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The following circular is promulgated for information, guidance, and necessary action

*Hamza S. Johari*

**Director General**

## **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 correspondingly improved flight crew assessment of take-off and landing performance.
- 1.2 The purpose of this AIC is to inform all concerned stakeholders on the implementation of the global reporting format in The United Republic of Tanzania with an effective date from **4 November 2021**.

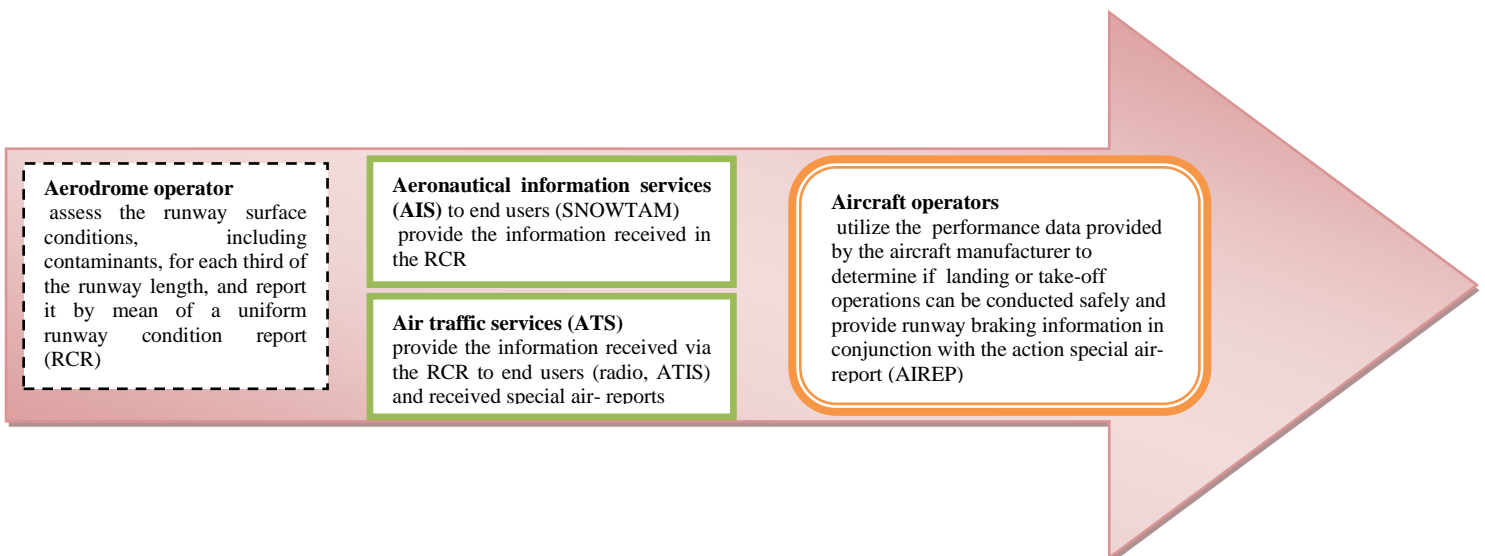
### **2. GENERAL**

- 2.1 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.
- 2.2 The GRF, applicable on 4 November 2021, is described through amendments to the following documents;
  - 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
  - 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)

- 2.3 The report methodology adopted by aerodrome operators in estimating the surface condition on contaminated runways, as well as the reporting format is different. Aerodromes may no longer report measured friction values (Mu-meter) or base the condition assessment on these measurements only. The report is made to the template and content of NOTAM regarding runway condition (SNOWTAM), named Global Reporting Format (GRF). ICAO Circular 355 contains information on assessment, measurements, and Reporting of Runway Surface Conditions.
- 2.4 The outcome of the assessment from aerodrome operators by using a Runway Condition Assessment Matrix (RCAM) and the consequent assignment of a runway condition code (RWYCC) are transmitted using a Runway Condition Report (RCR) forwarded to air traffic services and the aeronautical information services for dissemination to pilots. The pilots will use the RWYCC to determine their aircraft's performance by correlating the code with performance data provided by their aircraft's manufacturer. This will help pilots to correctly carry out their landing and take-off performance calculations for wet or contaminated runways.
- 2.5 Pilots are encouraged to make special air reports (AIREPs) whenever conditions they observe or experience in terms of braking capability and/or lateral control during landing that may trigger a new assessment or be directly taken into account in the downgrade process to the previously reported RWYCC.

### 3. FLOW OF INFORMATION



### 3.1 Collection of information:

- 3.1.1 The 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 Runway Condition Code (RWYCC) and information that describes the runway surface condition: type of contamination, depth, coverage for each third of the runway, etc., and other relevant information.
- 3.1.2 This code is derived from the Runway Condition Assessment Matrix (RCAM) and associated procedures for downgrading and upgrading.

**Note** – Details of the Global Reporting Format are 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	• WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth)	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD
4		Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	• WET ("slippery wet" runway)	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		Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR
0		Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR

### 3.2 Dissemination of information:

3.2.1 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 are 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.

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

### 3.3 Using the information:

3.3.1 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).

## 4. IMPLEMENTATION PLAN:

### 4.1 Date of implementation

- The new ICAO GRF including the new SNOWTAM format will be implemented in the United Republic of Tanzania on 4 November 2021 at 0000 UTC.
- The new ICAO Methodology for Assessing and Reporting Runway Surface Conditions (GRF) Implementation Action Plan is contained in an attachment to this AIC.

### 4.2 National GRF implementation Team

4.2.1 The National GRF implementation team was formed during the GRF stakeholders' workshop held on 11 February 2020 at TCAA Aviation House in Dar es salaam. The team is responsible for planning and coordinating the implementation of the new ICAO GRF for runway surface conditions in the country by

the new applicability date of 5 November 2021. The Committee commenced the task on 12 February 2020.

#### **4.3 Stakeholders involved**

4.3.1 The Committee comprises representatives from main stakeholders who will have a role in implementing the changes in the reporting format of runway surface condition in Tanzania, including TCAA regulatory sections, Aerodrome operators (TAA, ZAA, and KADCO), Air operators (Air Tanzania, Precision Air, TGFA, TPDF air transportation unit and representative of General Aviation), Air Navigation Service Provider (ATM and AIM), Aeronautical Metrological service (TMA) and Civil Aviation Training Centre.

#### **4.4 Coordination between aerodromes, AIS (NOF), and ATS units**

4.4.1 Aerodrome Operators, AIS, and ATS will close cooperation to ensure the flow of information will reach the end users.

#### **4.5 Training and awareness**

- Aerodrome operator personnel who respond to runway condition assessment and report shall be sufficiently trained with Global Reporting Format for Runway Surface Condition Assessment and Reporting.
- Airlines (flight operations departments, pilots) shall be sufficiently trained with Global Reporting Format (GRF) for Aircraft Operators and Flight Crew.
- ANSPs (AIS personnel and Air Traffic Controllers) shall be sufficiently trained with the Global Reporting Format (GRF) for Runway Surface Conditions and with the new SNOWTAM format

#### **4.6 Training Opportunities**

4.6.1 Tanzania Civil Aviation Training Centre is developing a tailor-made course on GRF for imparting knowledge and skills required to implement GRF. The courses will be delivered at CATC or on-site.

4.6.2 The GRF course will be developed for the following disciplines:

- i) Aerodrome operators
- ii) Air Traffic Management Officers
- iii) Aeronautical Information Management Officers
- iv) Pilots and Dispatchers
- v) Aeronautical Meteorological Officers

4.6.3 Other Courses and workshops are available online, Self-Study and Custom made internal training by Operators. Etc.

#### **4.7 Tests and trials**

4.7.1 A mock implementation involving Aerodrome operators, TCAA-ATM, TCAA-AIM, TMA, and other Airports commencing on Wednesday 27 October 2021 up to 4 November 2021. A mock implementation intensified to include AIRLINES from Friday 29 October 2021.

4.7.2 Each Airport in Coordination with the relevant ANSP station will prepare and activate testing and trials (mock implementation) by issuing NOTAMs.

**5. CONTACT**

For further information and guidance contact via the following:

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**Appendix to AIC**

**GRF Implementation Plan/Checklist**

S/N	TASK	TIMELINE		PARTIES INVLOVED	REMARKS
		START	FINISH		
1	Establish a GRF implementation team at the State Level	11/02/2020	12/02/2020	TCAA	DONE
2	Carry out National sensitization Workshop	11/02/2020	11/02/2020	TCAA	<b>DONE FEB 2020</b>
3	Issuance of AIC		01/11/2021	TCAA	<b>IN PROGRESS</b>
4	Issue Guidance Documents on GRF in the areas of AGA, ATM, AIM, MET, and Flight Ops.		30/11/2021	TCAA IN COLLABORATION WITH STAKEHOLDERS	<b>IN PROGRESS</b>
5	Amend the following Regulations to incorporate GRF provisions <ul style="list-style-type: none"> <li>• Civil Aviation (Aerodromes) Regulations.</li> <li>• Civil Aviation (Aeronautical Meteorology) Regulations</li> <li>• Civil Aviation (Airworthiness) Regulations</li> <li>• Civil Aviation (Operations of Aircraft) Regulations</li> <li>• Civil Aviation (Air Traffic</li> </ul>		30/03/2022	TCAA and MWT	<b>IN PROGRESS</b>

S/N	TASK	TIMELINE		PARTIES INVLOVED	REMARKS
		START	FINISH		
	Services) Regulations <ul style="list-style-type: none"> <li>• Civil Aviation (Aeronautical Information) Regulations</li> <li>• Civil Aviation (Air Operator Certification and Administration) Regulations</li> </ul>				
6	Update Procedure Manuals <ul style="list-style-type: none"> <li>• Aircraft flight Manuals</li> <li>• Operation Manuals Aircraft Operators</li> <li>• Aerodrome Manuals and SLA s</li> <li>• MANSOPS – ATM - Done</li> <li>• SSIs and USOIs – Station Standing Instructions, Unit Supplementary Operating Instructions</li> <li>• MANSOPS-AIM -</li> </ul> MET PROCEDURES		30/04/2020	OPERATORS	
7	<b>GRF awareness and Training</b>				
	7.1 Online Training		Continuous	TCAA and Operators	
	7.2 Development of GRF courses by CATC (CATC to coordinate with IFALPA on developing GRF course for Dispatcher	15/07/2021	30/11/2021	CATC	

S/N	TASK	TIMELINE		PARTIES INVLOVED	REMARKS
		START	FINISH		
	and Pilots)				
	7.3 Training at CATC of Operational Personnel from TAA, Airlines and possibly ANSP			CATC	
	7.4 Update of SNOWTAM Format/template (NOTAM/SNOWTAM systems)		30/09/2021	CAIM	
8	Safety Assessment	01/11/2021	03/11/2021	TCAA	
9	Testing	26/10/2021	04/11/2021	TCAA	