Chapter 15 - Annual Report on the Application of FUA

15.1 National organisation and responsibilities at the 3 levels of FUA

15.1.1 At Strategic Airspace Management Level 1

| FUA Level 1 Implemented | Y | The State has established appropriate FUA Level 1 mechanisms, e.g. High Level Airspace Policy Body | Y | Committee on Airspace Issues (ALF, "Ausschuss für Luftraumfragen") established in 1996 between MoT and MoD. |

Overall responsibility rests with the MoT; however, MoD agreement is required. Certain tasks are carried out by DFS Deutsche Flugsicherung GmbH and AFSBw Bundeswehr Air Traffic Services Office.

Measures established to ensure consistency between:
- ASM and ATFM: Y Regional ATFM/ASM Unit established at DFS HQ.
- ASM and ATS: Y AMC (Airspace Management Cell) established (DFS & AFSBw).

The State has notified the Commission of the identified persons/organisations responsible for all the tasks listed in Art. 4.1 of the FUA Regulation: not known Date and Reference of the Communication: N/A

The State has ensured that the following tasks related to ASM Level 1 are performed by the responsible body (referred to above):
- Regularly review and address users’ requirements Y
- Permanent review of user requirements through close coordination between user representatives, AFSBw and DFS.
- Regular meetings of airspace experts who analyse the current airspace situation and discuss new airspace requirements.
  “Luftraumnutzerkonferenz” (airspace users’ conference) yearly in October.
- MVPA: regular consultations with users.
- Approve activities which require airspace reservation or restriction Y
- A process has been agreed between AFSBw and DFS for the preparation of airspace restrictions/reservations.
  As stated in the "LuftVO §11", airspace restrictions can only be laid down by MOT. Before agreeing to an airspace restriction MOT requires statements by ATC, MOD, General Aviation representatives (Aeroclub), local Aviation Authorities ...
  A paragraph in the LuftVO (§10.4) gives DFS the right to reserve airspace (completely within airspace C and D).
- Define temporary airspace structures and procedures to offer multiple airspace reservation and route options Y
- Military Training areas are managed by AMC as well as Conditional Routes (with alternate route options published for each route).
- MVPA: in northeast Germany, military training airspace is assigned flexibly aided by a modular system.
- Establish criteria and procedures providing for the creation and use of adjustable lateral and
TRAs: some TRAs are laterally divided into sectors. In addition, further flexible limits of a TRA (depending on the type of activity inside the area) can be agreed between AMC and mil AA (which will then be reflected the AUP) or on short notice between ATC and TACCS (e.g. TRA is only used south of an airway which crosses it).

MVPA: the lateral limits of exercise airspace are defined based on a grid system. Vertical limits are defined individually based on the type of mission and aircraft type.

- Assess the national airspace structures and route network with the aim of planning for flexible airspace structures and procedures

Y

Ongoing assessment between DFS and AFSBw, regular meetings of “airspace expert teams” and MVPA Steering Group.

- Define specific conditions under which the responsibility for separation between civil and military flights rests on the ATS units or on the controlling military units

Y

As there is only one single enroute integrated ATS provider, all traffic is handled by ATC according to ATC Ops Manual Separation Criteria.

[Within the Hannover UIR two ATS providers share the responsibility for GAT and OAT by a co-located working principle. Generally, Eurocontrol Maastricht UAC is responsible for providing ATS to GAT and has priority on Upper RNAV Routes. DFS Maastricht UAC is responsible for providing ATS to OAT and has priority on Upper RNAV Routes. The latter has to ensure separation for OAT to both GAT and OAT. Co-ordination procedures to be applied are laid down in a common Letter of Agreement.]

For a civil flight crossing an active military training area (after coordination), the TACCS unit controlling the military flights will keep the minimum distances required (similar to the separation minima) to the civil flight. For the distances to airspace boundaries different arrangements have been established between ATC and TACCS.

- Establish mechanisms to assess performance of FUA operations

Y

A process for the establishment of a "Performance Report mil. Airspace Utilization" is developed. KPIs used are Eurocontrol KPIs 4 and 5 plus a set of newly developed KPIs (availability TRAMON position, ratio booking/usage, additional bookings, opportunity flights). Military KPIs are determined within the PRISMIL programme by the Bundeswehr.

- Based on the outcome of this assessment, periodically review and revise as necessary, airspace procedures

Y

There is a permanent review of user requirements through close coordination between user representatives, AFSBw and DFS, as well as regular meetings of airspace experts (who analyse the current airspace situation and discuss new airspace requirements).

- Establish mechanisms to archive data on the requests, allocation and actual use of airspace structures for further analysis and planning activities

Y

Airspace requests, Airspace Use Plans and details on actual airspace use are saved in MS-Excel and burned on CDs (per year). The data is kept in the AMC.

The details on booking/usage of TRAs are archived in the ASM tool STANLY_ACOS by DFS.

Apart from Danger Areas over the High Seas and Prohibited areas, the State has abandoned application of permanent airspace restrictions: N

Permanent airspace restrictions are still necessary for safety or security reasons, e.g. around nuclear power plants and for activities which are dangerous to aircraft (ammunition demolition areas).

Changes since previous FUA Report: ASM tool renamed to STANLY_ACOS, military participation in PRISMIL programme, MVPA structure changed from grid to modular, CFMU/STANLY_ACOS interface initiative

15.1.2 At Pre-tactical Airspace Management Level 2

<table>
<thead>
<tr>
<th>FUA Level 2 Implemented:</th>
<th>Y</th>
<th>Airspace Management Cell – AMC:</th>
<th>Y</th>
<th>(See below)</th>
<th>Joint Civil-Military Cell:</th>
<th>Y</th>
</tr>
</thead>
</table>

An Airspace Management Cell has been established. It is staffed with both civil and military personnel from DFS and the Bundeswehr (AFSBw).

The airspace is allocated in accordance with the conditions and procedures defined in Article 4.1: Y

The established AMC (referred to above) is provided with adequate dedicated ASM supporting systems to perform and communicate the pre-tactical airspace management tasks: Y

Office PCs (MS-Excel, email [Internet, ATC-internal and military-internal email]), STANLY_ACOS (bookings tool for
5.1.3 At Tactical Airspace Management Level 3

FUA Level 3 Implemented: Y
Integration of military area control service in civil ANSP organization (DFS)

The State has ensured that the relevant ATS Units and controlling military units:

- establish coordination procedures and communication facilities to allow the real-time activation, deactivation or reallocation of airspace allocated at pre-tactical level: Y

For areas which have a significant impact on capacity or influence neighbouring ACCs/UACs the AMC issues a UUP to all ATC units concerned.

Traffic controlled by TACCS is visible to ATC (special SSR codes). TACCS has CIMACT for "civil" radar picture.

TRAs are used by ATC for GAT until TACCS announces the upcoming arrival of their military traffic.

TACCS notifies ATC as soon as the activity inside the area has finished (only telephone coordination via ATC voice network).

- establish coordination procedures to ensure the timely and effective exchange of any modification of planned airspace reservations and the adequate notification to all affected users: Y

The military AAs notify the ACC/UAC-supervisor about changes to the activities planned in the AUP or additional bookings.

If there is a disagreement, the AMC may be called in to act as an intermediary.

GAT on affected CDRs will be tactically rerouted by ATC.

Exemption: Changes and additional bookings for areas which have a significant impact on DFS capacity or influence neighbouring ACCs/UACs (e.g. ED-R305 TRA Lauter) are coordinated via the AMC. In this case, the AMC issues a UUP to all ATC units concerned.

- establish coordination procedures and supporting systems to ensure safety when managing interactions between civil and military flights: Y

TACCS has CIMACT for "civil" radar picture.

Direct voice coordination between ATC and TACCS.

- establish coordination procedures to permit direct communication of relevant information to resolve specific traffic situations where civil and military controllers are providing services in the same airspace: n/a*

* Remark: not applicable as due to integration there is no military enroute ATC

Specifically:
- Position of aircraft n/a
- Flight intention of aircraft (e.g. exchange of Flight Plan data) n/a

All airspace reservations are released as soon as activities having caused their establishment cease: Art 3 c Y

TACCS notifies ATC as soon as the activity inside the area has finished (only telephone coordination via ATC voice network).

Changes since previous FUA Report: -
15.2 Cooperation between Member States at the 3 levels of FUA

15.2.1 At Strategic Airspace Management Level 1

| The State coordinates its airspace management policy with the respective States to jointly address the use of cross-border airspace structures: | Y | FABEC activities with Belgium, France, Luxembourg, Netherlands and Switzerland Coordination in ASM-SG, RNDSG. |

| Type(s) of cross-border airspace use is applied in the State: |  |
| Cross-border area | Y | Netherlands (CBA SEA1, AMRUFRA project) |
| Shared reserved airspace (TRA and TSA) | Y | Cross border operations are currently mainly done with Belgium, the Netherlands, France and Switzerland. |
| Conditional routes | Y | Belgium, Denmark, Netherlands |

The State has established with neighbouring States one common set of standards for separations between civil and military flights for cross-border activities:

| Y | CBA SEA1: ATC separates all traffic outside of CBA to CBA boundary. CBO: respective States' (where the airspace used is located) rules apply. |

Changes since previous FUA Report: AMRUFRA project, FABEC

15.2.2 At Pre-tactical Airspace Management Level 2

| If cross-border operations apply, has the State established a joint or multinational AMC with neighbouring State(s): | N | FABEC will establish a consolidated ATFCWASM function on local/FABEC level. |

Changes since previous FUA Report: -

15.2.3 At Tactical Airspace Management Level 3

| The State has established a common set of procedures to manage specific traffic situations and/or to enhance the real-time airspace management between civil and military units involved in or concerned with cross-border activities: | Y | Procedures in CBA-SEA1-LoA with the Netherlands. AMRUFRA project separation procedures. Traffic within and outside the CBA is allowed to go up to the air-space boundary. The controlling unit within the CBA is responsible to maintain separation according to the ICAO-Standards between exercising traffic and traffic outside the CBA and between exercising traffic and IFR - traffic, which is crossing the CBA under special circumstances (SAR, MEDEVAC, coordinated crossing, ...). The responsibility for maintaining exercising traffic within the CBA rests with the controlling unit. |

Changes since previous FUA Report: AMRUFRA project
15.3 Safety assessment

The State has established a safety management process to conduct all safety assessment activities before the introduction of any changes to the operations of the FUA: Y

All new/additional procedures and systems have to be validated to a safety management process (according to SES Regulation 2006/2005). Safety assessments done for MVPA Operations Phase II.

15.4 Performance assessment

Evaluation of the functioning of agreements, procedures and supporting systems established at the 3 levels Annex

A process for the establishment of a "Performance Report mil. Airspace Utilization" is developed. KPIs used are Eurocontrol KPIs4 and 5 plus a set of newly developed KPIs (availability TRAMON position, ratio booking/usage, additional bookings, opportunity flights). Military KPIs are determined within the PRISMIL programme by the Bundeswehr.

<table>
<thead>
<tr>
<th>Safety</th>
<th>Y/N</th>
<th>See above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airspace capacity</td>
<td>Y/N</td>
<td>See above</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Y</td>
<td>See above</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Y</td>
<td>See above</td>
</tr>
</tbody>
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15.5 Compliance monitoring

The State is fully compliant with the FUA Regulation (EC Regulation 2150/2005): Y

Responsibility for compliance monitoring rests with the Regulator.

The State has established a FUA compliance monitoring processes: Annex Y

Additional comments: An NSA audit took place in the DFS-part of the AMC on 15 Sep 2009.

15.6 Problems encountered and need for changes

Problems encountered in the implementation of the FUA regulation and need for changes Annex

"Basic FUA" as described in the FUA-Regulation is rather rigid when it comes to timelines and offers little possibilities to manage the airspace - while still on a pre-tactical basis - closer to the event.

DFS: ASM/ATFM-timelines need to be harmonised at European/Eurocontrol level to improve consistency between ASM and ATFM.