ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT (ATFM) AND AIRSPACE MANAGEMENT

1. AIR TRAFFIC FLOW AND CAPACITY MANAGEMENT

1.1 INTRODUCTION

*ATFCM is a service with the main objective of managing the demand and capacity by optimising the use of available resources and coordinating adequate response in order to enhance the quality of service and the performance of the ATM system and to protect ATC Units from over-delivery.

A centralized Air Traffic Flow and Capacity Management (*ATFCM) service is established within the ECAC (EUR) Region to optimize the use of air traffic system capacities. The overall authority for provision of *ATFCM Service in *BHACC Area of Responsibility (*AoR), is delegated to the EUROCONTROL Network Management (NM), and is conducted in close cooperation with BHFMP and *ATFCM Unit (*BHANSA) as part of CDM process.

This CDM process is a key enabler of the *ATFCM strategy allowing the sharing of all relevant information between parties involved in making decisions and supporting a permanent dialogue between the various partners through all phases of flight.

A description of *ATFCM Area and information on the Network Operations System can be found in the Network Operations Handbook.

Current Network Operations Handbook is available at the NMOC Network Operations Portal website.

1.1.1 *ATFCM Solutions for Capacity Shortfalls Resolution

*ATFCM considers continuously and pro-actively all possible *ATFCM solutions through an iterative seamless process as from strategic planning until the execution of the operations.

*ATFCM solution has been considered in three parts:

- Optimise capacity;
- Utilize other available Capacity with aim to shift traffic demand into areas where Capacity is available;
- Manage the Demand

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1.1.2 Information on *ATFCM Measures

Whenever the *ATFCM measures are in force, they are published by NM in form of an ANM (*ATFCM Notification Message) and AIM (*ATFCM Information Message).

Published ANMs and AIMs are received at the operation's office of those Aircraft Operators who made a request to the NM, or they are directly accessible for those Aircraft Operators who are connected to the NM via a NM Terminal.

These ANMs and AIMs are also available (at the local ARO) and at the BHFMP.

1.1.3 Flights subject to *ATFCM

All flights subject to *ATFCM will be treated equally, excepted for the flights with special status which are either excluded or entitled priority.

Flights that are subject to *ATFCM are all IFR/*GAT flights which:

- Depart from within *ATFCM area;
- Enters the *ATFCM area after departing from an adjacent FIR within the *ATFCM Adjacent Area.

Latest update of the list of adjacent FIRs may be found on EUROCONTROL website.

1.2 RESPONSIBILITIES OF NM

NM is responsible for:

- Ensuring that traffic flows correspond to the stated capacities of the sectors through which they pass;
- Ensuring that, when necessary, *ATFCM measures are applied in an equitable manner and in such a way as to reduce as far as possible the penalties to Aircraft Operators.

In order to this NM applies procedures which are:

- Agreed internationally;
- Published in the corresponding NM documentation;
- In accordance with the National Regulations stated in the National AIP.

1.3 RESPONSIBILITIES OF *BHANSA ATFM UNIT

Head of ATFM Unit is overall in charge for activities in Strategic Air Traffic Flow and Capacity Management by carrying out coordination of specific projects related to specific events or specific process.

1.3.1 Provision of information on events affecting air traffic movements

Airport Operators and all BH Aerodromes are to provide at the earliest opportunity, but at least 14 days in advance, details of any event that may lead to a significant increase in traffic demand.

The following information shall be submitted to *ATFCM Unit directly or through the BHFMP:

- Name of airport;
- Airport contact;
- ATC contact;
- Nature of event;
- The expected nature of change in demand.

Following the provision of the notice of the event, *ATFCM Unit will assess the impact and coordinate any necessary *ATFCM response.

1.4 RESPONSIBILITIES OF THE BHFMP

BHFMP shall coordinate with the NM the most effective Air Traffic Flow and Capacity Management (*ATFCM) services to the other ATS Units, Aerodrome Units, Aircraft Operators and all others concerned.

BHFMP is located in *BHACC, ATCU I, Sarajevo and is operational H24.

1.5 RESPONSIBILITIES OF ATC UNITS

ATC Units at aerodromes (TWR) are responsible for monitoring flight compliance with departure times (*CTOT and EOBT).

ATC Unit at the aerodromes (TWR) shall ensure that an *ATFCM slot is included as part of ATC Clearance.

ATC Units (TWR) shall give priority in the departure sequence to traffic with *CTOT departure time.

In accordance with the provision of ICAO Doc 7030 and the *ATFCM User Manual, flight which do not adhere their departure times (*CTOT/EOBT) shall be denied start-up clearance. However, ATS Units at aerodromes shall make all efforts to enable departing flights to comply with their departure time (*CTOT/EOBT).

With the progressive introduction of Enhanced Tactical Flow Management System (ETFMS) and Flight Activation Monitoring (FAM), flights that are not notified as being airborne within 30 minutes of the notified ETOT/*CTOT will

receive Flight Suspension Message (FLS).

Departure Tolerance Window (DTW): ±15 minutes ETOT – ETOT = EOBT + TAXY TIME
Slot Tolerance Window (STW): -5 +10 *CTOT

1.5.1 ATC Assistance to Aircraft Operators

ATS Units at the aerodromes may be able to assist Aircraft Operators in the message exchange with the NM, provided that the pilot is in contact with the TWR.

For flights having already receive their departure slot (*CTOT) and being in a READY situation, the pilot of concerned flight may ask TWR to send a READY Message (REA).

Any potential improvement which could be given to this flight will be made by NMOC through the transmission of a Slot Revision Message (SRM).

The TWR will pass the SRM to the pilot as soon as it has been received from NMOC.

1.6 RESPONSIBILITIES OF AIRCRAFT OPERATORS

Aircraft Operators shall inform themselves of and adhere to:

- General *ATFCM procedures including flight plan filling and message exchange requirements;
- Strategic *ATFCM measures;
- Current *ATFCM measures;
- Departure time compliance (*CTOT/EOBT) requirements.

For uncontrolled aerodromes within B&H, information about *ATFCM measures including eventual departure slots can also be obtained from BH FIS (BHFIC). In this case it is an Aircraft Operator or pilot responsibility to determine whether the *CTOT or FLS affects their flights.

1.7 ATFCM PROCESSES

For flights within *ATFCM Areas or from within *ATFCM Adjacent Area and entering *ATFCM Area, AO's shall assume that their flight is subject to *ATFCM measures and subject to the requirement to submit a flight plans at least 3 hours before EOBT.

It is important that the EOBT of a flight is accurate. Any change of EOBT of more than 15 minutes shall be notified to the NMOC through the IFPS.

AO's should be aware that late filling of a flight plan may lead to a disproportionate delay.

The NM automatically calculates (from flight plan data) slot times for flights operating into areas for which *ATFCM measures have been established. The slot allocated to a flight will be issued as a Slot Allocation Message (SAM) 2 hours prior to EOBT. The Slot is presented as a Calculated Take-Of Time (CTOT).

1.8 CONTACT DETAILS

UNIT	POST	PHONE	FAX	AFTN	SITA	FREQUENCY
NM	EUROCONTROL/DNM Rue de la Fusee 96 1130 Brussels Belgium	+322 729 9011	+322 729 9043	EUCHCEUW	BRUEC7X	NIL
ATFCM UNIT BHANSA	Ortiješ bb 88000 Mostar Bosnia and Herzegovina	NIL	NIL	NIL	NIL	NIL
BHFMP	Aleja Bosne Srebrene 64 71000 Sarajevo Bosnia and Herzegovina	+387 33 251 398	+387 33 251 351	LQSBZDZX	NIL	NIL

1.9 AIRSPACE MANAGEMENT (ASM)

1.9.1 General

1.9.1.1 Airspace management of Bosnia and Herzegovina is carried out in compliance with:

- Aviation Law of Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina No.39/09);
- Order on the Rules of the Air (Official Gazette of Bosnia and Herzegovina No.52/13);
- Rulebook on Flight Approval (Official Gazette of Bosnia and Herzegovina No.53/18);
- Rulebook on the Establishment and Organisation of an Airspace Management Cell (Official Gazette of Bosnia and Herzegovina No.9/17);
- Decision on the Establishment of an Airspace Management Committee of Bosnia and Herzegovina (Official Gazette of Bosnia and Herzegovina No.75/16);
- Rulebook on the Organisation and Use of Airspace in the Single European Sky (Official Gazette of Bosnia and Herzegovina No.45/10);
- Rulebook Laying Down Rules for the Flexible Use of Airspace (Official Gazette of Bosnia and Herzegovina No.79/10);
- Rulebook on Air Shows (Official Gazette of Bosnia and Herzegovina No.14/16).

1.9.1.2 In accordance with legal framework referred above, Airspace management is applied on three levels:

- Strategic airspace management (level 1);
- Pre-tactical airspace management (level 2);
- Tactical airspace management (level 3).

Strategic Airspace Management (level 1)

ASM level 1 is an ASM function managed by Airspace Management Committee of Bosnia and Herzegovina which is formed by Council of Ministries of Bosnia and Herzegovina.

Post: Ministry of Transport and Communication
Airspace Management Committee of Bosnia and Herzegovina
Trg BiH 1
71000 Sarajevo
Bosnia and Herzegovina

Pre-tactical Airspace Management (level 2)

ASM level 2 is ASM function managed by joint civil - military unit - Airspace Management Cell (*AMC).

Airspace users shall submit request regarding airspace management, including requests for reservation, activation, suspension, deactivation or allocation of airspace structures, to relevant approved agency.

The role of civil approved authority for civil airspace users is delegated to *BHANSA – ASM/CIV-MIL department.

The role of military approved authority for military airspace users is delegated to Ministry of Defence - Airspace Management Department through the Military Operational Units.

Approved authorities perform tasks of de-confliction and coordination of airspace usage requests, and their submission to *AMC.

Post:	Airspace Management Cell (of Bosnia and Herzegovina) Bosnia and Herzegovina Air Navigation Services Agency Aleja Bosne Srebrene 64 71000 Sarajevo Bosnia and Herzegovina
Phone:	+387 33 251 393
AFS:	LQSBAMCX
E-mail:	amc.lqsb@bhansa.gov.ba
URL:	http://www.bhansa.gov.ba
Working hours:	Monday-Friday 0700-1900 (0600-1800)

Post:	Civil Approved Authority Bosnia and Herzegovina Air Navigation Services Agency Department for Planning of Air Traffic and Organization and Use of Airspace (ASM/CIV-MIL) Ortiješ bb 88000 Mostar Bosnia and Herzegovina
Phone:	NIL
E-mail:	civaa@bhansa.gov.ba
URL:	http://www.bhansa.gov.ba
Working hours:	Monday-Friday 0700-1500 (0600-1400)

Post:	Military Approved Authority Ministry of Defence of Bosnia and Herzegovina Sector for Policy and Plans Airspace Management and Protection Department Hamdije Kreševljakovića 98 71000 Sarajevo Bosnia and Herzegovina
Phone:	+387 33 285 588
E-mail:	+387 33 206 094
Working hours:	Monday-Friday 0700-1500 (0600-1400)

Post:	Military Operational Units Ministry of Defence of Bosnia and Herzegovina Air Force and Air Defence Brigade Kraljice Marije 78000 Banja Luka Bosnia and Herzegovina
Phone:	+387 51 332 980
Fax:	+387 51 332 980
E-mail:	airinfo@oc.mod.gov.ba

Post:	Military Operational Units Ministry of Defence of Bosnia and Herzegovina Logistic Command - Movement Coordination Centre Vidovdanska 74000 Doboj Bosnia and Herzegovina
Phone:	+387 53 201 530
Fax:	+387 53 201 531
E-mail:	ckk.k@oc.mod.gov.ba

Tactical Airspace Management (level 3)

ASM level 3 is ASM function managed partially by *AMC and by ATS units through mutual agreements with airspace users in order to allow the real-time activation, deactivation or reallocation of the airspace allocated at pre-tactical level as defined by the Airspace Management Cell.

1.9.2 Airspace structures

1.9.2.1 Predefined Airspace structures

Predefined airspace structures are established on ASM level 1 by Airspace Committee of Bosnia and Herzegovina.

Predefined airspace structures can be Unmanageable or Manageable.

Predefined Unmanageable Airspace structures are published in AIP Bosnia and Herzegovina as Prohibited, Danger or Restricted Areas.

Predefined Manageable Airspace Structures are published in AIP Bosnia and Herzegovina as Temporary segregated areas (TSA), Temporary reserved areas (TRA), Manageable danger and restricted areas (D, R), Conditional routes (CDR).

*AMC is responsible authority for approval of reservation, activation, deactivation, suspension of predefined manageable Airspace Structures.

1.9.2.2 Ad hoc Airspace Structures

The Airspace Management Cell (*AMC) may define Ad hoc airspace structures of temporary nature, which are not published in the AIP BIH, but by NOTAM and *NAUP (*AUP if applicable). Ad hoc Airspace Structures can be established on Pre-tactical or Tactical ASM, when general design, safety and operational criteria are met, for maximum period of 15 days.

1.9.3 Procedures for the Establishment of Ad hoc Airspace Structures

Airspace users shall submit their request for establishment of Ad hoc Airspace Structures no later than 20 days before planned activity to relevant approved authority, civil or military. Relevant Approved Authority will negotiate and de-conflict requests with other airspace users, and submit requests to *AMC no later than 15 days before the planned activity. *AMC will coordinate all activities necessary for the approval of request, including de-confliction and safety assessment.

During the de-confliction of requests, *AMC will follow the Priority List, approved by Airspace Committee of Bosnia and Herzegovina.

*AMC is responsible authority for approvals on usage of airspace but the approval for the activity shall be obtained by *BHDCA. If the airspace users need consent of ATS units prior to approval of activity by *BHDCA, that consent will be delivered to *BHDCA by *AMC, not by Airspace User.

1.9.4 Procedures for Reservation of Predefined Airspace Structures

Airspace users shall submit their request for reservation of predefined airspace structures no later than 10 days before planned activity to relevant approved authority. Relevant Approved Authority will negotiate and de-conflict requests with other airspace users if necessary, and submit requests to *AMC, no later than 7 days before planned activity. *AMC will if necessary de-conflict Airspace users' requests using Priority List.

*AMC shall coordinate publication of NOTAMs at least 7 days before planned activity.

1.9.5 Responsibilities of Airspace Users

Airspace users shall:

- Send requests to approved authorities, civil or military, for the reservation of predefined airspace structures no later 10 days prior to planned activity;
- Send requests to approved authorities, civil or military, for the establishment of Ad hoc airspace structures

no later than 20 days before planned activity;

- Inform *AMC as soon as possible in case that they intent to cancel planned activity;
- Inform *AMC as soon as possible if they will not use airspace structures as planned and published by AIP or NOTAM.

1.9.6 Priority List

ASM level 2 is conducted in accordance with CDM process of coordination, and in a way that usage of Airspace Structures is based on Priority List approved by the Airspace Committee:

a. Flights of military aircraft for the purpose of sovereignty protection of Bosnia and Herzegovina;

b. Search and rescue flights and humanitarian flights;

c. Flights transporting sick or injured persons requiring emergency medical assistance, and the flights for the purpose of providing emergency medical assistance to the sick or injured persons, as well as the flights transporting transplants, blood, and medication, including the flights being conducted to board patients, medication, transplants or blood at the place of destination;

d. Observation flights according to international agreements binding for Bosnia and Herzegovina (Open Skies Treaty);

e. International military exercises and international exercises of other state administration bodies;

f. National military exercises and national exercises of other state administration bodies;

g. Flights transporting heads of state and flights transporting prime ministers and other state officials with an established preferential status;

h. Military test flights;

i. International air shows;

j. International competitions in aviation activities;

k. National competitions in aviation activities;

l. Military and police training;

m. Activities relating to aerial work (aerial spraying, vaccination, crop and infrastructure monitoring, aerial photography...);

n. Sports and recreational aviation activities;

o. Civil training flights;

p. Releasing and launching objects into the atmosphere (e.g. unmanned free balloons, children’s balloons, sky lanterns, fireworks, lighting effects...);

q. Experimental activities for educational purposes.

1.9.7 Publication of ASM information

Publication of ASM information is done via:

- AIP Bosnia and Herzegovina;
- NOTAMs;
- National Airspace Usage Plan (*NAUP);

- Airspace Usage Plan (*AUP);
- National Updated Usage Plan (*NUUP);
- Updated Usage Plan (*UUP).

1.9.7.1 AIP Bosnia and Herzegovina

AIP Bosnia and Herzegovina is used for publication of Predefined Airspace Structures.

1.9.7.2 NOTAMs

NOTAMs is used for publication of reservations, activations, deactivation, and suspension of predefined airspace structures, and establishment of Ad hoc airspace structures as navigation warning.

*AMC is responsible for NOTAMs requests regarding airspace usage.

1.9.7.3 *NAUP and *AUP

National Airspace Usage Plan is published daily by *AMC up to 1400 D-1, where D-1 is day before the day of operations.

*NAUP is valid from 0600 D up to 0600 D+1, where D is day of operations, and D+1 is day after the day of operations.

*NAUP is published on *BHANSA website, http://www.bhansa.gov.ba.

Parts of *NAUP relating to structures defined in CACD are coordinated with NM as *AUP. *AUP will be published by Centralized Airspace Data Function (CADF) on the EUROCONTROL Network Operations Portal (NOP) https://www.public.cfmu.eurocontrol.int/PUBPORTAL/gateway/spec/index.html in section European *AUP/*UUP (EAUP/EUUP).

Validity period of the *AUP is from 0600 D until 0600 D+1.

1.9.7.4 *NUUP and *UUP

*NAUP and *AUP can be updated in case of changes of usage airspace structures published. This is done via *NUUP that is published on *BHANSA website, or *UUP on the EUROCONTROL Network Operations Portal (NOP)

URL: https://www.public.cfmu.eurocontrol.int/PUBPORTAL/gateway/spec/index.html in section European *AUP/ *UUP (EAUP/EUUP).

*NUUP/*UUP can be used for:

- Deactivation of previously reserved and activated airspace structures;
- Shorten the time of activity of airspace structures;
- Shorten the vertical limits of airspace structures.

*NUUP/*UUP cannot be used for:

- Activation of additional airspace structures;
- Increasing the time of activity of airspace structures;
- Increasing the lateral or vertical limits of airspace structures.