



ICAO

International Civil Aviation Organization

The Ninth Meeting of the APANPIRG ATM Sub-Group
(ATM/SG/9)

Video Teleconference, 01 – 05 November 2021

Agenda Item 6: ATM Coordination (Meetings, Route Development, Contingency Planning)

ACTIVATION OF DANGER AREAS OVER HIGH SEAS FOR PROLONGED DURATION

(Presented by IATA)

SUMMARY

This paper presents IATA's concern regarding continued prolonged hours of Danger Areas activation over high seas and suggests there is a need to enhance processes for the management of such areas.

1. INTRODUCTION

1.1 There are Danger Areas established over the High Seas which at times are kept active for very prolonged periods.

1.2 In line with the ICAO DOC 10088 principle of *as civil as possible, as military as necessary*; this paper highlights the need for improved regional processes for the management of Danger Areas over High Seas to reduce the negative impact on aviation activities.

2. DISCUSSION

Location of Danger Areas:

2.1 States are only permitted to designate areas within international airspace that is delegated to that State for the purposes of provision of ATS (Annex 11 *Air Traffic Services*, 2.1.2 refers).

2.2 Regarding Aeronautical Data Area of Responsibility, the requirements of paragraph 2.1.2 of Annex 15 *Aeronautical Information Services* are to ensure a State's provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of ATS.

2.3 This paper focuses on Danger Areas situated over the areas referred to as High Seas, that is international waters outside a State's territorial sea¹, where only the relevant international law applies.

2.4 Danger Areas over international waters may be activated on an as-needed basis, preferably during the actual period of live firing activity or military exercise activity, rather than for a prolonged blanket duration throughout the year.

2.5 Blanket prolonged activation of Danger Areas ignores the needs of other airspace users, as well as indicating gaps in the co-ordination mechanisms between States, ATS Units and military

¹ the territorial sea extends only up to a maximum of 12 NM from the national coastline.

authorities. Items for consideration in this regard are included below.

2.6 Activation Window – enhanced coordination between civil and military authorities should focus on minimizing the Danger Area activation window, i.e.:

- consider activation timings when air traffic density is less;
- consider accommodating preferred (most efficient) flight levels for civil traffic as far as practicable;
- consider the implications of enroute weather related factors.

2.7 AIS (NOTAM) publication – NOTAMs shall be published providing at least seven days advance notice following the Doc 10066 Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM) procedure, prior to activation, advising/indicating all affected FIRs and detailing the minimum realistic activity duration window needed to successfully complete the planned exercise/event.

2.8 Neighboring FIRs – coordinated planning is essential, especially if the danger areas are situated in close vicinity to the airspace of other FIRs.

2.9 Tactical management – consider establishing daily co-ordination with military authorities for the beginning and end of the relevant activity, especially for Danger Areas located over high seas in the vicinity of established airways, or during adverse weather conditions.

2.10 De-activation – deactivate Danger Areas if they are not required, or as soon as the relevant activity is completed, rather than waiting until the end of the promulgated activity window.

2.11 The need for weather deviations by civil traffic, driven by the dynamics of oceanic weather-related disturbances at various times of the year, should be considered during the planning and coordination stage of Danger Area promulgation due to:

- limitations of communication and surveillance coverage over the high seas;
- the frequent requirement for flights on oceanic airways to fly parallel offsets for weather avoidance, to a much greater magnitude than the prevailing separation or wake turbulence standard, e.g. such deviations may often be 10 to 15 nautical miles, (and at times up to 25 to 50 nautical miles) to avoid convective weather cells.

2.12 When any temporary Danger Areas / Restricted Areas extend into other FIRs it is critical that all affected FIRs publish AIS (NOTAM) advice about the activation at least seven days advance notice following the PANS AIM procedure. If all affected FIRs do not provide NOTAM advice of an activation there is a risk that airline flight planning systems may not capture important information highly relevant to the safe and efficient operation of all potentially impacted flights.

2.13 United Nations Convention on the Law of Sea (UNCLOS) does not empower States to impose restrictive measures on aircraft (other than own State aircraft) within international airspace. Creating a permanent Danger Area and keeping it active for prolonged hours throughout the year does not comply with the UNLOS guidance.

2.14 An example case study highlighting many of the above points is included as **Attachment A**. This case study highlights the ongoing prolonged activation of Danger Areas in the Bay of Bengal.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper;
 - b) discuss any relevant matters as appropriate; and,
 - c) Discuss and agree to the draft conclusion below:

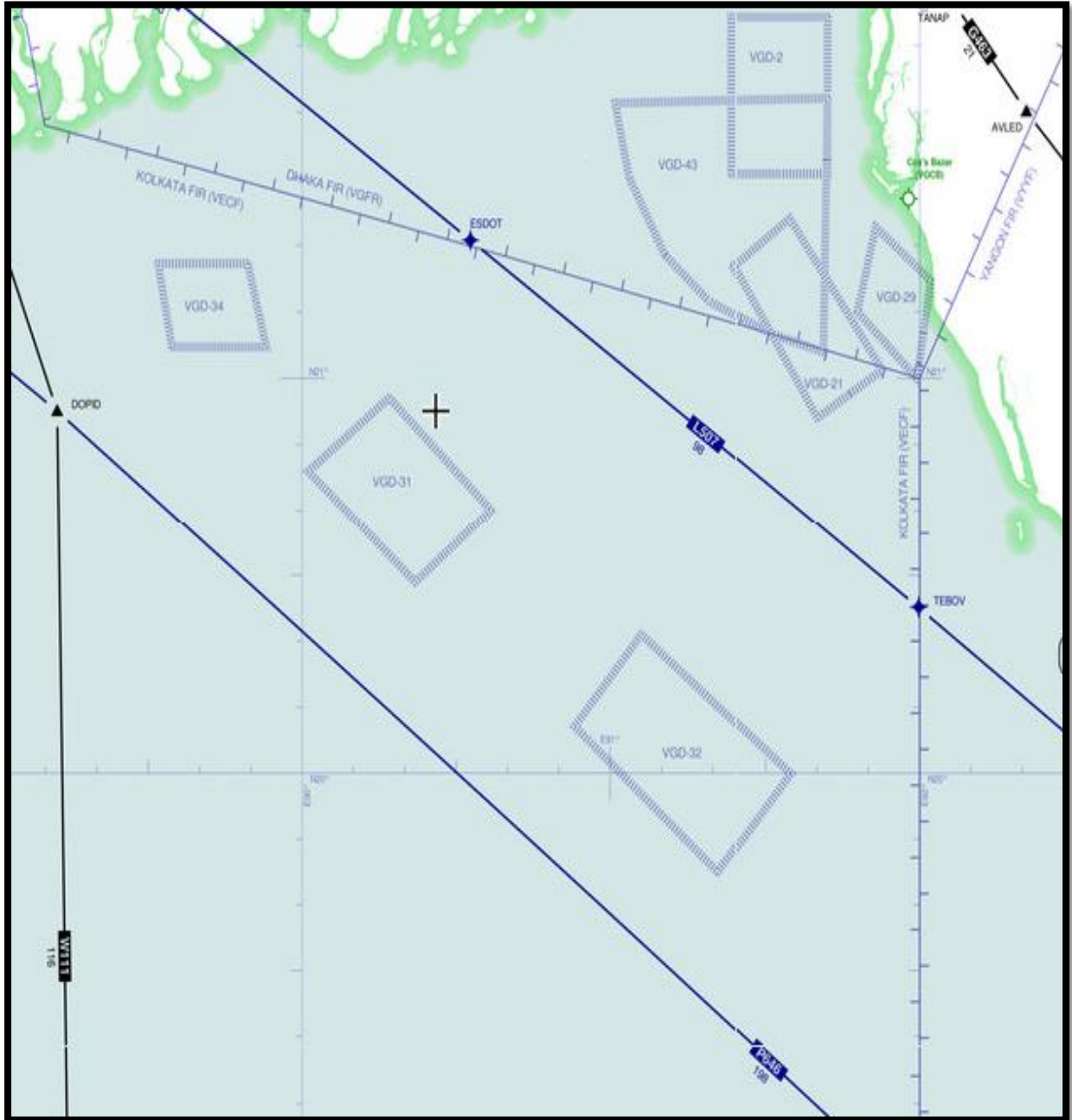
Draft Conclusion ATM/SG/9-X: Management of Danger Areas situated over the High Seas	
<p>What: Acknowledging that safe and sustainable aviation is the prime goal of all stakeholders, and that airspace is a very important shared resource, States are urged to:</p> <ul style="list-style-type: none"> i) act in accordance with the ICAO DOC 10088 principle <i>as civil as possible, as military as necessary</i>; and refrain from prolonged activation of Danger Areas over the High Seas, particularly activations that are repetitive in nature and impact almost all useable flight levels within the given volume of airspace; ii) give due consideration to the requirements of other airspace users (e.g. air traffic density, flight levels, enroute weather factors) during the planning, promulgation and activation of Danger Areas; iii) establish robust co-ordination between civil and military authorities, as well as with neighboring FIRs; iv) ensure all affected FIR/s provide appropriate AIS (NOTAM) notification regarding activation of the Danger Area at least seven days advance in accordance with the PANS AIM procedure . 	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<p>Why: To reduce the safety and sustainability impacts of unnecessary airspace closures on aviation activities in Asia Pacific</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 05 November 2021</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX</p>	

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Annexure A

Example Case study:

A.1. Location: Graphics detailing location of Danger Areas VGD-32 and VGD-34 established by Bangladesh over the High Seas that is in the northern portion of Bay of Bengal, in the vicinity of airways L507 and P646.



A.2. Activation period: These Danger Areas remain active throughout the year from water surface to FL400 with monthly series of NOTAMs, for Naval firing exercises, 5 days (Sundays through Thursdays) between 0000-1600 UTC, every week.

A.3. NOTAMs:

A.3.1. VGFR DHAKA FIR

A0307/21 - FRNG PRACTICE WILL CARRY OUT WI THE AREA VGD-32/34 BY BANGLADESH NAVY SHIPS. WATER - FL400, BTN 0000-1600 DLY EXC FRI AND SAT FM 01 TO 31 OCT 2021, 01 OCT 00:00 2021 UNTIL 31 OCT 16:00 2021. CREATED: 21 SEP 06:37 2021

A.3.2. Though VGD-32 and VGD-34 are situated over the High Seas in Kolkata (VECF) FIR but there is no VECF NOTAM about the activity.

A.4. Brief Background:

A.4.1. SAIOACG/9, ATM/SG/7 and APANPIRG/30 meetings:

- i. The meeting's discussions included VGD-32 and VGD-34 and heard that Bangladesh had been able to establish standard operating procedures on the activation, de-activation and suspension of activities in these Danger Areas with its military authorities and an agreement had also been reached with India for their operation and related notifications.
- ii. Reports received are that the Danger Areas continue to remain active for prolonged durations throughout the year and airlines do not receive notification of changes to their status in normal pre-flight briefing information.
- iii. Actions remain outstanding from those meetings to correct the incorrect promulgation of airspace in an FIR that is not assigned to the State, present application of the activation periods and subsequent notification process.

A.5. Weather deviation:

A.5.1. Refer graphics in A1, these danger areas are situated in-between airways L507 and P646 in VECF (Kolkata) FIR. The table below provides details of approximate spacing between these airways and Danger Areas:

Danger Area	Approx. Spacing with respect to	
	P646 to North	L507 to South
VDG 32	16 NM	25NM
VGD 34	20NM	33NM

A.5.2. This portion of Bay of Bengal is prone to weather related disturbances throughout most of the year due to frequent cyclones, monsoon, (as well as retreating monsoon) and nor'westers.

A.5.3. Flights on airways L507 and P646 are frequently required to fly a parallel offset, to a magnitude of deviation much greater than what is normally expected in the separation or wake turbulence scenarios and may often be 10 or 15 nautical miles (and at times up to 25 to 50 nautical miles) to avoid convective clouds (CBs).

A.6. Safety Case:

A.6.1. Airspace reservation, activation of Danger Areas for 16 hours daily, 5 days a week, month after month for all 52 weeks; clearly indicates that there is a scope to improve co-ordination between civil and military authorities.

A.6.2. VECF has not published NOTAM for activation of Danger Areas VGD 32 and VGD 34 which indicates:

- There is also scope to improve co-ordination between neighbouring FIRs
- Danger Areas activation may not be captured by airlines

A.6.3. Communications coverage limitations over Oceanic airspace means flight crews and ATCO may not be able to immediately inform or alert each other about weather related deviations or activation of the Danger Areas respectively.

A.6.4. Weather avoidance related large offsets may thus trigger a safety case.