

FLEXIBLE USE OF AIRSPACE

FREQUENTLY ASKED QUESTIONS (FAQ)

What is Flexible Use of Airspace Concept?

Flexible Use of Airspace (FUA) is an airspace management concept based on the principle that airspace should not be designated purely as civil or military, but rather as a continuum in which all user requirements are accommodated to the greatest possible extent.

In a practical sense, this means that designating airspace for the exclusive use of military (or civil) by creating rigid airspace structures such as Danger / Restricted / Prohibited Areas should be avoided. Instead, flexible structures such as TSA and TRA should be created and allocated one-day before the day of operations through Airspace Management Cells (AMC). This will prevent “idling” of airspace.

FUA also permits the creation of Conditional Routes through military (rigid or flexible) airspaces, which can be allocated by AMC in pre-tactical phase.

What are the three phases of airspace management in FUA?

Strategic, Pre-tactical and Tactical.

- Tactical: On the day of operation (D)
- Pre-tactical: The day before the day of operation (D-1)
- Strategic: Any day before D-1.

AMCs are responsible for the pre-tactical activity of allocating flexible airspace structures such as TSA, TRA and CDR routes.

What is an Airspace Management Cell (AMC)?

AMC is a joint civil/military cell responsible for the day-to-day management and temporary allocation of national airspace under the FUA concept.

AMC receives airspace and CDR allocation requests from various military and civil units, which then publishes their availability for the next day (or even beyond) through AUP or UUP.

AMC is responsible for de-conflicting of airspace and CDR allocation requests in the event of a conflict (multiple users requesting the same general airspace).

AMC works from Monday to Friday from 0230 UTC (0800 HRS) to 1330 UTC (1900 IST). Gazetted Holidays are holidays for AMC.

What are TSA, TRA and CDR?

Temporary Segregated Area (TSA) is an airspace temporarily reserved and allocated for the exclusive use of a specific user during a determined period, through which no other flights may pass. TSA can be considered as the flexible equivalent of Danger Area.

Temporary Reserved Area (TRA) is an airspace temporarily reserved and allocated for the specific use of a particular user during a determined period, through which other flights may pass with permission from Controlling Authority. TRA can be considered as the flexible equivalent of Restricted Area.

Conditional Route (CDR) is a non-permanent ATS route or part of it that can be planned and used under special conditions.

- CDR1: Permanently flight plannable as per conditions published in AIP ENR 3.1. CDR1 not allocated by AMC.
- CDR2: Temporarily flight plannable, if the route is allocated by AMC and published in AUP/UUP.
- CDR3: Not flight plannable. CDR3 is also not allocated by AMC and can be used by ATC in dynamic coordination with concerned military unit(s).

Existing ATS routes are known as Permanent ATS Routes. Permanent ATS Routes are not considered flexible.

What are AMC-Manageable Airspaces?

AMC-manageable airspaces are flexible airspaces which are managed by AMC in pre-tactical phase.

Rigid airspace structures such as Danger Area or Restricted Area can be either fully or partially released as AMC-manageable airspace. When, it is done so, such airspace structure will be allocated by AMC in the same manner as TSA, TRA and CDR2. The availability of such airspace structures will also be published in AUP/UUP.

IAF has agreed to release 46 LFAs at and above FL330 and another 4 LFAs above FL250 as AMC-manageable airspace. This was done in phases starting 14 August 2020.

What is an Airspace Use Plan (AUP)?

Airspace Use Plan (AUP) is an ASM message of NOTAM status notifying the daily decision of an Airspace Management Cell on the temporary allocation of the airspace within its jurisdiction for a specific period, through a standard message format.

AUP indicates the allocation status of TSA, TRA, other AMC-manageable airspaces and CDR2 routes on the applicable date. Thus, if one sees a TSA, TRA or CDR2 route in the AUP, it means that the airspace structure will be used by concerned stakeholder. As an illustration, if AUP indicates that TRA501 is allocated from 0200 to 0500 UTC, it means that the concerned military unit will be using TRA501 during the time it has been allocated to them. Similarly, if a CDR2 route is mentioned as available in the AUP, airline operators can flight plan the CDR2 route. For example, if J17 is indicated as available from 0500-1000 UTC for a particular day in the AUP, then the route is flight plannable by airline operators during the time specified.

AUP is published before 0930 UTC (1500 IST) by AMC.

AUP is published as A-series NOTAM by concerned NOTAM Office. AUP (in PDF format) will also be sent by AMC through email to all stakeholders. AUP will also be published in the CATFM Portal and also in the AIM India Portal before 1030 UTC (1600 IST).

AMC can publish AUPs for up to 7 days in advance. This facility is used when AMC is not functional as in the case of Saturdays, Sundays and Gazetted Holidays. AMC publishes additional AUPs for the days when it is not functioning. For example, on Fridays, the AMC will publish 3 AUPs for Saturday, Sunday and Monday. If Wednesday is a Gazetted Holiday, then on Tuesday AMC will publish 2 AUPs for Wednesday and Thursday.

What is an Updated Airspace Use Plan?

Any corrections or changes (to the already AUP) required in allocation slots (availability in terms of time and/or level band) can be published as Updated Airspace Use Plan (UUP). When required, UUPs can be published at 1230 UTC (1800 IST) and/or 1330 UTC (1900 IST).

UUPs are sequentially number as published. This means that if UUP is published at 1230 and 1330 UTC, then the first UUP will be named as UUP1 and the second one as UUP2. However, if only one UUP is published at 1330 UTC, it will be named as UUP1.

When published, UUP will completely replace AUP or earlier UUP applicable for the particular day. Thus, a new NOTAM replacing the previously published NOTAM will be issued. UUP will contain the complete contents of the previously published AUP/UUP after incorporating the changes.

Will publication of a UUP render previously allocated CDR2 unavailable?

In normal case, NO.

The changes permitted from allocation published as AUP should generally be limited to within the requests already submitted. This means that going beyond the original request submitted in terms of level band or timing is not permitted unless it is an extremely urgent military requirement. This also means that no new TSA or TRA can be asked for after AUP is published. However, the final discretion in this regard will be exercised by AMC.

Can a UUP be published on the actual day of operation?

Yes, if the situation warrants such as action. This publication is generally not encouraged as a routine action.

On the actual day of operation, if a previously allocated airspace is not being activated by the military unit for some reason, and due to this CDR2 routes can be activated through this airspace, then AMC may issue a UUP for the same day replacing the previous AUP or UUP. The UUP will be sequentially numbered (say UUP3 etc.) but the date of applicability will be for the same day.

UUP can be issued only if AMC is working. UUPs cannot be issued by ATS units.

What are Approved Agencies?

Approved Agencies (AA) are units, which are authorised by Airspace Users to coordinate with Airspace Management Cells (AMC) for airspace allocation and utilisation matters. AAs will submit airspace request for multiple airspaces under their command to AMC. For example, CATCO, EAC, IAF is the AA for all TSA, TRA and other AMC-Manageable airspaces controlled by IAF in the eastern and north-eastern region.

The system of AA coordinating with AMC will drastically reduce the coordination efforts on part of AMC.

What are the best practices for submitting an Airspace Allocation request?

- Controlling Authorities of airspaces submit airspace allocation requests to concerned Approved Agencies before 0500 UTC (1030 IST).
- AA scrutinises the requests for errors and appropriateness of demand and compiles the allocation requests as per the standard format. Controlling Authorities and Approved Agencies should ensure that the airspace demanded should be appropriate to the planned

missions and should not be in any case excessive. A small but reasonable margin for uncertainties may be factored in.

- AA submits the consolidated airspace allocation request to AMC by email before 0530 UTC (1100 IST).
- In the event of any issues with the internet, the request may be sent to AMC as FAX.

What are the best practices for submitting a CDR2 Allocation request?

- WSO, ACC prepares the allocation request for CDR2 routes in their airspace. The request should be based on the anticipated use of the route based on the airline schedules, factoring in a small but reasonable margin for delays. ATFM-FMP may be requested to identify the set of CDR2 routes which need to be activated the next day based on the demand-capacity issues and also other uncertainties such as weather.
- ACC submits the consolidated CDR2 allocation request to AMC by email before 0530 UTC (1100 IST).
- In the event of any issues with the internet, the request may be sent to AMC as FAX.

Can the Airspace and CDR2 Allocation Requests be submitted well before 1100 IST on D-1?

Yes. AA and ACCs can submit airspace and CDR2 allocation requests two or three days in advance. AMC will store the information and process it on the day before the actual day of operation.

However, the point to be noted is that as one comes closer to the actual day of operation, the level of uncertainties will be less and hence the slots requests could be more accurate. Another matter of concern is the availability of two or more requests for the same action (in case of revision) with AMC which may be wrongly processed. Hence it is advisable to issue requests on D-1.

What is the role of ATS Units in FUA?

ATS units conduct airspace management function as part of their air traffic management responsibilities. When a Danger Area is notified as active through NOTAM, the ATS unit ensures activation of the area as per NOTAM (if the Controlling Authority is in contact, pre-activation and post-deactivation coordination will take place). This is an airspace management function. When ATC ensures that no aircraft enters the active Danger Area, it is Air Traffic Services function.

In the case of FUA, ATS units should ensure that:

- The current AUP/UUP for the day should be available in the briefing folder for ATC officers.
- All ATC officers should be aware of the contents of the current AUP/UUP and should prepare for the activation of the flexible airspace structures as per plan.
- Mutual coordination should be effected between civil and military units concerned for activating TSA, TRA, other AMC-manageable airspaces and CDR2 routes.
- On completion of the activities, the flexible airspace structures should be de-activated in mutual coordination between civil and military ATS units.

What are the changes happening in Indian airspace since 30th July 2020?

- Delhi AMC is established on 30th July 2020.
- 46 IAF LFAs have been converted into AMC-manageable airspaces at and above FL330 starting from 14th August 2020, out of which 14 LFA became effective from 14th August, 18 LFAs from 18th August and 14 LFAs from 1st September 2020.

- 4 IAF LFAs will be converted into AMC-manageable airspaces above FL250 from 1st September 2020.
- Two conditional routes T301 (Mumbai-Pathankot-Mumbai) and T308 (Delhi-Jalalabad) have been created from 14/15 August 2020 respectively.
- 20 existing CDRs with time restrictions have been made available H24 from 25th August 2020.
- 8 new CDR2 routes will be established from 1st September 2020.

Can a CDR be published as CDR1, CDR2 and CDR3?

Yes. The same CDR can be published as CDR1 during specified timings mentioned in the AIP, and also as CDR2 as per AUP/UUP published by AMC and as CDR3 on an opportunity basis.

Can AMC handle tactical airspace management?

No, for the time being. When AMCs get better equipped with system support etc., and when FUA gets matured to Dynamic Airspace Management (DAM), AMC will be able to handle tactical ASM.

What is the plan for phased implementation of other AMCs?

- Delhi AMC was established on 30th July 2020.
- RAMC-Chennai would be established before 30th September 2020. When established, RAMC-Chennai will handle airspace allocation of Chennai and Kolkata FIRs. Delhi AMC will handle Delhi and Mumbai FIR and additionally function as NAMC.
- Other RAMCs will be established as per requirement.

What will happen if AUP is not published for a day?

If AMC is unable to publish AUP, no flexible airspace structure will be active on the actual day of operation. If such an eventuality were to happen, airspaces should be activated in dynamic coordination between civil and military units and all CDR2 routes will be used as CDR3 only.
