



**LIBYAN NATIONAL  
METEOROLOGICAL CENTER**

**STATE OF LIBYA  
MINISTRY OF  
TRANSPORT**



**LIBYAN CIVIL AVIATION  
AUTHORITY**

## **AGREEMENT BETWEEN CIVIL AVIATION AUTHORITY AND NATIONAL METEOROLOGICAL CENTER**



***First Issue***  
**MAR 2021**



# AGREEMENT BETWEEN CIVIL AVIATION AUTHORITY AND NATIONAL METEOROLOGICAL CENTER

## 1 OBJECTIVE

- 1.1 The objective of this Agreement between the Libyan Civil Aviation authority (LYCAA) and the Libyan National Meteorological Center (LNMC) is to establish the directives for the necessary coordination between ATS units and meteorological offices and stations to ensure the provision of the meteorological service required for civil (international and national) air navigation, in accordance with international agreements (see 1.4) and [national air navigation regulatory documents].
- 1.2 This Agreement also specifies the responsibility of ATS units in relation to the transmission to meteorological offices and stations of air-reports and other meteorological information obtained from aircraft in flight or resulting from observations made by ATS personnel at aerodromes.
- 1.3 This Agreement also includes the responsibilities of ATS units and meteorological offices and stations in relation to the mutual exchange of information on pre-eruption volcanic activity, volcanic eruptions and volcanic ash cloud, and information on the release into the atmosphere of radioactive materials and toxic chemicals [if applicable].
- 1.4 The directives detailed in this document are in accordance with the Standards and Recommended Practices and Procedures of ICAO, contained in Annex 3 — *Meteorological Service for International Air Navigation*, Annex 11 — *Air Traffic Services*, Annex 12 — *Search and Rescue*, Annex 15 — *Aeronautical Information Services* and in the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444), as well as the provisions contained in the *Regional Supplementary Procedures* (Doc 7030), relevant regional air navigation plans and in the aeronautical information publication of Libya (AIP-Libya). These directives are also based on the guidance material in the *Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services* (Doc 9377), *Meteorological Service for International Air Navigation* (Doc 49 Vol 2), the *Aeronautical Information Services Manual* (Doc 8126) and the *Handbook on the International Airways Volcano Watch (IAVW) — Operational Procedures and Contact List* (Doc 9766) and in accordance with LYCARs which are approved by Libyan Civil Aviation Authority, National Meteorological Center Regulations, and the issued Directives.

## 2 REVISIONS

- 2.1 When, for special or unforeseen reasons, a significant change in the coordination between the two parties involved or the services mentioned in this Agreement becomes necessary, the respective officers-in-charge, through mutual agreement, may effect temporary changes or amendments, provided that these changes are not intended to last more than 6 days.
- 2.2 Permanent revisions to this Agreement may be made by the authorities who approve and sign this agreement. A complete cancellation of this Agreement may be made, in writing, by the parties to the agreement within a notice period of 180 days.





### 3 GENERAL

- 3.1** The objective of meteorological service is to contribute to the safety, regularity and efficiency of civil air navigation.
- 3.2** The Libyan National Meteorological Center (LNMC) has responsibility for executing and coordinating activities to meet the meteorological requirements necessary for civil air navigation in The State of Libya.
- 3.3** On basis of the Law No 6 /2005 and Law No 13/1991 by State of Libya, the Libyan National Meteorological Center (LNMC) establishes an adequate number of meteorological offices and stations to meet the relevant requirements for the provision of meteorological service for civil air navigation.
- 3.4** The aeronautical meteorological service provided by these offices and stations to ATS units comprises:
- a) Aeronautical Meteorological Stations making routine and special observations and issuing local routine and special reports and METAR and SPECI. In addition, these stations make non-routine observations and prepare volcanic activity reports [if applicable].
  - b) Aerodrome Meteorological offices and/or aeronautical meteorological Stations providing forecasts for aerodromes (such as TAF and trend forecasts, relevant warnings for aerodromes and their vicinity), as well as forecasts of en-route weather conditions, meteorological consultation, flight briefings and documentation; and
  - c) Tripoli Meteorological Watch Office (MWO), providing meteorological watch for the Tripoli FIR/UIR established in the State of Libya, including the preparation, issuance, and dissemination of SIGMET information and AIRMET information [if applicable] concerning specified en-route weather phenomena which may affect the safety of aircraft operations.
- 3.5** The objectives of ATS are to:
- a) Prevent collisions between aircraft in the air or on the manoeuvring area of an aerodrome.
  - b) Prevent collisions between aircraft on the manoeuvring area and obstructions on that area.
  - c) Expedite and maintain an orderly flow of air traffic.
  - d) Provide advice and information useful for the safe and efficient conduct of flights; and
  - e) Notify appropriate organizations regarding aircraft in need of search and rescue aid and assist such organizations as required.
- 3.6** ATS comprises three services, as follows:
- a) Air traffic control service;
  - b) Flight information service; and
  - c) Alerting service.





**3.7** The air traffic control service includes the provision of:

- a) Air traffic control service for controlled flights, except for those parts of such flights provided within the approach control service and the aerodrome control service.
- b) Approach control service to that portion of controlled flights associated with the arrival of an aircraft at, or its departure from, the various controlled aerodromes; and
- c) Aerodrome control service for aerodrome traffic, except for those parts of flights provided within approach control service.

**3.8** The flight information service provides advice and information useful for the safe and efficient conduct of flights.

**3.9** The alerting service notifies the appropriate organizations regarding aircraft in need of search and rescue aid and assists such organizations as required.

*Note. — The established FIR/UIR and control areas and the related FIC/ACC, as well as the established TWRs and APPs, are given in the AIP, GEN 3.3, of State of Libya.*

## **4 RESPONSIBILITIES**

### **4.1 General:**

In order to provide an efficient air traffic service and in view of the fact that the ATS units are an important factor in the liaison between aircraft in flight and the meteorological offices and stations, The Libyan National Meteorological Center (LNMC) and the Libyan Civil Aviation Authority (LYCAA) will collaborate to ensure a fast and efficient coordination.

### **4.2 Responsibilities of the Libyan National Meteorological Center (LNMC) and the meteorological offices and stations**

#### **General**

**4.2.1** The Libyan National Meteorological Center (LNMC), through the meteorological offices and aeronautical meteorological stations listed in Table A2-1, is responsible for the provision of up-to-date information on existing and forecast meteorological conditions to those ATS units that need it in order to carry out their functions. The necessary meteorological information will be supplied to individual ATS units from the associated meteorological offices and relevant meteorological stations at aerodromes. Table A2-2 provides a list of the associated meteorological offices designated by The (LNMC) to serve individual ATS units and rescue coordination centers and sub-centers.

**4.2.2** Aerodrome Meteorological Offices will be located, or suitable arrangements will be made, so that meteorological briefings for ATS personnel, as well as consultations between meteorological and ATS personnel, are facilitated and fast and reliable communications for e.g an AFTN system are established in order to effect coordination in the most efficient manner possible

**4.2.3** The meteorological information provided will, as far as possible, be in a format that facilitates easy interpretation by ATS personnel, and the frequency of meteorological reports, forecasts, warnings, etc., will cover the needs of each of the ATS units. Table A2-3 provides a list of meteorological information to be supplied to ATS units, its format and the frequency with which it is to be supplied to individual ATS units.

**4.2.4** In providing local reports and current altimeter setting information to ATS units at aerodromes, consideration will be given to the type and volume of air traffic and the





availability of meteorological instruments/displays and/or automated observing system displays in the units concerned.

**Table A2-1. List of meteorological offices and aeronautical stations providing meteorological service to civil aviation**

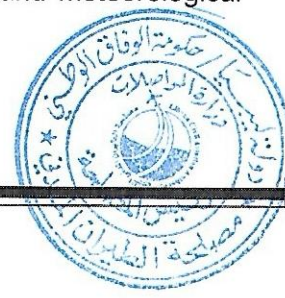
Office	Located at	Location indicator
Meteorological Watch Office	Tripoli	HLMC
Aerodrome Metrological Office *	Tripoli International Airport	HLLT
Aerodrome Metrological Office *	Benina International Airport	HLLB
Aerodrome Metrological Office *	Sebeha International airport	HLLS
Aerodrome Metrological Office *	Misurata International airport	HLMS

<i>Meteorological Station in</i>	<i>Location Indicators</i>
Tripoli International Airport	HLLT
Benina International Airport	HLLB
Sebeha International Airport	HLLS
Misurata International Airport	HLMS
Kufra Airport *	HLKF
Ghardabya Airport *	HLGD
Maitega International Airport	HLLM
Labreq Airport *	HLLQ
Ghat Airport	HLGT
Ghadams Airport *	HLTD
Toubrek Airport	HLTQ
Ubari Airport	HLUB
Zawara Airport *	HLZW
Hun Airport *	HLON
Zentan Airport *	HLZN

**Table A2-2. Designation of meteorological offices associated with individual ATS units and search and rescue services centers**

Aerodrome	ATS Unite	MET office associated with the ATS unit
Tripoli International Airport	Tripoli Tower	Tripoli Airport MET Office
Benina International Airport	Benina Tower	Benina MET Office
Sebha International Airport	Sebha Tower	Sebha MET Office
Mitega International Airport	Mitega Tower	Mitega MET Station
Misurata International Airport	Misurata Tower	Misurata MET Station
-	Tripoli (ACC-APP)	Tripoli MET Watch Office
-	Benina (ACC-APP)	Tripoli MET Watch Office
-	Rescue Coordination Center	Tripoli MET Watch Office

- 4.2.5** Detailed information on the location, vertical extent, direction, and speed of movement of significant meteorological phenomena in the proximity of aerodromes, which may present a danger to aircraft operations, particularly in the areas of the initial climb-out and approach, will be provided to the appropriate ATS units with the utmost speed. This information will be derived from weather radar observations, remote-sensing equipment, and meteorological satellite data available in the ( LNMC ).





- 4.2.6** Meteorological offices and/or Aeronautical Meteorological Stations will provide other information as agreed locally concerning, for example, surface wind, rapid deterioration of weather conditions or sudden fluctuations of temperatures that could adversely affect the operation of certain types of aircraft, either en-route or on take-off and landing.
- 4.2.7** Aerodrome Meteorological Offices will provide the meteorological information needed to meet non-routine requests from aircraft in flight (e.g. requests from distant aerodromes for meteorological reports).
- 4.2.8** Computer-processed meteorological information in digital form will be provided to ATS computerized centers in accordance with the arrangements agreed between the Libyan National Meteorological Center (LNMC) and the Libyan Civil Aviation Authority (LYCAA) concerning its content, format and transmission.
- 4.2.9** Copies of meteorological flight documentation supplied to flight crews will be kept for a period of at least 30 days (i.e. stored as hard copies or in computer memory), from the date of issue and will be made available on request for inquiries or investigations and, for these purposes, will be retained until the inquiry or investigation is completed.

**Table A2-3. Aeronautical meteorological information supplied to ATS units**

Information	Distributor	Destination	Frequency	Communication means
METAR and local routine reports with trend forecast*, as required	Aeronautical MET station [trend forecast prepared by MET Office]	TWR,APP,ACC FIC,COM station	Hourly**	See Note 1&2
SPECI and local special reports with trend forecast, as required	Aeronautical MET station [trend forecast prepared by MET Office]	TWR,APP,ACC FIC, COM station	When it Occurs	See Note 1&2
TAF	A/D MET office	TWR,APP,ACC COM station A/D service	Every 3 or 6 hours	See Note 1&2
A/D Warnings	A/D MET office	TWR,APP COM station A/D service	When it Occurs	See Note 1&2
Upper wind and temperature forecast	A/D MET office or MWO	ACC FIC	Every 6 hours (if required)	See Note 2
Significant en-route weather forecast	A/D MET office or MWO	ACC FIC	Every 6 hours	See Note 2
SIGMET and AIRMET	MWO	TWR,APP,ACC FIC,COM station	When it Occurs	See Note 2
Wind shear warnings and alerts	A/D MET office	TWR,APP	When it Occurs	See Note 1&2
Tropical cyclone advisory	MWO	ACC,FIC		See Note 1
Volcanic ash advisory	MWO VAAC	ACC,FIC	When it Occurs	See Note 1&2
Information on release of radioactive material, i.e. location of the release and forecast trajectories of the radioactive material	MWO	ACC,FIC	When it Occurs	See Note 1&2
Information on volcanic eruptions and volcanic ash for which a SIGMET has not yet been issued	MWO VACC	TWR,APP ACC,FIC	When it Occurs	See Note 1&2



\* *Trend to be added to local reports and METAR/SPECI for those stations so identified in the air navigation plan.*

\*\* *Or half-hourly if so decided by regional air navigation agreement.*

**Note 1**—*Communication by internet, video display unit or similar. If none of these are available, or during unserviceability periods, communication by phone, followed if possible, by confirmation by other means.*

**Note 2**—*Communication by teleprinter or by internet for non-time-critical operational meteorological information.*

**4.2.10** Aeronautical climatological information (i.e. in particular, aerodrome climatological tables and summaries) will be provided to the (LYCAA) as agreed between the two parties of this Agreement.

### **Information for aerodrome control towers (TWRs)**

**4.2.11** Up-to-date local reports with trend forecasts, including current pressure data for the setting of altimeters, and TAF, related to the aerodrome concerned, will be provided to the aerodrome control tower of each aerodrome.

**4.2.12** Local special reports with trend forecasts, including current pressure data for the setting of altimeters, issued in accordance with Annex 3, Chapter 4, 4.4, and the list of criteria for special observations referred to in Annex 3, Appendix 3, 2.3, and amendments to TAF will be communicated to the TWR in accordance with locally established procedures as soon as they are issued, i.e. without waiting for the next local routine report or forecast.

**4.2.13** Aerodrome warnings issued in accordance with Annex 3, Chapter 7, 7.3 and Appendix 6, 5 and 6, and the list of criteria for the issuance of these warnings in Annex 3, Appendix 6, 5.2, wind shear warnings and alerts and relevant SIGMET information and AIRMET information [if appropriate] will be communicated to the TWR without delay.

**4.2.14** TWRs will be equipped with displays for surface wind and runway visual range (RVR), [other meteorological elements/phenomena, as appropriate]. The displays will relate to the same points of observation and will obtain data from the same sensors as those to which the corresponding displays in the meteorological station are connected.

**4.2.15** Local special reports will not be issued for changes in values of meteorological elements displayed continuously at TWRs (as per 4.2.14).

**4.2.16** Information received on pre-eruption volcanic activity, volcanic eruptions and volcanic ash cloud, for which SIGMET information has not been issued, will be communicated to individual TWRs by their associated meteorological offices [if applicable].

### **Information for approach control offices (APPs)**

**4.2.17** Up-to-date local reports with trend forecasts, including current pressure data for the setting of altimeters, and TAF related to the aerodromes concerned will be provided to the ATS units that provide approach control services.

**4.2.18** Local special reports with trend forecasts, including current pressure data for the setting of altimeters, and amendments to TAF will be communicated to APPs, in accordance with locally established procedures, as soon as they are issued (i.e. without waiting for the next local routine report or forecast).





- 4.2.19** Relevant SIGMET information and appropriate special air-reports, AIRMET information [if appropriate], aerodrome warnings and wind shear warnings and alerts will be provided to APPs without delay.
- 4.2.20** APPs providing the service for final approach, landing and take-off will be equipped with displays for surface wind, RVR and atmospheric pressure, [other meteorological elements/phenomena, as appropriate]. The displays will relate to the same points of observation and will obtain data from the same sensors as those to which the corresponding displays in the meteorological station are connected.
- 4.2.21** Local special reports will not be issued for changes in values of meteorological elements displayed continuously at APPs (as per 4.2.20).
- 4.2.22** Information received on pre-eruption volcanic activity, volcanic eruptions and volcanic ash cloud, for which SIGMET information has not been issued, will be communicated to individual APPs by their associated meteorological offices [if applicable].

***Information for the [HLLT / HLLB] area control center/flight information center (ACC/FIC)***

- 4.2.23** Up-to-date routine and special reports (METAR and SPECI with trend forecasts) and TAF related to aerodromes located within the Tripoli FIR/UIR, as well as other forecasts for the airspace for which the Tripoli and Benina ACC/FIC are responsible, will be provided to these centers, giving special emphasis to significant meteorological conditions and weather deterioration occurring, as soon as it can be determined. Such reports and forecasts will also relate to all other areas that may be determined on the basis of regional air navigation agreement.
- 4.2.24** SIGMET information and appropriate special air-reports and AIRMET information [if appropriate] pertaining to the Tripoli FIR/UIR, and also to those FIRs/UIRs or portions of FIRs/UIRs which lie within two hours' flying time from the boundaries of the Tripoli FIR/UIR, will be provided to the Tripoli and Benina ACC/FIC.
- 4.2.25** Current pressure data for setting altimeters [e.g. the lowest QNH in the FIR/Control area specified by the FIC/ACC] will be provided to the Tripoli and Benina ACC/FIC to be available for low-level flight operations.
- 4.2.26** Information received on pre-eruption volcanic activity, volcanic eruptions and volcanic ash cloud, for which SIGMET information has not been issued, will be communicated to the Tripoli and Benina ACC/FIC by the Tripoli Meteorological Watch Office (MWO) [if applicable].
- 4.2.27** Volcanic ash advisories will be communicated to the Tripoli and Benina FIC/ACC in accordance with regional air navigation agreement.
- 4.2.28** Information received from [the designated national and/or international sources] concerning the release into the atmosphere of radioactive materials and toxic chemicals will be communicated to the Tripoli and Benina ACC/FIC by the Tripoli Meteorological Watch Office (MWO).

***Calibration***

The National Meteorological Center has committed to conduct periodic calibration for all meteorological devices installed in the ATC units.





### 4.3 Responsibilities of LYCAA and ATS units

#### 4.3.1 LYCAA makes the necessary arrangements for ATS units to:

- a) Transmit routine and special air-reports received by voice communications to the Tripoli Meteorological Watch Office (MWO).
- b) Automatically transmit routine air-reports by data link communications to WAFCs London and Washington and Tripoli Meteorological Watch Office (MWO).
- c) Automatically transmit special air-reports received by data link communications to the Tripoli Meteorological Watch Office (MWO) and WAFCs London and Washington.

The special air-reports will be transmitted without delay and the routine air-reports will be transmitted as soon as practicable.

#### 4.3.2 Reports of non-routine observations from aircraft in flight (Annex 3, 5.6 refers) will be transmitted without delay to the Tripoli Meteorological Watch Office (MWO) and meteorological offices and stations concerned. (Annex 11, 2.20.1 a) and b) refer.)

#### 4.3.3 Supplementary Meteorological Observations made by personnel in local ATS units, as well as the meteorological information that the meteorological offices and stations have requested them to obtain will be supplied without delay to the meteorological offices and stations concerned.

#### 4.3.4 Meteorological information obtained from ATS radar will be provided to meteorological offices and stations whenever necessary and feasible and, in particular, when information from weather radar is not available. This information should be relayed to the associated meteorological offices and stations as soon as possible and should contain the time of observation, location, extent, distance, and intensity of the identified significant weather areas. In this regard, it is recognized that it is not mandatory for radar controllers to maintain watch over significant weather areas [if applicable].

#### 4.3.5 ATS units will transmit to the associated Aerodrome Meteorological Offices and to the Tripoli Meteorological Watch Office (MWO), as appropriate (and to the VAAC [if so agreed with the VAAC]), without delay, information received on pre-eruption volcanic activity, volcanic eruptions and volcanic ash cloud for which SIGMET information has not been issued. (Annex 11, 2.20.1 c) refers) [if applicable.]

#### 4.3.6 Within the frame of the FIS, relevant ATS units will transmit to aircraft pertinent:

- a) SIGMET information up to a distance normally corresponding to two hours' flying time and appropriate special air-reports for which SIGMET information has not been issued. The transmission to aircraft of such air-reports will continue for Two hours from the time of issuance of the respective air-reports.
- b) AIRMET information [if appropriate] up to distance of Two hours' flying time.
- c) Information concerning pre-eruption volcanic activity, volcanic eruptions and volcanic ash clouds received from [the sources specified in arrangements developed by the ATS, AIS and meteorological authorities in Libya until the respective SIGMET and/or ASHTAM or NOTAM are issued [if applicable].





- d) Information received from the (LNMC) concerning the release into the atmosphere of radioactive materials or toxic chemicals, in accordance with arrangements developed by the LYCAA in coordination with the (LNMC) [if applicable]; and
- e) As necessary, weather conditions at departure, destination and alternate aerodromes reported in relevant METAR and SPECI, with trend forecasts and TAF.

## 5 DISSEMINATION OF METEOROLOGICAL INFORMATION

Bearing in mind that meteorological information is of vital importance to the safety of aircraft in flight, it is necessary that the units providing ATS always keep aircraft informed of the current weather conditions. Table A2-3 outlines the requirements for supplying aeronautical meteorological information to the various ATS units as well as the means of communication to be utilized so that this information reaches the ATS units in good time.

## 6 ATS UNITS AND METEOROLOGICAL OFFICES AND STATIONS — COORDINATION MEETINGS

A Permanent committee to hold regular meetings twice a year between experts in the both fields with the aim of improving the services provided for the safety of the air traffic.

## 7 COURSES FOR METEOROLOGISTS AND AIR TRAFFIC CONTROLLERS

- 7.1 Courses or on-the-job training for meteorological and ATS personnel will be organized periodically with the objective of familiarizing them with the activities performed by both services.
- 7.2 Periods and dates for these courses will be agreed by the Libyan Civil Aviation Authority (LYCAA) and the Libyan National Meteorological Center (LNMC) taking into account the availability of personnel and the necessary equipment.





## Signatures

The head of the Libyan Civil Aviation Authority and the head of the Libyan National Center of Meteorology must sign this agreement, and it enters into force as of the date of its signing.

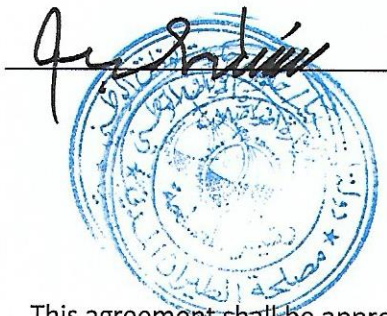
The National Meteorological Center will take the necessary steps to establish and equip meteorological offices and stations of the airports listed in Table A2-1 (\*) to upgrade and enhance the staff when the necessary capabilities are available! That's to ensure that meteorological services are provided to the air traffic units as required and as stipulated in clauses this agreement.

**President of Libyan**

**Civil Aviation Authority**

**President of Libyan**

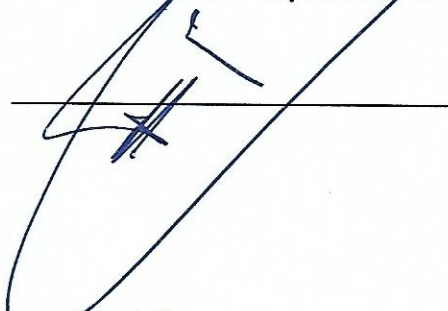
**Libyan Meteorological Center**



## Accreditation

This agreement shall be approved and accredited by the authorized Minister of Transportation, in order for it to be valid since approval, and for all responsible authorities to implement it.

**Minister of Transportation**



This agreement was drawn up in Tripoli on 2 / 3 / 2021