



Guide on WARSAW FIR GAFOR area forecast

(valid from 05.05.2022)

Table of contents:

1. Definition	2
2. Basic information	2
3. Detailed information.....	4
4. GAFOR AMD	6
5. Contingency situation.....	7





1. Definition

GAFOR - graphic area forecast, dedicated to low-level flights, which is a forecast of visibility, cloud base and specific/significant meteorological phenomena, for the regions in FIR EPWW, issued by Central Aeronautical Forecasting Office - Meteorological Watch Office (MWO) in Warsaw and Meteorological Forecasting Office in Cracow.

GAFOR provides information on the minimal conditions occurring in a predominant area that a pilot may encounter while flying in the area.

2. Basic information

GAFOR forecast is prepared by MWO in Warsaw for regions located in A1, A3 and A4 areas, and by Office in Cracow for regions located in A2 and A5 areas (excluding mountain areas). It is issued 10 minutes prior to its validity period for the next six consecutive hours. GAFOR is updated every 2 hours from sunrise to sunset. The forecast is constantly monitored throughout its validity period.

Tab. 1 Forecast validity terms

GAFOR TIME (UTC)	GAFOR VALIDITY PERIOD			
	TOTAL	PERIOD 1	PERIOD 2	PERIOD 3
01.50	02-08	02-04	04-06	06-08
03.50	04-10	04-06	06-08	08-10
05.50	06-12	06-08	08-10	10-12
07:50	08-14	08-10	10-12	12-14
09.50	10-16	10-12	12-14	14-16
11:50	12-18	12-14	14-16	16-18
13:50	14-20	14-16	16-18	18-20



Tab. 2 Compilation time depending on the season of the year (sunrise and sunset)

GAFOR VALIDITY PERIOD	VALIDITY DATES
02-20 UTC	from 02.04 to 06.09
02-18 UTC	from 07.09 to 30.09
04-18 UTC	from 01.10 to 02.11
04-16 UTC	from 03.11 to 04.12
06-16 UTC	from 05.12 to 22.01
04-18 UTC	from 23.01 to 19.03
02-18 UTC	from 20.03 to 01.04

GAFOR is prepared in graphic form with the use of a color scale. It consists of 3 maps. Each map covers next 2 hours of validity period of a given forecast, for which minimum values of AGL cloud bases, visibility and meteorological phenomena are given.



3. Detailed information

Except from the color scale, on the maps there are also symbols of atmospheric phenomena forecasted within a given region. The legend is attached to the maps.

Forecasted visibility should be understood as the most probable minimum visibility over prevailing GAFOR area during GAFOR validity period.

Tab. 3 Colour matrix

Red (C - closed)	VIS < 1500m and/or hs < 500ft
Orange (M – marginal)	1500m ≤ VIS < 5000m and/or 500ft ≤ hs < 1000ft
Yellow (D – difficult)	5000m ≤ VIS < 8000m and/or 1000 ≤ hs < 2000ft
Green (O – open)	VIS ≥ 8000m and/or hs ≥ 2000ft

where: VIS – visibility hs – cloud base AGL

CLOUD BASE FT AGL	2000		M	D	O
	1000		M	D	D
	500		M	M	M
	500				
		1500	5000	8000	
		VISIBILITY (KM)			



Forecasted cloud base should be understood as the most probable minimum cloud base over prevailing GAFOR area during GAFOR validity period. Cloud base is given in relation to the Earth's surface (AGL). GAFOR is only for BKN (Broken i.e. 5/8/7/8) and OVC (Overcast i.e. 8/8).

When forecasting visibility, the limitation by hydrometeors near the ground that is at the eye level of the observer, is taken into account.

The forecast also includes the occurrence of the following phenomena or meteorological elements. Meteorological symbols compliant with the regulations of the World Meteorological Organization (WMO) are used to describe them:

Tab. 4 Phenomena symbols and their hierarchy.

SYMBOL	PHENOMENON	HIERARCHY
	Thunderstorm	1
	Thunderstorm with hail	1
	Blizzard with snow	1
	Freezing rain	1
	Snow	2
	Shower snow	2
	Rain	2
	Drizzle	2
	Shower rain	2
	Freezing fog	2



For the area of one region only 2 phenomena causing difficulties for flying may be indicated. In case of many phenomena, the phenomena that occur over a larger area and are of greater importance for safety are indicated, according to Tab. 4.

One should note that GAFOR forecast is a forecast type in which it is not possible to include all the details and weather conditions for small areas. Consequently, some generalization is necessary. Therefore, all phenomena that occur in less than 15% of a given region are considered local.

4. GAFOR AMD

GAFOR forecast, throughout its validity period, is constantly monitored and amended if forecasted meteorological conditions differ from those actually occurring.

If visibility and cloud base thresholds indicated in the Tab. 3 are exceeded and if phenomena indicated in Tab. 4 occur, disappear or are no longer forecasted, GAFOR AMD forecast is issued.

5. Contingency situations

If contingency situations, interrupting the proper functioning of MWO in Warsaw or the Office in Cracow, occur GAFOR forecast is canceled (CANCEL) until the standard operating mode is restored.