

GEN 3.5 METEOROLOGICAL SERVICES

- 1. RESPONSIBLE SERVICE(S)**
- 1.1 The meteorological services for civil aviation are provided by the Department of Meteorology under the Ministry of Disaster Management and Human Rights.
- The Director General,
Department of Meteorology,
383, Baudhaloka Mawatha,
Colombo 7,
Sri Lanka .
- Tel : 94-11-2694104
94-11-2694846
- Tele Fax : 94-11-2698311
E-mail : meteo1@slt.net.lk :
- 1.2 The service is provided in accordance with the provisions contained in the following ICAO documents:
- ANNEX 3 Meteorological Services for International Air Navigation.
- DOC7030 Regional Supplementary Procedures part 3- Meteorology.
- 1.3 Differences to these provisions are detailed in sub section **GEN 1.7**
- 2 AREA OF RESPONSIBILITY**
- 2.1 Area meteorological watch is provided for the Colombo FIR.
- 3. METEOROLOGICAL OBSERVATIONS AND REPORTS**

TABLE GEN 3.5.3 METEOROLOGICAL OBSERVATIONS AND REPORTS

Name of Station/ Location Indicator	Type & Frequency of observation/ automatic observing equipment	Types of MET reports & Supplementar y information included	Observation system & site(s)	Hours of operation	Climatologica l information
1	2	3	4	5	6
KATUNAYAKE / Bandaranaike Intl. Airport Colombo (VCBI)	Half hourly plus special observations	METAR, SPECI, SIGMET TREND TAF	Ultrasonic Wind sensor located 80m and 100m from the RWY centerline on both RWY 04 and 22 respectively close to PAPI site. Dry & Wet bulb and Barometric Pressure sensors are also mounted on to 6m high wind sensor mast. Transmissometers are also located closed to Wind Sensor sites. Ceilometer near the ILS Middle Marker at both approach ends. Complete observation Station(MWO) located at 500m from RWY centerline close to RWY 04 end.	H24	Climatological summaries AVBL
→ RATMALANA / Colombo Intl. Airport Ratmanala (VCCC)	Hourly and special observations.	METAR* SPECI* Suppl : Nil	Cup Anemometer fixed with wind wane, 120m from RWY centerline	H24 *BTN 0100-1300 UTC	Climatological summaries AVBL

4. TYPES OF SERVICES

- 4.1 The Meteorological Office and Meteorological Watch Office at KATUNAYAKE / Bandaranaike Intl. Airport Colombo operates throughout the twenty-four hours (H24) and provide following services for Civil Aviation.
- (a) Meteorological services for pre-flight/current operational planning for all flights operating out of KATUNAYAKE / Bandaranaike Intl. Airport Colombo by means of:
- (I) Flight documentation and / or
- (II) Displays;
- (b) Area meteorological watch over the Colombo FIR with the supply of meteorological information including SIGMET information to aircraft in flight through ATS radio channels.(See Subsection **AD 2.11**);
- (c) Supply hourly weather reports with trend-type landing forecasts at (H+10UTC) for the Mumbai METAR ROBEX Bulletin.
- (d) Supply of hourly weather reports with trend-type landing forecasts at (H+40UTC) for VOLMET Broadcasts.;
- (e) Supply of meteorological information for ATS.
- 4.2 Meteorological consultation or briefing by a Meteorologist is always available at the Meteorological Office at KATUNAYAKE / Bandaranaike Intl. Airport Colombo either on telephone or in person.
- 4.3 In addition self-briefing display facility is always available for the crewmembers at the MET Briefing Office located in terminal building.
- 4.4 Routine aerodrome forecasts received from other meteorological offices are normally included in meteorological documentation without modification. When a required aerodrome forecast is not received, the Meteorological
- Office providing the documentation may issue a provisional forecast.
- 4.5 Details of documentation supplied for each flight are determined by agreement between operator and the Meteorological Office. In general, the pilot-in-command is provided with documentation comprising a fixed time prognostic streamline / isotach / spot temperature chart for the isobaric surface of 250hpa, fixed time prognostic significant weather chart and forecasts for take-off, climb and descent and appropriate aerodrome forecasts in TAF code form.
- 4.6 After documentation has been issued and until take-off (that is, the latest estimated time of departure notified to the Meteorological Office), the Meteorological Office at KATUNAYAKE / Bandaranaike Intl. Airport Colombo makes available, amendments to the documentation. It is the responsibility of the operator's local representatives or the pilot-in-command to obtain any pre-departure amendment(s)from the Meteorological Office. The pilot-in-command may request pre-departure amendment(s) through the aerodrome control tower.
- 4.7 Climatological Summaries based on observation over a period of 25 years or longer are available for the following airport meteorological stations.
- a) KATUNAYAKE/Bandaranaike Intl. Airport Colombo(VCBI-43450)
- b) RATMALANA/ColomboIntl. Airport Ratmalana (VCCC-43467) ←
- c) KANKESANTURAI/Jaffna (VCCJ-43400)
- 4.7.1 Applications for climatological summaries should be made to :
- The Director General,
Department of Meteorology,
383, Baudhaloka Mawatha,
Colombo 7,
Sri Lanka.
e-mail: meteo1@slt.net.lk

5 NOTIFICATION REQUIRED FROM OPERATORS.

5.1 It is the responsibility of the operator's local representative or the pilot-in-command to notify the meteorological office of any flight for which meteorological documentation is required (Refer ICAO Annex 3, para 2.3). As much prior notices as possible should be given and at least 1 1/2 hours notice would be required for non-scheduled flights. Personnel briefing by a forecaster is always available at the meteorological office at KATUNAYAKE / Bandaranaike Intl. Airport Colombo.

6. AIRCRAFT REPORTS REQUIRED FROM OPERATORS.

6.1 Aircraft meteorological observations shall be made at ATS/MET reporting points within Colombo FIR, and recorded in sections I and III of the AIREP form and transmitted in flight by all aircraft except when;

- a) the flight duration is less than 2 hours.
- b) the altitude of the flight path is less than 5000ft, or;
- c) the aircraft is less than 1 hour's flying time from the next intended point of landing.

6.2 The ATS/MET reporting points referred to in para 6.1 are listed below with the relevant ATS routes.

ATS ROUTE	ATS/ MET REPORTING POINTS (Co-ordinates)	
	1	2
M641	BAXAM (010303N 0850806E)	DOGAR (020000S 0875100E)
P627	KADAP (020000S 0840936E)	
N640	ELATI (020000S 0895742E)	

6.3 The completed AIREP form shall be handed over to the meteorological office Post-flight with the least possible delay.

6.4 Pilots encountering low level wind shear shall report to the ATC as soon as possible.

6.4.1 Pilots, when reporting wind shear on radiotelephony are required to transmit the information in the following order

- a) Aircraft Call sign;
- b) Wind Shear Report;
- c) Time of occurrence;
- d) Position of occurrence.
- e) Intensity (moderate, strong or severe)
- f) Average height of wind shear layer

6.4.2 On receipt of a wind shear report from a pilot, the ATC will pass that information to all aircraft in the vicinity.

7. VOLMET SERVICE.

7.1 VOLMET service not available.

8. SIGMET SERVICE

8.1 General

8.1.1 For the safety of the air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This service consist partly of a continuous weather watch within the FIR and issuance of appropriate information (SIGMET) by Meteorological watch office and partly of the issuing of warnings for KATUNAYAKE / Bandaranaike Intl. Airport Colombo.

8.2 Area Meteorological watch Service

8.2.1 The area meteorological watch service is performed by the Meteorological watch office at KATUNAYAKE / Bandaranaike Intl. Airport.

8.2.2 The MWO at KATUNAYAKE / Bandaranaike Intl. Airport Colombo issues information in the form of SIGMET messages about the occurrence or expected occurrence of one or several of the following significant meteorological phenomena.

- thunder storm*

- tropical cyclone
 - severe turbulence
 - severe icing
 - severe mountain waves
 - heavy sand storm/dust storm
 - volcanic ash cloud
- 8.2.3 The SIGMETS are issued in abbreviated plain language using ICAO abbreviations and are respectively numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to less than 4 hours from the time of transmission.
- 8.3 **Warning Service**
- 8.3.1 Aerodrome warnings may be issued by the aerodrome MWO for the protection of parked and moored aircraft or of other equipment at BIA, if one or several of the following phenomena are expected to occur at the airport;
- squall
 - thunderstorm
 - hail
 - tornado
 - tropical cyclone**
 - horizontal visibility and/or RVR of 800 meters or less.
- 8.3.2 The warnings are issued in English and are distributed in accordance with a distribution list, which has to be agreed upon locally. In order to guarantee rapid dissemination of the warnings, the distribution list to be used shall, as far as possible, contain only one recipient for an interested group; this recipient will be responsible for the further dissemination of the warning within the group.
- 8.3.3 SIGMET is disseminated by direct transmission to the aircraft in flight through general calls by the Colombo ACC within Colombo FIR.
- Note :
- * Area widespread cumulonimbus clouds or cumulonimbus along a line (squall line) with little or no space between individual clouds, and cumulonimbus embedded in cloud or obscured by haze.
 - ** The warning is designated as "storm warning" and will be issued when the mean speed of surface wind is expected to exceed 34kt (Beaufort Scale 8) or when gusts in excess of 41kt (Beaufort Scale 9) are expected to occur.

TABLE GEN 3.5.8 - SIGMET SERVICE

Name of MWO/Location Indicator	Hours	FIR or CTA served	Type of SIGMET validity	Specific procedures	ATS unit served	Additional information
1	2	3	4	5	6	7
KATUNAYAKE / Bandaranaike Intl Airport Colombo (VCBI)	H24	Colombo FIR	SIGMET/4HR	Nil	Colombo ACC	Nil

9. OTHER AUTOMATED METEOROLOGICAL SERVICES

9.1 ATIS Broadcast Service provided at KATUNAYAKE / Bandaranaike Intl. Airport Colombo (VCBI) . (Ref. page GEN 3.4-3, para 3.4)

9.1.1 Through ATIS, the authenticated METAR by Meteorological Dept. and any other manual insertion texts from ATC will be automatically converted to voice and transmitted omni directionally through VHF on FREQ 127.2 MHZ at 50W power. Hence the meteorological data message and ATIS message in combination can be heard by the pilots of aircraft within the VHF coverage approximately 100NM from BIAC.

9.2 At KATUNAYAKE / Bandaranaike Intl. Airport Colombo (VCBI), in addition to the complete Meteorological Observation system located 500m away from the RWY centreline at 04 approach end and maintained by Meteorological Dept., a fully Automated Airport Weather Observation System (AWOS) is also located at the Navigational Complex (NSC). The meteorological sensors located at both approach ends close to landing threshold generate meteorological data such as Wind (Speed and Direction), Barometric Pressure, Temperatures (including Dew Point), Visibility and Ceilometer reading. These sensors transmit data to the NSC to process to form the METAR messages. This in turn transmitted through AFTN.