

METEOCLIMATIC REPORT AND ACTIVITIES RELATED TO THE RURITAGE PROJECT

AGOSTO 2021

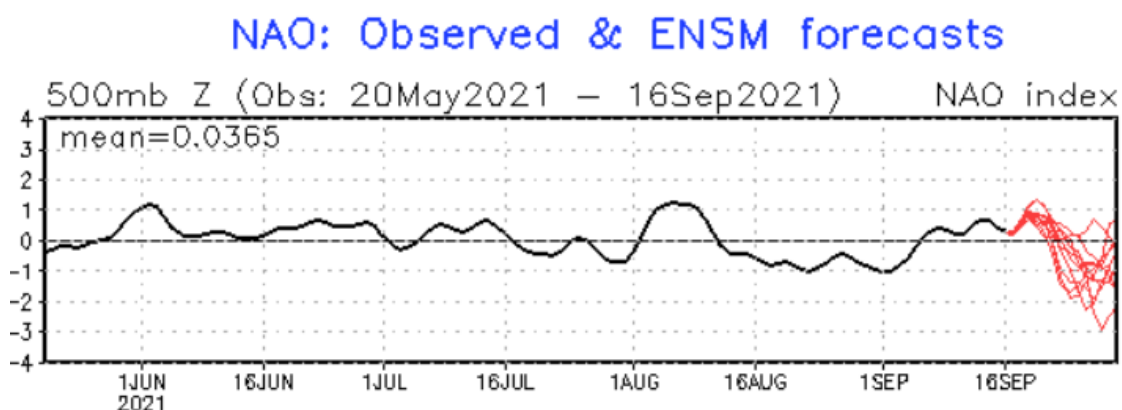
August 2021 was characterized by long anticyclonic periods - MAINLY OF CONTINENTAL SUBTROPICAL NATURE - interrupted only in the last week of the month, by unstable passages, however weak and rapid, in a thermal context higher than the averages calculated on longer and slightly lower than those of the 'last fifteen years. Precipitation, concentrated almost totally in three modest events, proved once again to be scarce and halved compared to the climatological average.

It was a month substantially devoid of any significant meteo-climatological evidence, which could bring about operational problems in the Civil Protection.

The NAO signal remained slightly positive in the first decade and then became negative but without associated meteoric effects (fig. 1).

As previously anticipated, therefore, the weather was characterized by considerable atmospheric stability if we exclude the passage of three lines of instability on days 25, 27 and 31 which, however, did not bring any noteworthy phenomenologies other than short thunderstorms.

Figure 1 - Normalized daily NAO signal

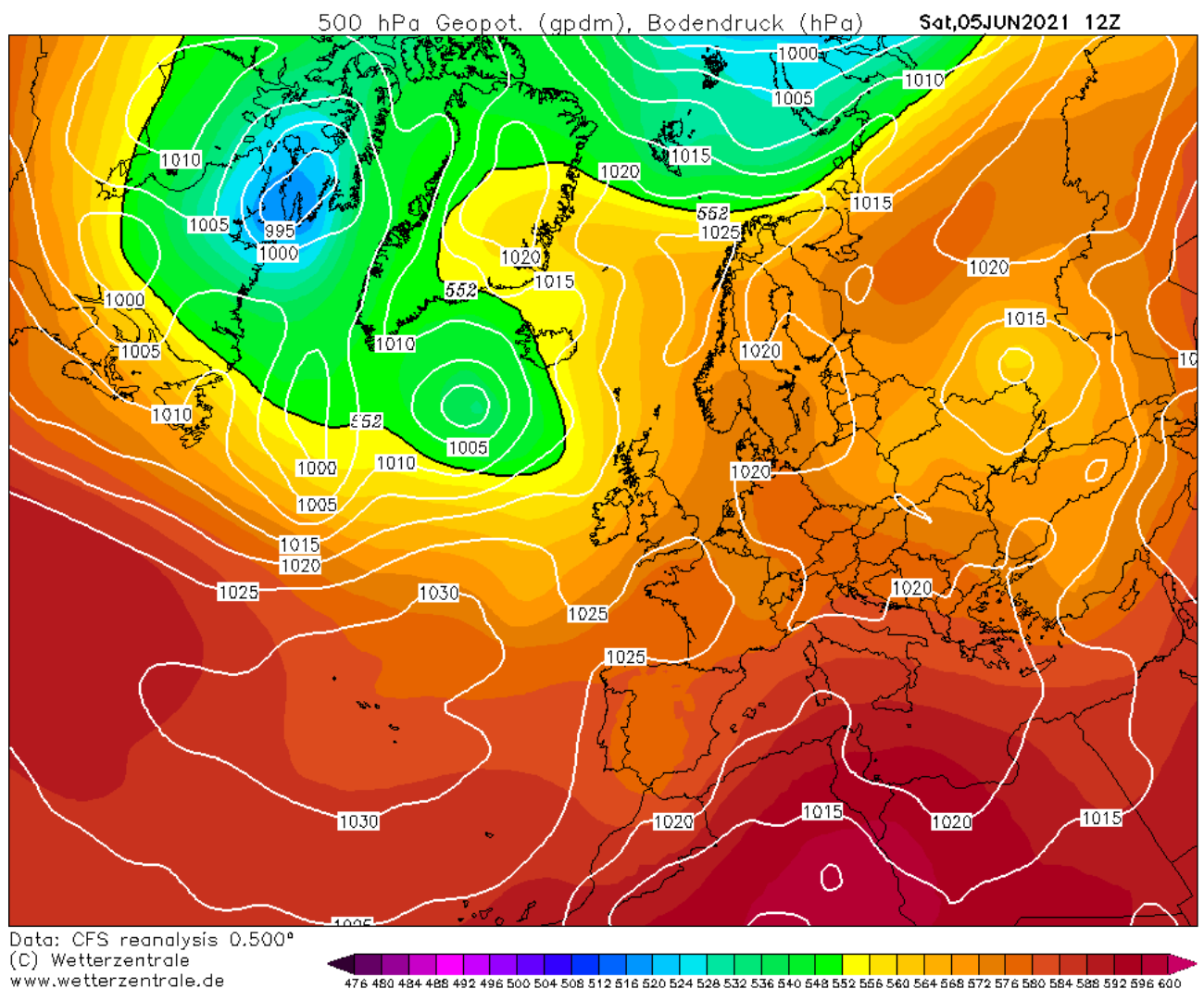


After an overall cooler first part of the year than recent averages, in this month, after a decidedly cool start and after the first unstable passage, temperatures gradually began to rise until reaching constantly high values in the last decade. In particular, both minimum and maximum values were over one degree above the climatic averages of the last forty years.

With regard to the meteoric picture, the monthly cumulative reached 35 millimeters, compared to only 4 rainy days.

The monthly atmospheric dynamics was, as mentioned above, characterized by a notable predominance of anticyclonic conditions (figs. 2 and 3), scratched on only two occasions by unstable North-Atlantic passages capable of determining short showers with thunderstorm.

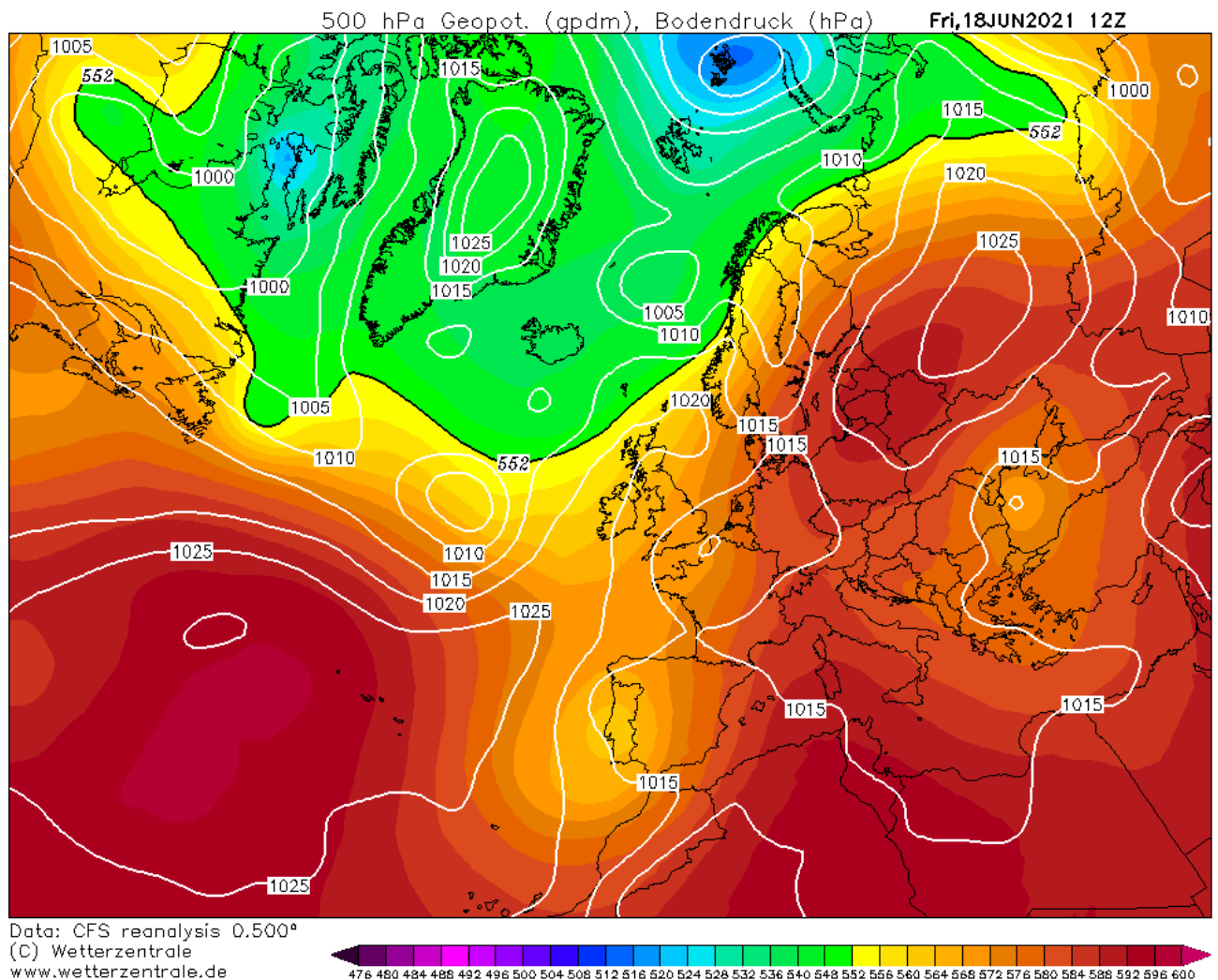
Figure 2 - 500 hPa ground and geopotential map, relative to 12Z on June 5th



In figure 2, the decisive ascent of the continental subtropical anticyclone towards the north, affecting the entire peninsula is evident.

The two unstable passages of 6 and 18 were equal in terms of intensity and meteoric cumulative but while in the first case, the unstable passage resulted from a temporary subsidence on its eastern edge of the anticyclone, in the second case, our area is it is found ON THE EDGE OF A DEEP CLOSED DEPRESSION THAT HAS DETERMINED EXTENDED AND INTENSE PRECIPITATIONS ON THE BALKANS (fig. 3)

Figure 3 - 500 hPa ground and geopotential map, relative to 12Z on June 18th



From the analysis of the complete thermometric data (table 1 and figure 4), it can be observed that the average monthly temperature was about 23.2 ° C, the average minimum and maximum temperature of 16.9 ° C and 29.4. ° C respectively; consequently the average daily temperature range was found to be about 9.5 ° C, about one degree lower than the climatic average of about 10.4 ° C.

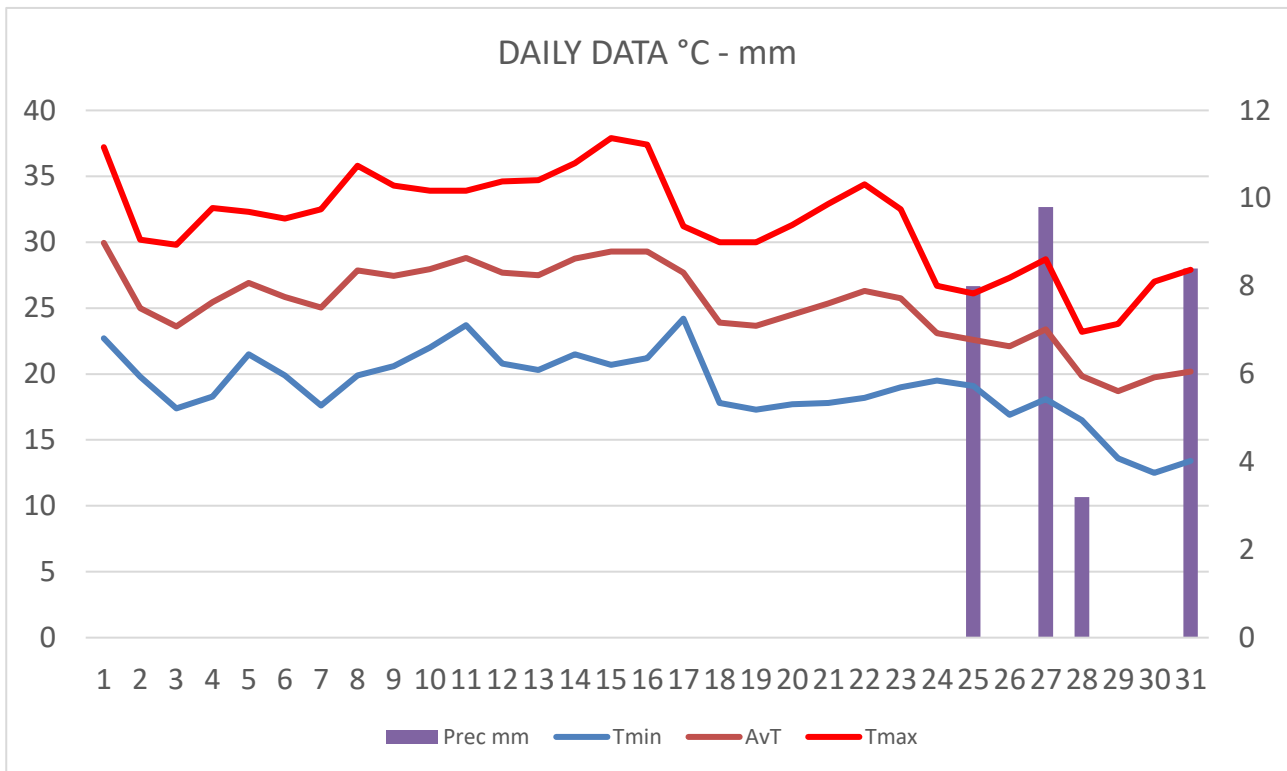
The absolute minimum temperature was 9.6 ° C on day 1 while the absolute maximum was recorded on day 29, with 33.8 ° C.

Compared to the monthly climatological average calculated for the meteorological station of Ascoli Piceno and relating to the period 1981-2015 - of about 21.7 ° C, - a surplus of 1.5 ° C is observed, measured equally between minimum and maximum values. If we consider the monthly average data of the last fifteen years and related to the station under analysis, we observe a substantial identity in the values.

With regard to rainfall, the monthly cumulative, as previously highlighted, touched 36 mm distributed over 4 days with a cumulative liquid or equivalent from the solid > 1mm. They consider a monthly climatic average referred to the Ascoli Piceno weather station is about 58 mm, the monthly cumulative recorded shows a deficit in the cumulative of about 75%, a value that is repeated in recent months and is highly worrying in view of the upcoming summer season, since there are already conditions of **severe seasonal water drought**.

Figure 4 and table 1 show the thermo-pluviometric graph and the daily climatic data with the respective monthly averages.

Figure 4 - graph of daily thermo-meteoric data (ordinate left °C, ordinate right mm)



Y	M	D	Tmin	AvT	Tmax	Prec mm	RA	TS	TRN	VHD
2021	8	1	22,7	30,0	37,2	0			*	*
2021	8	2	19,8	25,0	30,2	0				
2021	8	3	17,4	23,6	29,8	0				
2021	8	4	18,3	25,5	32,6	0				
2021	8	5	21,5	26,9	32,3	0			*	
2021	8	6	19,9	25,9	31,8	0				
2021	8	7	17,6	25,1	32,5	0				
2021	8	8	19,9	27,9	35,8	0				*
2021	8	9	20,6	27,5	34,3	0			*	
2021	8	10	22	28,0	33,9	0			*	
2021	8	11	23,7	28,8	33,9	0			*	
2021	8	12	20,8	27,7	34,6	0			*	
2021	8	13	20,3	27,5	34,7	0			*	
2021	8	14	21,5	28,8	36	0			*	*
2021	8	15	20,7	29,3	37,9	0			*	*
2021	8	16	21,2	29,3	37,4	0			*	*
2021	8	17	24,2	27,7	31,2	0			*	
2021	8	18	17,8	23,9	30	0				
2021	8	19	17,3	23,7	30	0				
2021	8	20	17,7	24,5	31,3	0				
2021	8	21	17,8	25,4	32,9	0				
2021	8	22	18,2	26,3	34,4	0				
2021	8	23	19	25,8	32,5	0				
2021	8	24	19,5	23,1	26,7	0				
2021	8	25	19,1	22,6	26,1	8				
2021	8	26	16,9	22,1	27,3	0				
2021	8	27	18,1	23,4	28,7	9,8	*			
2021	8	28	16,5	19,9	23,2	3,2	*			
2021	8	29	13,6	18,7	23,8	0				
2021	8	30	12,5	19,8	27	0				
2021	8	31	13,4	20,2	27,9	8,4	*	*		
AVER			19,0	25,3	31,5	29,4	3	1	11	5
AVER 81-17			17,7	24,3	30,8	48	3,4			
AVER 03-19				26						

Table 1 - daily summary of the meteorological and climatic data available. LEGEND: Tmin: minimum temperature; avT: average temperature; Tmax: maximum temperature; prev. mm: daily precipitation; monthly sum of total precipitation; RD: days with precipitation > 1mm; TS: stormy days, TRN: tropical nights; VHD: very hot days (Tmax > 35 ° C)