

ADVISORY BULLETIN FOR STATES

Subject: ISSUANCE OF SAFETY ALERT / WARNING

Date:

Issued by:

AB No:

1. PURPOSE

1.1 The purpose of this Advisory Bulletin is to make sure that all controllers are aware of the need to issue 'Safety Alert / Warning' when circumstances so warrant.

Reference: ICAO Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM)

2. BACKGROUND

2.1 A fatal air crash occurred in mountainous terrain shortly after completion of a radar handoff and communications transfer from an area to an approach unit. The aircraft took a descent clearance issued by the approach controller intended for another aircraft with a similar call sign. The approach controller did not catch the incorrect read back or observe the aircraft's descent

2.2 The aircraft was operating at the minimum flight altitude at the time of the transfer so the area controller received an en route minimum safe altitude warning (MSAW) when the aircraft began its descent. The area controller suppressed the MSAW alert after approximately one minute and subsequently suppressed display of the data block but did not alert the approach controller.

2.3 The computer entry of a message suppressing or inhibiting MSAW alerts constitutes acknowledgement for the alert and indicates that action has or will be taken to resolve the situation.

2.4 Had the area controller correctly applied the safety alert procedure, the approach controller would have been notified of the MSAW alert possibly averting the accident.

3. APPLICABILITY

3.1 The overall responsibility for providing safe and efficient air traffic service rests with the Air Traffic Service (ATS) provider. ATS providers should ensure that ground-based radars and their associated by-products provide the necessary levels of terrain avoidance protection, including the installation of MSAW, to aircraft operating under their control. Where applicable APAC States/ATS providers should identify areas where the necessary levels of terrain avoidance protection to aircraft are not in place. ATS providers should establish training programmes, procedures and policies concerning the issuance of 'Safety Alert / Warning' by air traffic controllers.

4. SAFETY ALERT

4.1 A **safety alert** (warning) is to be issued to pilots of aircraft being controlled by ATC if the controller is aware the aircraft is at an altitude which, in the controller's judgement, places the aircraft in unsafe proximity to terrain, obstructions or other aircraft. The provision of this service is contingent upon the capability of the controller to have an awareness of a situation involving unsafe proximity to terrain,

obstructions and uncontrolled aircraft. The issuance of a **safety alert** cannot be mandated, but it can be expected on a reasonable, though intermittent basis. Once the alert is issued, it is solely the pilot's choice to determine what course of action, if any to take. The alert procedure is intended for use in time critical situations where aircraft safety is in question. Non-critical situations should be handled via the normal traffic alert procedure.

5. ISSUANCE OF SAFETY ALERT BY AIR TRAFFIC CONTROLLERS

5.1 If a controller is aware that an aircraft is in a position /altitude which, in his/her judgment, places it in unsafe proximity to terrain, obstructions, or other aircraft a **safety alert** (warning) should be issued. Once the pilot informs the controller that action is being taken to resolve the situation, a controller may discontinue the issuance of further alerts. Controllers should not assume that because someone else has responsibility for the aircraft that the unsafe situation has been observed and the safety alert issued; advise the appropriate controller.

NOTE

1. *The issuance of a safety alert (warning) is a first priority once a controller observes and recognizes a situation of unsafe aircraft proximity to terrain, obstacles, or other aircraft. Conditions, such as workload, traffic volume, the quality/limitations of the radar system, and the available lead time to react are factors in determining whether it is reasonable for a controller to observe and recognize such situations. While a controller cannot see immediately the development of every situation where a safety alert must be issued, a controller must remain vigilant for such situations and issue a safety alert (warning) when the situation is recognized.*
2. *Recognition of situations of unsafe proximity may result from MSAW, automatic altitude readouts, Conflict / Mode C Alert, observations on a PAR scope, or pilot reports.*
3. *Once the alert (warning) is issued, it is solely the pilot's choice to determine what course of action, if any, will be taken.*

a. **Low Altitude / Terrain Alert** (Warning). Controllers should immediately issue/initiate an alert (warning) to an aircraft if you are aware the aircraft is at an altitude which, in his/her judgment, places it in unsafe proximity to low altitude / terrain. Controllers should issue an alert (warning) as follows:

PHRASEOLOGY

(aircraft call sign) LOW ALTITUDE WARNING,

CHECK YOUR ALTITUDE IMMEDIATELY QNH IS (number) [(units)]

[THE MINIMUM FLIGHT ALTITUDE IS (altitude)],

(aircraft call sign), TERRAIN ALERT (suggested pilot action if possible)

b. Aircraft Conflict/Mode C Alert. Controllers should immediately issue/initiate an alert to an aircraft if they are aware of another aircraft at an altitude which they believe places them in unsafe proximity. If feasible, the controller may offer the pilot an alternate course of action.

c. When an alternate course of action is given, end the transmission with the word "immediately."

PHRASEOLOGY

TRAFFIC (number) O’CLOCK (distance) [Any other pertinent information]
DO YOU WANT VECTORS?

TURN LEFT (or RIGHT) IMMEDIATELY HEADING (three digits), TO AVOID UNIDENTIFIED TRAFFIC (bearing by clock-reference and distance) and/or CLIMB (or DESCEND) (specific altitude if appropriate) IMMEDIATELY.

6. MINIMUM SAFE ALTITUDE WARNING

a. When a **MSAW** alert is displayed, controllers should immediately analyze the situation and, if necessary, take the appropriate action to resolve the alert.

NOTE

1. *Caution should be exercised when issuing a clearance to an aircraft in reaction to an MSAW alert to ensure that adjacent areas are not a factor.*

b. The controller may suppress the display of an **MSAW** alert from his/her control position with the application of one of the following suppress/inhibit computer functions:

1. The specific alert suppression message may be used to inhibit the **MSAW** alerting display on a single flight for a specific alert.
2. The indefinite alert suppression message shall be used exclusively to inhibit the display of **MSAW** alerts on aircraft known to be flying at an altitude that will activate the alert feature of one or more areas.

NOTE-

1. *The indefinite alert suppression message will remain in effect for the duration of the referenced flight's active status within the ACC unless modified by controller action.*
2. *The indefinite alert suppression message would typically apply to military flights with clearance to fly low-level type routes that routinely require altitudes below established minimum IFR altitudes.*

c. The computer entry of a message suppressing or inhibiting **MSAW** alerts constitutes acknowledgment for the alert and indicates that appropriate action has or will be taken to resolve the situation.

7. ACTION BY STATES

7.1 States should confirm that ground-based radars and their associated by-products provide the necessary levels of terrain avoidance protection, including the installation of MSAW, to aircraft operating within their respective airspace. Where applicable APAC States/ATS providers should identify areas where the necessary levels of terrain avoidance protection to aircraft are not in place.

7.2 States should ensure that ATS providers that already have ‘Safety Alert / Warning’ training, procedures and policies in place are encouraged to re-emphasize the need for controllers to issues Safety Alert (Warnings) when the circumstances so warrant.

7.3 States should ensure that ATS providers that do not have training, procedures or policies in place for the issuance of a Safety Alert (Warning) consider developing appropriate training, procedures and policies based on the information provided in this Advisory Bulletin and *ICAO Procedures for Air Navigation Services — Air Traffic Management (PANS -ATM)*.