 3 mm).
- 4) A final assessment of the precipitation reveals that the depth has increased to 7 mm. A new runway condition code is required because the change in depth from the last runway condition report (second runway condition code) i.e. from 3 mm to 7 mm is greater than the significant change threshold of 3 mm. A third runway condition report is thus created as below:

#### 2/2/2 100/100/100 07/07/07 SLUSH/SLUSH/SLUSH

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: /NR/

When the depth of the contaminants varies significantly within a runway third, additional information is to be given in the plain language remark part of the situational awareness section of the runway condition report.

Note.— In this context a significant variation in depth in the lateral direction is more than twice the depth indicated in column 3 of Table 2. Further information is available in Circular 329 — Assessment, Measurement and Reporting of Runway Surface Conditions.

g) Condition description for each runway third: to be reported in capital letters using terms specified in 2.9.5 of Annex 14, Volume I. These terms have been harmonized with the terms used in the Standards and Recommended Practices in Annexes 6, 8, 11 and 15. The condition type is reported by any of the following condition type descriptions for each runway third and separated by an oblique stroke "/".

This information is mandatory.

**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

Format: nnnn/nnnn/nnnn

Example: DRY SNOW ON TOP OF COMPACTED SNOW/WET SNOW ON TOP OF

COMPACTED SNOW/WATER ON TOP OF COMPACTED SNOW

h) Width of runway to which the RWYCCs apply if less than published width is the two-digit number representing the width of cleared runway in metres.

This information is optional.

Format: nn Example: 30

If the cleared runway width is not symmetrical along the centre line, additional information is to be given in the plain language remark part of the situational awareness section of the runway condition report.

# Runway condition report — Situational awareness section:

5.3.5.All individual messages in the situational awareness section end with a full stop sign. This is to distinguish the message from subsequent message(s).

The information to be included in this section consists of the following:

# a) Reduced runway length

This information is conditional when a NOTAM has been published with a new set of declared distances affecting the LDA.

Format: Standardized fixed text

RWY nn [L] or nn [C] or nn [R] LDA REDUCED TO [n]nnn

Example: RWY 22L LDA REDUCED TO 1450.

# b) Drifting snow on the runway

This information is optional.

Format: Standardized fixed text Example: DRIFTING SNOW.

## c) Loose sand on the runway

This information is optional.

Format: RWY nn[L] or nn[C] or nn[R] LOOSE SAND

Example: RWY 02R LOOSE SAND.

# d) Chemical treatment on the runway

This information is mandatory.

Format: RWY nn[L] or nn[C] or nn[R] CHEMICALLY TREATED

Example: RWY 06 CHEMICALLY TREATED.

### e) Snowbanks on the runway

This information is optional.

Left or right distance in metres from centre line.

Format: RWY nn[L] or nn[C] or nn[R] SNOWBANK Lnn or Rnn or LRnn FM CL

Example: RWY 06L SNOWBANK LR19 FM CL.

# f) Snowbanks on taxiway

This information is optional.

Left or right distance in metres from centre line.

Format: TWY [nn]n SNOWBANK Lnn or Rnn or LRnn FM CL

Example: TWY A SNOWBANK LR20 FM CL.

# g) Snowbanks adjacent to the runway penetrating level/profile set in the aerodrome snow plan.

This information is optional.

Format: RWY nn[L] or nn[C] or nn[R] ADJ SNOWBANKS

Example: RWY 06R ADJ SNOWBANKS.

### h) Taxiway conditions

This information is optional.

Format: TWY [nn]n POOR Example: TWY B POOR.

## i) Apron conditions

This information is optional.

Format: APRON [nnnn] POOR Example: APRON NORTH POOR.

# j) State-approved and published use of measured friction coefficient

Whenever an operational runway is contaminated by ice or compacted snow the overall runway surface assessment is made (for detailed information see GM1 ADR.OPS.A.005 "Condition of the movement area and related facilities" (h) and CT-AD p. 2.9.8).

This information is optional.

Format: [The measured friction coefficient is publishing in decimal format as 0,xx]

Example: [friction coefficient is 0,53].

### k) Plain language remarks using only allowable characters in capital letters

Where possible, standardized text should be developed.

This information is optional.

Format: Combination of allowable characters where use of full stop « . » marks the end

of the message.

Allowable characters:

A B C D E F G H I J K LM N O P Q R S T U V W X Y Z

0123456789

/ [oblique stroke] "." [period]" " [space]

# Complete information string

5.3.6. An example of a complete information string prepared for dissemination is as follows:

[COM header and Abbreviated header] (Completed by AIS)
GG EADBZQZX EADNZQZX EADSZQZX
170229 EADDYNYX
(SWEA0151 EADD 02170225
SNOWTAM 0151

[Aeroplane performance calculation section]

EADD 02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET SNOW

02170135 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH

02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

[Situational awareness section]

RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR.

APRON NORTH POOR)

## Assessing a runway and assigning a runway condition code

- 5.3.7.The assessed RWYCC to be reported for each third of the runway is determined by following the procedure described in 5.3.12 to 5.3.16.
- 5.3.8.If 25 per cent or less area of a runway third is wet or covered by contaminant, a RWYCC 6 is reported.
- 5.3.9.If the distribution of the contaminant is not uniform, the location of the area that is wet or covered by the contaminant is described in the plain language remarks part of the situational awareness section of the runway condition report.
- 5.3.10. A description of the runway surface condition is provided using the contamination terms described in capital letters in Table 3 Assigning a runway condition code (RWYCC).
- 5.3.11. If multiple contaminants are present where the total coverage is more than 25 per cent but no single contaminant covers more than 25 per cent of any runway third, the RWYCC is based upon the judgment by trained personnel, considering what contaminant will most likely be encountered by the aeroplane and its likely effect on the aeroplane's performance.
- 5.3.12. The RWYCC is determined using Table 3.
- 5.3.13. The variables, in Table 3, that may affect the runway condition code are:
  - a) type of contaminant;
  - b) depth of contaminant; and
  - c) outside air temperature. Where available the runway surface temperature should preferably be used.

Note.— At air temperatures of plus 3 degrees Celsius and below, with a dew point spread of 3 degrees Celsius or less, the runway surface condition may be more slippery than indicated by the runway condition code assigned by Table 3. The narrow dew point spread indicates

that the air mass is relatively close to saturation which is often associated with actual precipitation, intermittent precipitation, nearby precipitation or fog.

This may depend on its correlation with precipitation but it may also, at least in part, depend on the exchange of water at the air-ice interface. Due to the other variables involved, such as surface temperature, solar heating and ground cooling or heating, a small temperature spread does not always mean that the braking action will be more slippery.

The observation should be used by aerodrome operators as an indicator of slippery conditions but not as an absolute.

- 5.3.14. An assigned RWYCC 5, 4, 3 or 2 are not upgraded.
- 5.3.15. An assigned RWYCC 1 or 0 can be upgraded using the following procedures:
  - a) if a properly operated and calibrated State-approved measuring device and all other observations support a higher RWYCC as judged by trained personnel;
  - b) the decision to upgrade RWYCC 1 or 0 cannot be based upon one assessment method alone. All available means of assessing runway slipperiness are to be used to support the decision:
  - c) when RWYCC 1 or 0 is upgraded, the runway surface is assessed frequently during the period the higher RWYCC is in effect to ensure that the runway surface condition does not deteriorate below the assigned code; and
  - d) variables that may be considered in the assessment that may affect the runway surface condition, include but are not limited to:
    - i. any precipitation conditions;
    - ii. changing temperatures;
    - iii. effects of wind;
    - iv. frequency of runway in use; and
    - v. type of aeroplane using the runway.
- 5.3.16. Upgrading of RWYCC 1 or 0 using the procedures is not permitted to go beyond a RWYCC 3.
- 5.3.17. If sand or other runway treatments are used to support upgrading, the runway surface is assessed frequently to ensure the continued effectiveness of the treatment.
- 5.3.18. The RWYCC determined from Table 3 should be appropriately downgraded considering all available means of assessing runway slipperiness, including the criteria given in Table 4.
- 5.3.19. Where available, the pilot reports of runway braking action should be taken into consideration as part of the ongoing monitoring process, using the following principle:
  - a) a pilot report of runway braking action is taken into consideration for downgrading purposes; and
  - b) a pilot report of runway braking action can be used for upgrading purposes only if it is used in combination with other information qualifying for upgrading.
  - Note 1.— The procedures for making special air-reports regarding runway braking action are contained in the Procedures for Air Navigation Services Air Traffic Management (PANS-ATM, Doc 4444), Chapter 4, and Appendix 1, Instructions for air-reporting by voice communications.
  - Note 2.— Procedures for downgrading reported RWYCC can be found in 2.1.3.23 including the use of Table II-2-5, Runway condition assessment matrix (RCAM).
- 5.3.20. Two consecutive pilot reports of runway braking action of POOR are a trigger an assessment if an RWYCC of 2 or better has been reported.
- 5.3.21. When one pilot has reported a runway braking action of LESS THAN POOR, the information is disseminated, carried out a new assessment and the suspension of operations on that runway is considered.

- Note 1.— If considered appropriate, maintenance activities may be performed simultaneously or before a new assessment is made.
- Note 2.— Procedures for the provision of information to arriving aircraft are contained in Procedures for Air Navigation Services Air Traffic Management (PANS-ATM, Doc 4444), Section 6.6.
- 5.3.22. Table 4 shows the correlation of pilot reports of runway braking action with RWYCCs.
- 5.3.23. Table 3 and Table 4 combined form the runway condition assessment matrix (RCAM) in Table 5. The RCAM is a tool to be used when assessing runway surface conditions. It is not a standalone document and is used in compliance with the associated procedures of which there are two main parts:
  - a) assessment criteria; and
  - b) downgrade assessment criteria.

**Table 1. Percentage of coverage for contaminants** 

Assessed per cent	Reported per cent
10 - 25	25
26 - 50	50
51 – 75	75
76 - 100	100

Table 2. Depth assessment for contaminants

Contaminant	Valid values to be reported	Significant change
STANDING WATER	04, then assessed value	3 mm up to and including 15 mm
SLUSH	03, then assessed value	3 mm up to and including 15 mm
WET SNOW	03, then assessed value	5 mm
DRY SNOW	03, then assessed value	20 mm

- Note 1.— For STANDING WATER, 04 (4 mm) is the minimum depth value at and above which the depth is reported. (From 3 mm and below, the runway third is considered WET).
- Note 2.— For SLUSH, WET SNOW and DRY SNOW, 03 (3 mm) is the minimum depth value at and above which the depth is reported.
- Note 3.—Above 4 mm for STANDING WATER and 3 mm for SLUSH, WET SNOW and DRY SNOW an assessed value is reported and a significant change relates to observed change from this assessed value.

Table 3. Assigning a runway condition code (RWYCC)

Table 5. Assigning a funway condition code (NW Fee)				
Runway condition description	Runway condition code (RWYCC)			
DRY	6			
FROST	5			
WET (the runway surface is covered by any visible dampness or water up to and including 3 mm deep) SLUSH (up to and including 3 mm depth)				
<b>DRY SNOW</b> (up to and including 3 mm depth)				
WET SNOW (up to and including 3 mm depth)				
COMPACTED SNOW	4			
(Outside air temperature minus 15 degrees Celsius and below)				
WET ("Slippery wet" runway)	3			
<b>DRY SNOW</b> (more than 3 mm depth)				
WET SNOW (more than 3 mm depth)				
DRY SNOW ON TOP OF				
COMPACTED SNOW (any depth)				
WET SNOW ON TOP OF				
COMPACTED SNOW (any depth)				
<b>COMPACTED SNOW</b> (outside air temperature above minus 15 degrees Celsius)				
STANDING WATER (more than 3 mm depth)	2			
SLUSH (more than 3 mm depth)				
ICE	1			
WET ICE	0			
WATER ON TOP OF COMPACTED SNOW				
DRY SNOW OR WET SNOW ON TOP OF ICE				

Table 4. Correlation of runway condition code and pilot reports of runway braking action

Pilot report of runway braking action	Description	Runway condition code (RWYCC)
N/A		6
GOOD	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal	5
GOOD TO MEDIUM	Braking deceleration OR directional control is between good and medium	4
MEDIUM	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced	3
MEDIUM TO POOR	Braking deceleration OR directional control is between medium and poor	2
POOR	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced	1
LESS THAN POOR	Braking deceleration is minimal to non- existent for the wheel braking effort applied OR directional control is uncertain	0

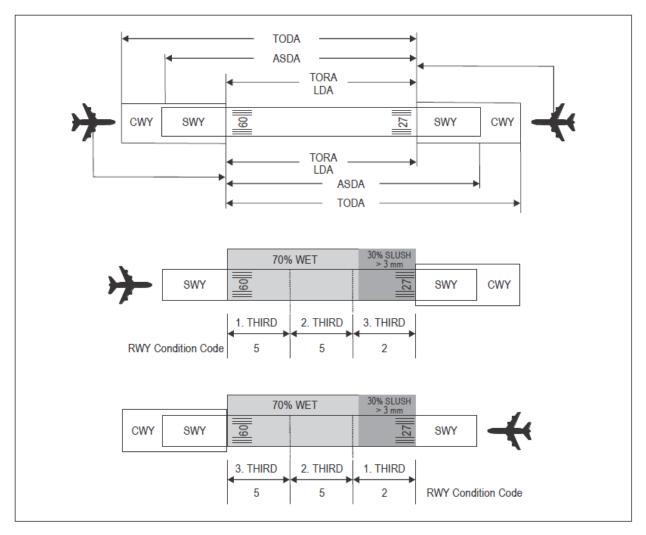
Table 5. Runway condition assessment matrix (RCAM)

	Runway condition assessment matrix (RCAM)				
Assessment criteria		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	-15°C 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 -15°C outside air temperature¹:  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 <sup>2</sup>	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR		
0	WET ICE 2 WATER ON TOP OF COMPACTED SNOW 2 DRY SNOW OF WET SNOW ON TOP OF ICE 2	Braking deceleration is minimal to non- existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR		

<sup>&</sup>lt;sup>1</sup> Runway surface temperature should preferably be used where available.

<sup>&</sup>lt;sup>2</sup> The aerodrome operator may assign a higher runway condition code (but no higher than code 3) for each third of the runway, provided the procedure in 5.3.15 is followed.

Figure 1. Reporting of runway condition code from ATS to flight crew for runway thirds



TODA ASDA TORA LDA CWY CWY SWY SWY LDA TORA ASDA TODA 70% WET SWY SWY CWY 1. THIRD 2. THIRD 3. THIRD 5 2 **RWY Condition Code** 30% SLUSH 70% WET CWY SWY SWY 3. THIRD 2. THIRD 1. THIRD 2 **RWY Condition Code** 

Figure 2. Reporting of runway condition code for runway thirds from ATS to flight crew on a runway with displaced threshold

# 6. The cases of runway closure:

In cases when a postponement of clearance operations would involve a definite risk of the situation developing into a crisis, e.g. when a fall in temperature causes water or slush to become solid ice, the snow clearance service is authorized to demand that RWY or other sections of the movement areas to be closed to traffic, informing the ATC provider and the CAA of the Republic of Moldova.

## 7. Distribution of information about runway surface conditions:

Information on snow conditions at Aerodromes during SNOWTAM-issue period will be disseminated directly from the corresponding Aerodrome Service in a separate series of NOTAM (SNOWTAM) and through the information after METAR messages, as one or several coded groups (at the end of the weather message (METAR) broadcast).

SNOWTAM will be prepared in accordance with ICAO DOC 10066, Appendix 4.

Other information on snow conditions at aerodromes can be obtained at the aerodrome concerned or will be available at the Briefing Office at Aerodrome.