

**GEN 3.5 METEOROLOGICAL SERVICES****1 Responsible service**

The Meteorological Services for Civil Aviation are provided by the:

Post:	The Officer in Charge Kenneth Kaunda International Airport P.O. BOX 310095 Chelstone Lusaka	The Director Zambia Meteorological Department P.O. BOX 30200. Longacres Lusaka.
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The service is provided in accordance with the provisions contained in the following ICAO documents:

- Annex 3 - Meteorological Service for International Air Navigation
- Doc 8400 - ICAO Abbreviations and Codes
- Doc 8896 - Manual of Aeronautical Meteorological Codes
- Doc 9328 - Manual of Runway Visual Range Observing and Reporting Practices

**2 Area of responsibility**

Meteorological service is provided within the Lusaka FIR

**3 Meteorological observations and reports**

Name of station/Location indicator	Type and frequency of observation/ automatic observing equipment	Types of MET reports & Supplementary information included	Observation System and Site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
KASAMA - KASAMA AIRPORT FLKS	Hourly plus special observations	METAR SPECI SYNOP	All instruments including thermometers in Met enclosure 650 from the eastern runway 13. DINES PT NIL, Barometer and cup-counter not working	0400-1600	AVAILABLE
LIVINGSTONE- HARRY MWAAN- GA NKUMBULA INTERNATIONAL AIRPORT  FLHN	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer NIL. All instruments including thermometers in Met enclosure and the Automatic Weather Station (AWS) about 859 south of the same.	0400-1630	AVAILABLE

LUSAKA- KENNETH KAUN- DA INTERNATIONAL AIRPORT  FLKK	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer on mast 2100 north of the point on runway 10 1350 from the western threshold. Temperature sen- sor in the screen near the mast. New equipment's in the middle of the run- way	H 24	AVAILABLE
MANSA MANSA AIRPORT  FLMA	Hourly plus special observations	METAR SPECI SYNOP	Electrical anemometer at the top of the control building NIL. All in- struments includ- ing thermometers in Met enclosure 190 south of RWY 09/27	0400-1600	AVAILABLE
MONGU- MONGU AIRPORT  FLMG	Hourly plus special observations	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure about 380m north point on the runway 10/28 and 300 from threshold RWY 10	0400-1500	AVAILABLE
NDOLA- SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT  FLSK	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer and thermometers in MET. Enclosure al- most 426m north of the middle point of the runway 10/28	H 24	AVAILABLE
SESHEKE- Sesheke  FLSS	Hourly plus special observations	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure about 426M to south of threshold runway 09	0400-1500	AVAILABLE
CHIPATA - CHIPATA AIRPORT  FLCP	Hourly plus special observations	METAR SPECI SYNOP	Electrical anemometer on mast 90m south of the point in the middle of runway 09/27, 90m from the threshold RWY 09, temperatures sensors near the mast.	0400-1600	AVAILABLE
KAOMA/ Kaoma	Hourly plus special observations Nil	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure situ- ated 100m from the threshold runway.	0400-1600	AVAILABLE

MFUWE AIR- PORT  FLMF	Hourly plus Special observations	METAR SPECI SYNOP	Automated Weather Observing Station (AWOS). Observed weather elements from the screen yard	0400-1600	AVAILABLE
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<sup>1)</sup> See significant weather chart

For reporting weather phenomena in vicinity of the airport following local rules apply:

- convective type of cloud (TCU and/or CB) are reported within 30 km radius around ARP,
- thunderstorm, shower (VCTS, VCSH, ) in the vicinity are reported when phenomena is observed or detected between 2 km and 16 km radius around ARP,
- all other weather phenomena in the vicinity are reported when observed or detected between 2 km and 8 km radius around ARP,

## 4 Types Of Service

### 4.1 Meteorological Offices providing a service to Civil Aviation

Forecast and watch office is established at Kenneth Kaunda International, Harry Mwaanga Nkumbula, and Simon Mwansa Kapwepwe International Airport. See the table shown below for Meteorological Office services on airports within Lusaka FIR.

Meteorological Office	Services Available	Telephone	AFTN	Hours of operation
1	2	3	4	5
Kenneth Kaunda International Airport	METAR, SPECI, TAFs, ROFOR,	+260 95563 2486	FLKKYMYX	H24
Simon Mwansa Kapwepwe International Airport	METAR, SPECI, TAFs	+260 954755167	FLSKYMYX	H24
Harry Mwaanga Nkumbula Airport	METAR, SPECI, TAFs	+260 954755119	FLHNYMYX	H13
Mfuwe Airport	METAR, SPECI, TAFs	+260 0954755084	FLMFYMYX	H13

<sup>1)</sup> METAR, <sup>2)</sup> TAF, <sup>3)</sup> Foreign TAFs and METARs, <sup>4)</sup> Special forecasts

Meteorological Offices provide the pilot with following documentation:

Meteorological Office	Telephone	Telefax	Email
1	2	3	4
LUSAKA  FLKK	+260 95563 2486	-	Lusakamet.2@gmail.com
NDOLA  FLSK	+260954 7551 67	-	ndolamet@gmail.com
LIVINGSTONE  FLHN	+260 954755119	-	livingstonemet@gmail.com

Meteorological Office	Telephone	Telefax	Email
MFUWE	+260 0954755084	-	mfuwemet@gmail.com
FLMF			

- Meteorological Aerodrome Reports – METAR
- Aerodrome Forecasts in TAF form
- Forecasts of en-route conditions in form of charts (SWC)
- Upper wind and temperature forecasts in chart form (WAF)
- Significant Meteorological information - SIGMET
- Special AIREP

Personal briefing and consultation for flight crew members are provided only at Kenneth Kaunda International airport, Simon Mwansa Kapwepwe and Harry Mwaanga Nkumbula. For all other aerodromes, consultation is available by telephone (00:00-24:00 UTC). Briefing is normally provided together with the issue of documentation. If Meteorological Office briefing is not available, it may be obtained by telephone from the Meteorological Office at the Kenneth Kaunda airport.

## 4.2 Meteorological information for general aviation

### 4.2.1 General

Meteorological information for General aviation is normally supplied upon request by a pilot or its organization by telephone or as briefing directly in the Meteorological office. When requesting meteorological information, the pilot is asked to supply the Meteorological office with the following information:

- Aircraft co-sign or Aircraft Registration
- destination, route and flying time (ETD/ETA)
- Flight Level
- language (English)

Information about meteorological situation and forecast at the aerodromes and routes are available for the need of General aviation. Information could be given as briefing or upon request of a pilot, in the written form as documentation.

Meteorological offices are provided at the following aerodromes:

Meteorological Office	Telephone	Telefax	Email
1	2	3	4
LUSAKA	+260 95563 2486	-	Lusakamet.2@g-mail.com
NDOLA	+260954 7551 67	-	ndolamet@gmail.com
LIVINGSTONE	+260 954755119	-	livingstonemet@g-mail.com

### 4.2.2 Documentation for flight

Documentation for flight may be prepared in the form of “forecast chart of significant weather” or given in the plain language including the following information:

- meteorological situation concerning the route,
- amount, type and height of clouds,
- weather, turbulence and freezing level,

- direction and speed of wind on the flight level,
- temperature on the flight level and isotherm elevation of 0°C,
- surface visibility

Documentation is supplemented by the information about meteorological information and forecast for the aerodrome of departure, arrival and alternate aerodrome.

## 5 Notification Required From Operators

Notification from operators in respect of briefing, consultation, flight documentation and other meteorological information they need (ref. ICAO Annex 3, 2.3) is normally required for intercontinental flights of more than 3500 km. Such notification should be received at least 2 hours before the expected time of departure. Non scheduled flights (local) should book 30 minutes in advance before the Estimated Time of Departure.

## 6 Aircraft Reports

Pursuant to ICAO Annex 3, 5.3.1 the making and transmission of aircraft reports (AIREP) are required at the following ATS reporting points:

- KEPOK (152700S 0302300E)
- UDNOR (113424S 235806E)
- EGSUD (130640S 220000E)

There is also a MET requirement for reporting of significant low level wind shear and turbulence if expected by pilots during take-off or landing. (Ref Annex 3, 5.5.1). The ATS/MET reporting points in respect to routes crossing Lusaka FIR are indicated in the relevant section of this AIP.

## 7 VOLMET service

No VOLMET Service available within Lusaka FIR.

## 8 SIGMET and AIRMET Service

### 8.1 General

For the safety of air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This service consists partly of a continuous weather watch within the lower and upper FIR and the issuance of appropriate information (SIGMET and AIRMET) by Meteorological Watch Offices and partly of the issuing of warnings for the respective aerodrome and, subject to agreement, for other aerodromes by all aeronautical MET offices.

### 8.2 Area Meteorological Watch Service

The area Meteorological watch service is performed by Lusaka Meteorological Watch Office (MWO).

The MWO issues information in the form of SIGMET messages about the occurrence or expected occurrence of one or several of the following significant meteorological phenomena.

- Thunderstorm
- Severe turbulence
- Severe icing
- Heavy sand storm/dust storm
- Volcanic ash cloud
- Tropical cyclone

The SIGMETs are issued in abbreviations and plain language using ICAO abbreviations and numbered for each consecutively day commencing at 0001; their periods of validity is generally limited to less than 4 hours from the time of transmission.

The MWO transmit SIGMETs issued by itself as well as SIGMETs adjacent MWOs upon agreement, also SIGMETs of the MWOs to the regional control centre competent for the FIR or UIR concerned.

In addition to the assurance of SIGMETs the MWO informs the regional control centres about the occurrence or expected occurrence of thunderstorms, moderate icing, light to moderate hail, of moderate turbulence within the FIRs concerned. This information is intended for the safety of low-level flights and is limited to the lower airspace.

## 9 Other automated meteorological services

Service name	Information available	Area,route and aerodrome coverage	Telephone, telex and telefax numbers Remarks
1	2	3	4
Aeronautical Meteorological Watch Office. Kenneth Kaunda International "Pre-Flight-Polling" (FLKK)	Prognostic General Aviation weather Chart (GWC) The 850, 700, 500, 300, 250, 200 hpa contour TAFs	All the National and adjacent FIRs	Tel: 260- 95563 2486 Telegraphic Address METZAM, LUSAKA AFS: FLKKYMYX
Harry Mwaanga Nkumbula Airport (FLHN)	Hourly plus special observations	METAR SPECI TREND SYNOP	+260 954755119.
Aeronautical Meteorological Watch Office. Simon Mwansa Kapwepwe International Airport (FLSK)	Hourly plus special observations	METAR, SPECI, TREND SYNOP)	+260- 954 7551 67
Mfuwe International Airport (FLMF)	Hourly plus special observations	METAR, SPECI, TREND SYNOP)	+260-954755084