GEN 3.5 METEOROLOGICAL SERVICES

1. RESPONSIBLE SERVICE

The meteorological services for civil aviation in Bosnia and Herzegovina are provided by the:

Post:	Bosnia and Herzegovina Air Navigation Services Agency (BHANSA) Ortiješ bb, P.P.133 88000 Mostar Bosnia and Herzegovina
Phone:	+387 36 281 000
Fax:	+387 36 281 010
AFS:	NIL
E-mail	info@bhansa.gov.ba
URL:	http://www.bhansa.gov.ba

Operational Unit:

Post:	Bosnia and Herzegovina Air Navigation Services Agency (BHANSA) Meteorological Watch Office of B&H Aerodrom Banja Luka Mahovljani bb 78250 Laktaši Bosnia and Herzegovina
Phone:	+387 51 337 570
Phone:	+387 51 337 573[1)]
Phone:	+387 61 260 631
Phone:	+387 63 353 224
Fax:	+387 51 337 571[1)]
AFS:	LQSBYMYX
E-mail	mwo.banjaluka@bhansa.gov.ba
URL:	http://www.bhansa.gov.ba
	1. H24

The service is provided in accordance with the provisions contained in the following ICAO documents:

- *ICAO Annex 3 - Meteorological Service for International Air Navigation*;
- *Doc 7754 - Air Navigation Plan / European Region*;
- *Doc 8400 - PANS-ICAO Abbreviations and Codes*;
- *Doc 7030 - Regional Supplementary Procedures*;
- *Doc 8896 - Manual of Aeronautical Meteorological Practices*;
- *Doc 9328 - Manual of Runway Visual Range Observing and Reporting Practices.*

2. AREA OF RESPONSIBILITY

Meteorological service is provided within Sarajevo FIR.

3. METEOROLOGICAL OBSERVATIONS AND REPORTS

Name of station / Location indicator	Type and frequency of observation/ automatic observing equipment	Types of MET reports & Availability of trend forecasts	Observation System & Site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
SARAJEVO LQSA	Half hourly & Hourly plus special observations. Automatic observation of: surface wind, RVR, present weather, height of cloud base, temperature, humidity, pressure.	METAR & MET REPORT /SPECIAL & TREND AVBL[1)]	RWY 11/29 - 2 ultrasonic anemometers (TDZ 11 & TDZ 29) -3 scatter meter (TDZ 11, MID and TDZ 29) -1 ceilometer (MM 11) -1 temperature and humidity sensor (TDZ 11) -1 pressure sensor (TDZ 11) -1 present weather sensor (TDZ 11)	H24	Aerodrome climatological tables and summaries AVBL
BANJA LUKA LQBK	Half hourly & Hourly plus special observations. Automatic observation of: surface wind, RVR, present weather, height of cloud base, temperature, humidity, pressure.	METAR & MET REPORT /SPECIAL & TREND AVBL	RWY 16/34 -2 ultrasonic anemometers (TDZ 16 & TDZ 34) -3 scatter meters (TDZ 16, MID and TDZ 34) -1 ceilometer (MM 16) -1 sensor for temperature and humidity (TDZ 16) -1 pressure sensor (TDZ 16) -1 present weather sensor (TDZ 16)	H24	Aerodrome climatological tables and summaries AVBL
MOSTAR LQMO	Half hourly & Hourly plus special observations. Automatic observation of: surface wind, RVR, present weather, height of cloud base, temperature, humidity, pressure.	METAR & MET REPORT /SPECIAL & TREND NOT AVBL	RWY 15/33 -2 ultrasonic anemometers (TDZ 15 & TDZ 33) -3 scatter meters (TDZ 33, MID and TDZ 15) -1 ceilometer (DVOR/DME MSR) -1 temperature and humidity sensor (TDZ 33) -1 pressure sensor (TDZ 33) -1 present weather sensor (TDZ 33)	H24	Aerodrome climatological tables and summaries AVBL
TUZLA LQTZ	Half hourly & Hourly plus special observations. Automatic observation of: surface wind, RVR, present weather, height of cloud base, temperature, humidity, pressure.	METAR & MET REPORT /SPECIAL & TREND NOT AVBL	RWY 09/27 -2 ultrasonic anemometers (TDZ 09 & TDZ 27) -3 scatter meters (TDZ 09, MID and TDZ 27) -1 ceilometer (near TDZ 09) -1 sensor for temperature and humidity (TDZ 09) -1 pressure sensor (TDZ 09) -1 sensor for present weather (TDZ 09)	H24	Aerodrome climatological tables and summaries AVBL

1. Only during forecaster on duty (AD opening hours)

4. TYPES OF SERVICES

4.1 General

Issuance of documentation for flight crew members are provided at Sarajevo, Banja Luka, Mostar and Tuzla International airports during the airports opening hours.

Meteorological information for General aviation is provided at the following aerodromes:

Meteorological office	Phone	Fax	E-mail
1	2	3	4
SARAJEVO[1)]	+387 33 779 153 +387 63 352 586	+387 33 546 743	sarajevo.met@bhansa.gov.ba
BANJA LUKA[2)]	+387 51 337 573 +387 61 260 631 +387 63 353 224	+387 51 337 571	banjaluka.met@bhansa.gov.ba
MOSTAR[1)]	+387 36 352 207 +387 61 260 176	+387 36 352 208	mostar.met@bhansa.gov.ba
TUZLA[1)]	+387 35 745 746 +387 63 351 665	+387 35 745 532	tuzla.met@bhansa.gov.ba
1. In the opening airport hours 2. H24			

Personal briefing and consultation for flight crew members are provided at Banja Luka (H24) and at Sarajevo during the airports opening hours. Briefing and consultation for flight crew members for Mostar and Tuzla are provided from Banja Luka.

4.2 Meteorological Information for flights above FL 150

Meteorological information includes flight documentation and briefing and consultation.

Meteorological flight documentation consists of:

- METAR/SPECI for aerodrome of departure, destination and alternate aerodromes;
- TAF for aerodrome of departure, destination and alternate aerodromes;
- SIGWX charts and upper-wind/temperature charts;
- SIGMET and SPECIAL AIREP en route.

The documentation issuing time should be as close as possible to the time of departure.

Briefing and/or consultation to flight crew members and/or other flight operations personnel are provided on request.

4.3 Meteorological Information for flights below FL 150

Meteorological information consists of documentation and/or briefing and consultation. The pilot shall state category of flight rules (VFR/IFR), destination, route and flying time and altitude.

Meteorological flight documentation consists of:

- METAR/SPECI for aerodrome of departure, destination and alternate aerodromes;
- TAF for aerodrome of departure, destination and alternate aerodromes;
- SIGWX charts and upper-wind/temperature charts;
- GAMET (area forecast for low level flights);
- SIGMET and SPECIAL AIREP en route;

- AIRMET en route.

Briefing consists of oral explanation of the actual and forecasted meteorological conditions for the area/route to be flown, supplemented by available satellite and radar pictures as follows:

- meteorological synopsis;
- surface wind;
- surface visibility;
- upper wind and temperature;
- clouds (amount, type and height);
- weather;
- freezing level;
- turbulence;
- icing;
- landing/aerodrome forecast.

5. NOTIFICATION REQUIRED FROM OPERATORS

An operator requiring meteorological service or changes in existing meteorological service shall notify sufficiently in advance when:

a. new routes or new types of operations are planned;

b. changes of a lasting character are to be made in scheduled operations and;

c. other changes, affecting the provision of meteorological service, are planned.

The aerodrome meteorological office shall be notified about:

a. Scheduled flights:
- within Europe: 24 hours prior to departure;
- outside Europe:1 month prior to departure.

b. Non-scheduled flights:
- within Europe: 1.5 hour prior to departure;
- outside Europe: 24 hours prior to departure.

c. Delayed, advanced or cancelled flights as soon as operators are aware of.

The notification required for individual flights, needed by aerodrome meteorological office for the planning of appropriate arrangements, should contain the following:

a. aerodrome of departure and estimated time of departure;

b. destination and estimated time of arrival;

c. route to be flown and estimated times of arrival at, and departure from, any intermediate aerodrome(s);

d. alternate aerodromes needed to complete the operational flight plan and taken from the relevant list contained in the regional air navigation plan;

e. cruising level;

f. type of flight, whether under the visual or the instrumental flight rules;

g. type of meteorological information requested for a flight crew member, whether flight documentation and/ or briefing or consultation; and

h. time(s) at which briefing, consultation and/or flight documentation are required.

In case of scheduled flights, when information from 5.3 was provided once, the requirement for some or all of listed information may be waived by agreement between the meteorological office and the operator.

6. AIRCRAFT REPORTS

Routine Aircraft reports are not required within Sarajevo FIR.

Special Aircraft reports are required within Sarajevo FIR whenever one or more of the following conditions is encountered or observed:

a. severe turbulence or;

b. severe icing or;

c. severe mountain waves or;

d. thunderstorms, with or without hail, that are obscured, embedded, widespread or in squall lines or;

e. heavy dust storm or heavy sandstorm or;

f. volcanic ash clouds or;

g. other meteorological conditions which, upon the opinion of the pilot, may affect the safety of air traffic.

7. VOLMET SERVICE

Name of station	Call Sign/ IDENT (EM)	FREQ	Broadcast period	Hours of service	FIR, Aerodromes included	REP, FCST SIGMET and Remarks
1	2	3	4	5	6	7
BANJA LUKA	VHF VOLMET BROADCAST BANJA LUKA	135.775 MHZ	CONS	H24	SARAJEVO FIR (LQSB)	SIGMET
					BANJA LUKA (LQBK)	METAR, TREND, TAF
					SARAJEVO (LQSA)	METAR, TREND[1)], TAF
					MOSTAR (LQMO)	METAR, TAF
					TUZLA (LQTZ)	METAR, TAF
1. If available						

8. SIGMET AND AIRMET SERVICE

For the safety of air traffic, the meteorological service maintains an area meteorological watch and warning service. The service of a continuous weather watch within the FIR and the issuance of appropriate information (SIGMET, AIRMET) are provided by Meteorological Watch Office.

The area meteorological watch service is provided by Meteorological Watch Office Banja Luka.

8.1 SIGMET

SIGMET information gives a concise description in abbreviated plain language concerning the occurrence and/ or expected occurrence of specified en-route weather phenomena, which may affect the safety of aircraft operations.

Name of MWO/ location indicators	Hours	FIR or CTA served	Type of SIGMET validity	Specific procedures	ATS unit served	Additional information
1	2	3	4	5	6	7
BANJA LUKA LQBK	H24	SARAJEVO FIR	SIGMET 4 HR	NIL	BHACC: ATCU I SARAJEVO ATCU II BANJA LUKA	NIL

8.2 AIRMET

AIRMET information gives a concise description in abbreviated plain language, concerning the occurrence or expected occurrence of specified en-route weather phenomena which have not been included in the GAMET.

Name of MWO/ location indicators	Hours	FIR or CTA served	Type of SIGMET/ AIRMET validity	Specific procedures	ATS unit served	Additional information
1	2	3	4	5	6	7
BANJA LUKA LQBK	H24	SARAJEVO FIR	AIRMET 4 HR	NIL	FIS BIH (FIC BANJA LUKA)	NIL

AIRMET information are provided by MWO Banja Luka and refer to the portion of Sarajevo FIR from the ground up to FL 150.

8.3 AIRPORT WARNINGS

Airport warnings are provided at Banja Luka and Sarajevo airport during AD operating hours, when one or more of the following phenomena is observed or expected to occur at the airport:

- thunderstorms;
- hail;
- snow (including the expected or observed snow accumulation);
- freezing precipitation;
- hoarfrost or rime;
- strong surface wind gusts;
- squall;
- frost;
- volcanic ash;
- other phenomena as agreed locally.

Quantitative criteria, language on which warnings are issued, means by which warnings are supplied and distribution list are subject to local agreement.

9. OTHER AUTOMATED METEOROLOGICAL SERVICES

NIL

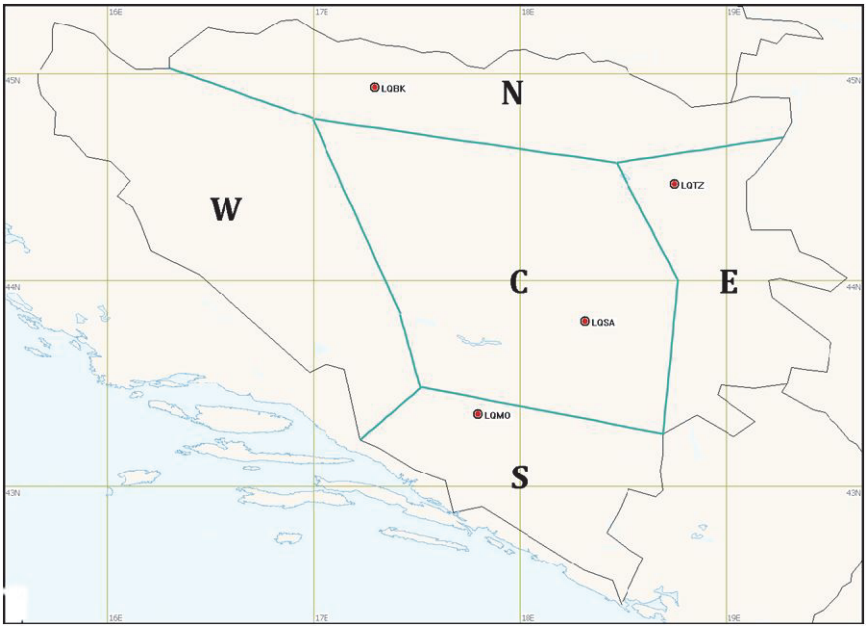
9.1 AREA FORECAST

MWO Banja Luka issues GAMET area forecasts for low-level flights, up to FL 150, every 6 hours for a validity period of 6 hours.

GAMET area forecasts are available at all aerodrome meteorological offices in accordance with following table:

Time of issue (UTC)	Validity period (UTC)
0000	0100 - 0700
0600	0700 - 1300
1200	1300 - 1900
1800	1900 - 0100

Sarajevo FIR is divided into five areas: W, C, N, E and S.



9.2 eGAFOR FORECAST

MWO Banja Luka issues eGAFOR forecasts with impact on VFR routes, for low level flights, up to FL 100 for Sarajevo FIR. eGAFOR include forecast following hazardous MET elements: Turbulence, CB distribution, Cloudiness (BKN/OVC), Visibility and Freezing precipitation.

eGAFOR products are available at web page www.egafor.eu

Validity time of eGAFOR forecast is 6 hours and it is divided into three 2-hourly intervals.

Issuance time, validity time and 2-hourly intervals, are in the following table.

Issuance time (UTC)	Validity time (UTC)		
	1. time interval	2. time interval	3. time interval
0200	03-05	05-07	07-09
0600	07-09	09-11	11-13
1000	11-13	13-15	15-17
1400	15-17	17-19	19-21

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