



AGROMETEOROLOGICAL BULLETIN

*January 2022
2nd 10-day period*

- Temperature
- Relative Humidity
- Soil Temperature
- Sunshine Duration
- Precipitation
- Evaporation
- Growing Degrees
- Reference Evapotranspiration
- Accumulated Rainfall from the beginning of wet period
- Accumulated Reference Evapotranspiration
- Number of dry days



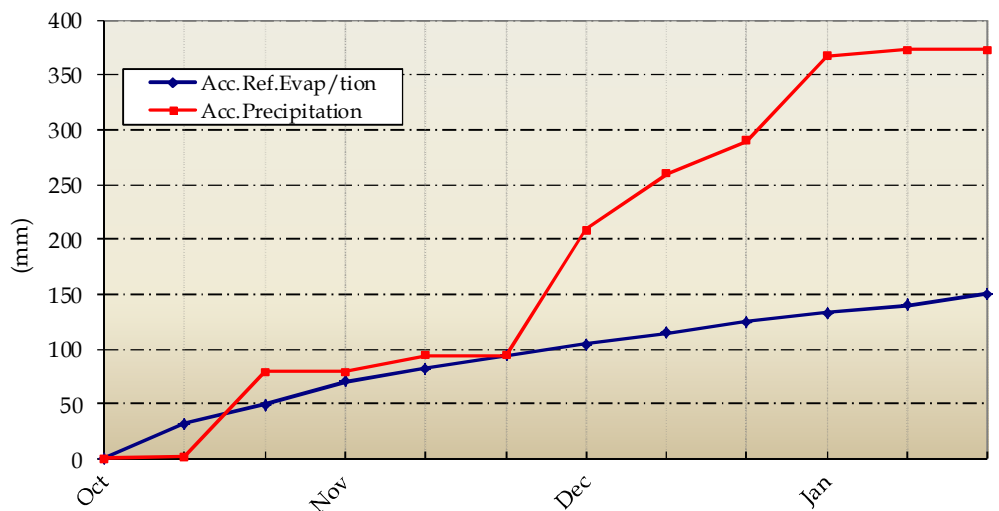
Hellenic National Meteorological Service
Division of Climatology-Applications
El. Venizelou Street 14, 16777
Helliniko, Athens

Web addresses of HNMS
www.hnms.gr
www.emy.gov.gr
www.meteo.gov.gr
www.meteohellas.gr

2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.6	2.6	1.6	6.4	12.0	7.4	11.8	10.0	7.2	11.4	8.1	7.9	9.2
	Min	2.6	-2.0	-5.0	-7.0	-1.6	-0.4	-2.2	3.0	-3.0	-2.6	-1.8	0.5	1.5
Relative Humidity	Max	85	92	86	90	92	89	90	90	71	84	87	85	91
	Min	70	49	62	44	47	34	54	20	35	52	47	56	64
Soil Temperature at 10 cm	06 UTC	9.2	3.8	2.0	2.0	2.2	2.6	3.2	4.6	3.4	3.8	3.7	6.4	5.1
	12 UTC	8.4	3.8	2.2	2.4	4.4	4.2	5.6	6.6	5.4	5.8	4.9	6.8	6.1
Sunshine Duration		0.0	2.1	8.4	8.0	6.7	8.6	7.2	8.6	8.6	8.6	6.7	3.9	3.7
Precipitation			0.0									0.0	228.6	13.0
Evaporation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	-	7.8
Growing Degrees	5	1.6	0.0	0.0	0.0	0.2	0.0	0.0	1.5	0.0	0.0	3.3	16.5	14.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	1.1

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	10.4	7.9	7.0
Precipitation - Reference Evapotranspiration	-10.4	220.7	6.0
Number of Rainy Days	0.0	2.0	2.0
Number of Dry Days	10.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

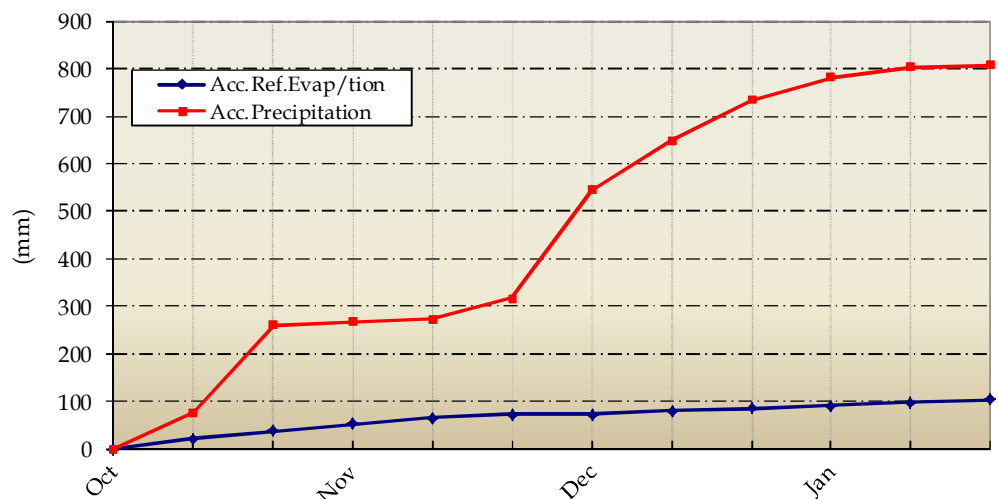


2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.8	12.9	11.2	10.9	13.8	15.4	15.4	14.6	12.9	14.0	13.6	13.8	14.3
	Min	8.4	6.4	0.0	-2.9	0.2	3.6	7.6	4.6	-2.2	3.0	2.9	6.6	5.4
Relative Humidity	Max	94	71	93	91	94	89	98	94	85	87	90	90	91
	Min	55	42	38	32	55	41	61	41	27	56	45	51	54
Soil Temperature at 10 cm	06 UTC	11.6	10.8	8.8	7.2	7.0	8.5	9.8	10.6	8.2	8.1	9.1	11.6	8.8
	12 UTC	13.0	10.3	11.0	7.8	8.3	9.4	10.8	11.0	9.0	9.6	10.0	12.1	10.7
Sunshine Duration		5.1	6.6	6.8	7.4	6.7	6.7	4.7	6.8	7.2	3.8	6.2	4.3	4.6
Precipitation		1.6						1.5				3.1	34.1	26.4
Evaporation		1.4	1.0	0.8	1.2	1.0	0.2	0.8	1.4	0.8	0.9	9.5	8.0	30.8
Growing Degrees	5	6.6	4.7	0.6	0.0	2.0	4.5	6.5	4.6	0.4	3.5	33.3	52.4	40.4
	10	1.6	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.1	20.7	7.9

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	6.2	-	10.5
Precipitation - Reference Evapotranspiration	-3.1	-	15.9
Number of Rainy Days	2.0	6.0	2.8
Number of Dry Days	0.0	1.0	-

The missing info in the tables are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

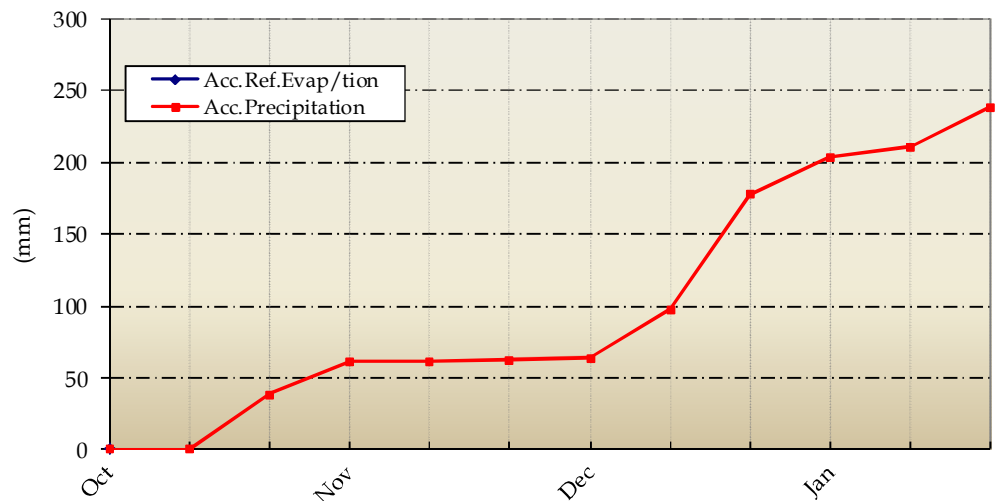


2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.0	14.4	9.0	10.8	14.4	12.2	13.6	15.2	11.0	14.0	13.0	14.9	15.6
	Min	10.4	10.2	8.8	7.0	5.4	9.8	6.0	11.0	9.4	3.0	8.1	10.4	9.5
Relative Humidity	Max	95	95	86	78	91	60	86	84	67	83	82	86	87
	Min	57	73	66	54	52	43	57	50	50	57	56	60	61
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.4	2.2	0.8	0.6	6.0	7.8	6.0	1.8	4.1	8.5	4.1	3.1	4.3
Precipitation		2.9	19.3	4.5	0.6	0.0			0.6	0.2		28.1	48.2	27.1
Evaporation		1.0	0.5	1.4	2.2	3.4	3.0	0.2	3.5	1.9	1.4	18.5	17.0	26.7
Growing Degrees	5	7.7	7.3	3.9	3.9	4.9	6.0	4.8	8.1	5.2	3.5	55.3	76.5	66.5
	10	2.7	2.3	0.0	0.0	0.0	1.0	0.0	3.1	0.2	0.0	9.3	33.4	23.6

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	6.0	7.0	4.0
Number of Dry Days	0.0	9.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



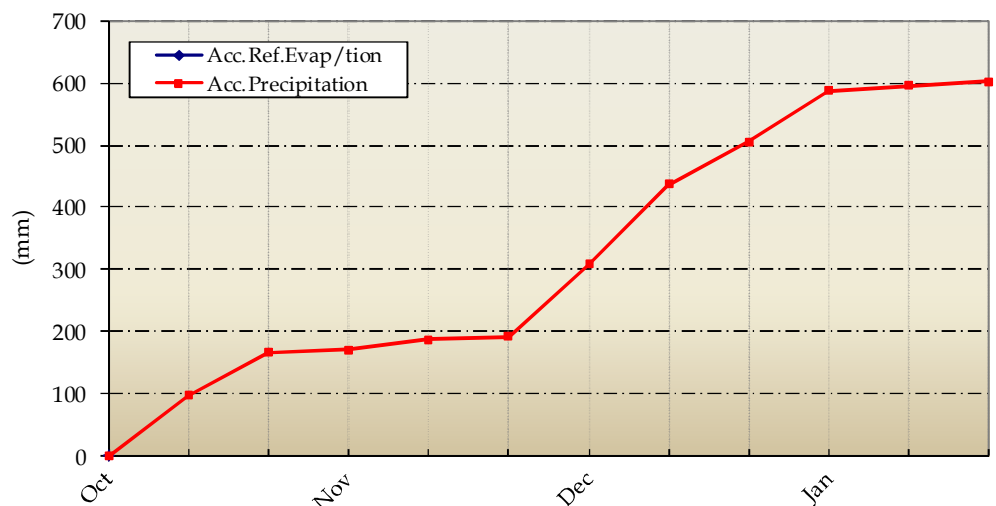
Ioannina

2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.3	6.2	8.7	9.9	15.8	12.8	10.7	12.0	9.4	9.9	10.6	8.3	9.5
	Min	2.7	5.6	-1.8	-8.0	-6.5	-5.8	-2.2	-0.4	-6.3	-7.0	-3.0	-0.5	-0.3
Relative Humidity	Max	91	65	65	81	100	93	100	100	91	99	88	98	94
	Min	48	45	26	31	29	26	56	17	17	44	34	52	58
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	3.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	3.9
Sunshine Duration		0.3	2.6	8.2	8.4	7.7	7.7	2.6	7.8	8.2	1.9	5.5	4.1	3.0
Precipitation		7.0	0.2								0.1	7.3	58.0	20.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	3.2	14.9	7.5
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.1

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	10.9
Precipitation - Reference Evapotranspiration	-	-	9.6
Number of Rainy Days	3.0	5.0	2.0
Number of Dry Days	0.0	0.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

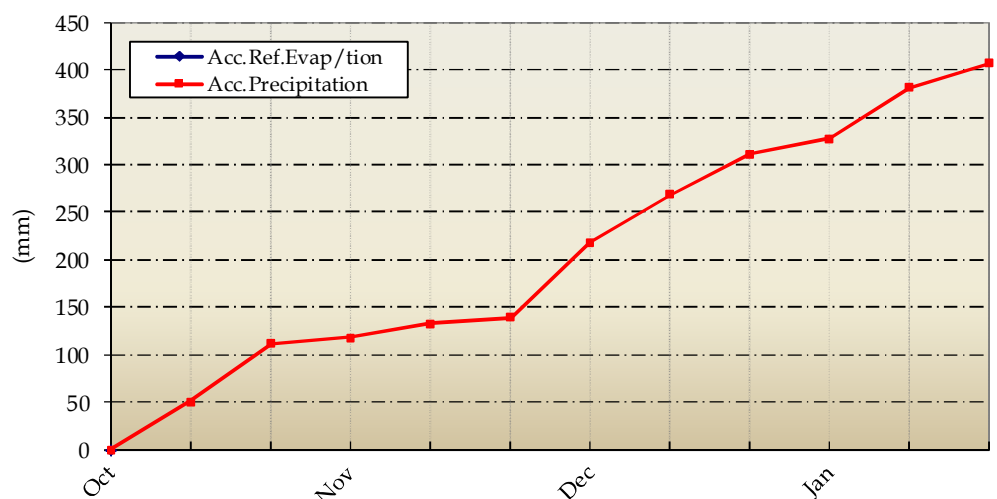


2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.6	14.8	12.4	13.3	16.6	16.6	15.3	17.2	15.0	14.7	15.2	15.1	15.3
	Min	6.7	5.4	5.5	-0.9	-0.8	4.5	7.0	5.3	4.6	6.6	4.4	5.4	5.5
Relative Humidity	Max	97	79	62	85	92	90	98	98	73	93	87	93	91
	Min	53	40	27	27	28	32	61	48	25	52	39	48	52
Soil Temperature at 10 cm	06 UTC	11.0	10.4	9.0	7.8	-	-	9.6	9.6	9.4	9.4	9.5	10.6	9.7
	12 UTC	11.4	14.6	13.6	8.6	-	-	10.0	10.2	9.6	10.2	11.0	11.3	10.7
Sunshine Duration		3.4	6.0	8.7	8.7	8.7	8.7	3.3	6.7	8.2	5.1	6.8	5.3	4.9
Precipitation		20.9						3.4	0.8		0.0	25.1	13.1	31.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	12.5	20.5
Growing Degrees	5	6.2	5.1	4.0	1.2	2.9	5.6	6.2	6.3	4.8	5.7	47.7	52.3	47.9
	10	1.2	0.1	0.0	0.0	0.0	0.6	1.2	1.3	0.0	0.7	4.9	16.8	9.1

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	11.2
Precipitation - Reference Evapotranspiration	-	-	20.3
Number of Rainy Days	3.0	5.0	3.4
Number of Dry Days	0.0	1.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



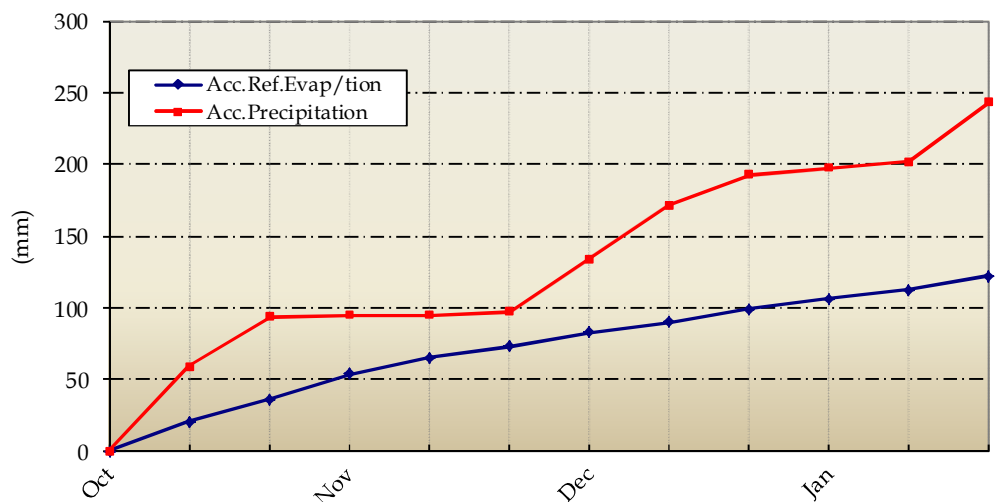
Larisa

2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.8	6.2	5.3	6.7	12.6	10.2	11.0	10.8	8.0	11.2	9.3	8.8	10.4
	Min	6.2	3.8	-0.4	-5.0	-3.8	-2.6	-3.6	-0.8	-2.0	-6.0	-1.4	0.3	0.6
Relative Humidity	Max	100	80	86	96	96	94	100	96	81	85	91	93	95
	Min	72	57	45	52	45	39	48	25	31	60	47	54	58
Soil Temperature at 10 cm	06 UTC	9.4	7.8	5.8	4.6	4.2	4.6	4.4	4.2	4.2	3.8	5.3	-	6.0
	12 UTC	9.2	8.0	6.2	4.4	4.4	5.0	4.8	8.4	4.4	3.8	5.9	-	6.6
Sunshine Duration		0.0	0.0	6.8	5.9	6.7	7.1	6.7	7.6	8.2	0.0	4.9		3.7
Precipitation		41.4										41.4	24.9	10.6
Evaporation		-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	4.4	7.9
Growing Degrees	5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	15.8	13.8
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.8

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	9.8	-	8.8
Precipitation - Reference Evapotranspiration	31.6	-	1.8
Number of Rainy Days	1.0	3.0	2.2
Number of Dry Days	0.0	0.0	-

The missing info in the tables are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



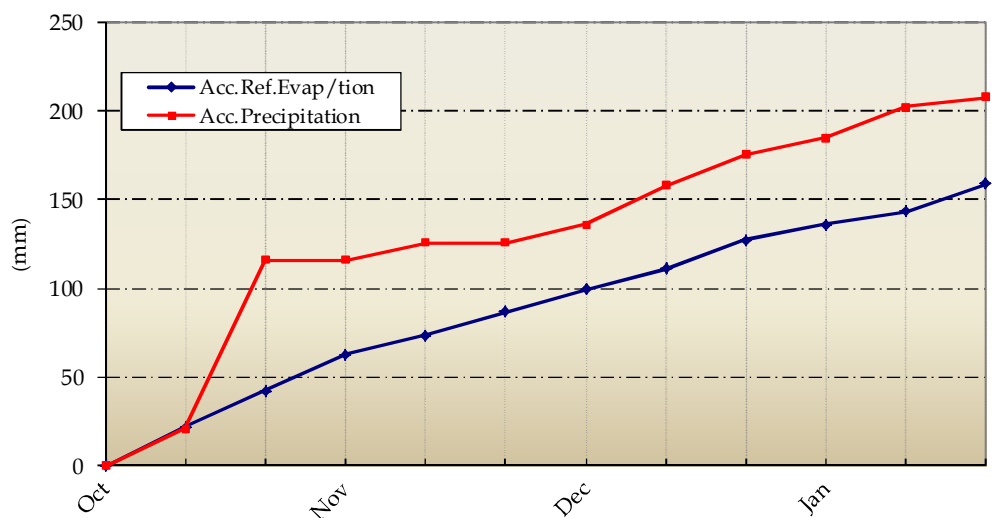
Mikra

2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.0	7.6	4.2	9.0	12.2	9.4	10.8	11.8	7.8	9.2	9.4	8.2	9.7
	Min	7.2	3.0	0.5	0.2	7.2	-1.9	-1.2	-0.2	1.0	-3.5	1.2	2.2	2.1
Relative Humidity	Max	87	86	70	65	78	100	100	62	78	86	81	87	87
	Min	68	59	49	48	46	45	44	36	32	43	47	47	57
Soil Temperature at 10 cm	06 UTC	10.2	8.0	6.0	4.2	6.2	5.2	5.6	6.8	5.2	4.2	6.2	6.3	5.3
	12 UTC	10.0	8.2	6.0	5.4	7.2	6.5	5.2	6.6	6.2	7.2	6.8	7.2	6.9
Sunshine Duration		0.0	0.9	7.8	8.1	8.7	8.4	4.5	8.3	8.2	8.7	6.4	5.7	4.1
Precipitation		2.1	3.2									5.3	29.8	8.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	20.6
Growing Degrees	5	4.6	0.3	0.0	0.0	4.7	0.0	0.0	0.8	0.0	0.0	10.4	19.6	15.8
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.8

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	15.9	15.1	6.6
Precipitation - Reference Evapotranspiration	-10.6	14.7	2.0
Number of Rainy Days	2.0	4.0	2.2
Number of Dry Days	0.0	0.0	-

The missing info in the tables are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

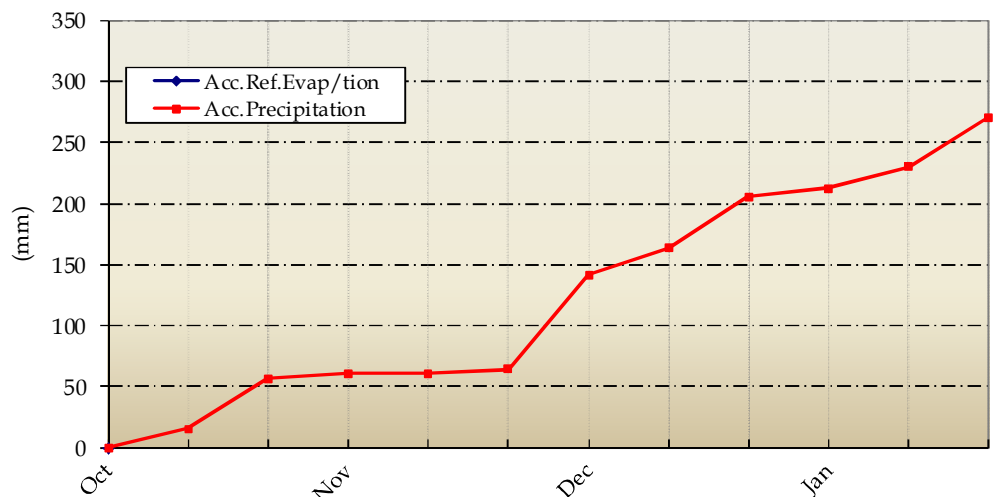


2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.1	5.4	4.4	8.6	12.9	8.3	13.3	10.0	7.2	14.8	9.7	10.6	11.9
	Min	6.4	4.9	2.6	0.6	-1.1	5.0	-2.4	3.2	1.1	-4.4	1.6	2.4	3.5
Relative Humidity	Max	100	90	65	78	82	100	100	96	95	99	90	92	93
	Min	68	64	47	28	48	65	58	34	40	36	49	47	55
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.2	0.7	4.2	7.9	5.8	0.6	7.0	5.7	2.1	7.3	4.4	5.0	3.7
Precipitation		11.0	27.0	1.6			0.4					40.0	40.3	25.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	19.5
Growing Degrees	5	4.3	0.2	0.0	0.0	0.9	1.7	0.5	1.6	0.0	0.2	9.2	32.0	26.7
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	3.0

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	4.0	6.0	3.4
Number of Dry Days	1.0	7.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



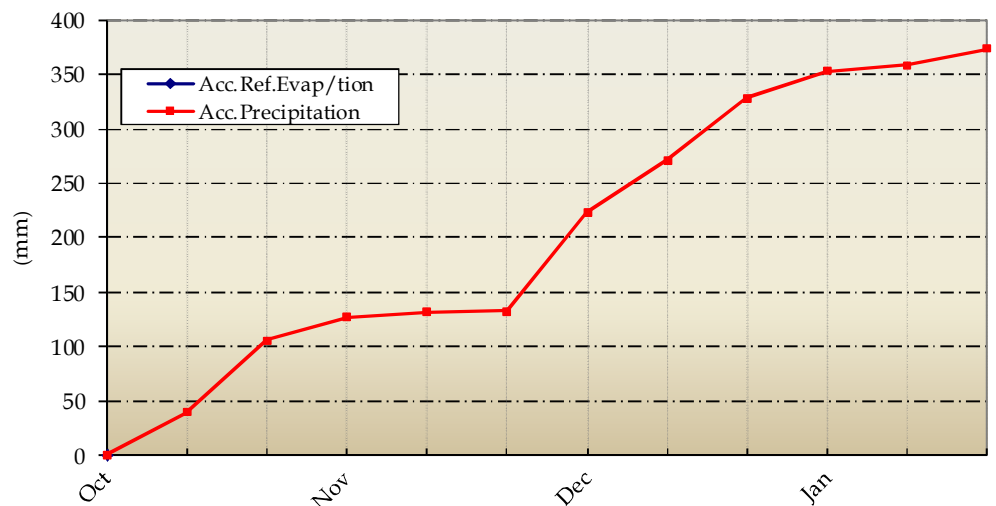
Tripoli

2nd 10-day period (11-20/01/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	8.0	5.3	2.8	10.3	12.7	8.2	12.5	10.3	7.0	10.1	8.7	8.8	10.1
	Min	1.9	2.7	0.1	-6.8	-5.6	-1.2	-4.6	0.2	-6.9	-3.7	-2.4	1.3	0.1
Relative Humidity	Max	97	90	90	94	93	99	100	96	99	92	95	94	95
	Min	73	68	58	16	29	53	37	47	34	55	47	52	56
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	4.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	5.5
Sunshine Duration		0.8	6.2	6.2	7.3	7.6	4.3	6.0	3.7	6.8	1.9	5.1	3.8	4.0
Precipitation		14.8	0.1	0.2	0.0	0.0	0.0	0.0			0.0	15.1	45.4	26.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	4.8
Growing Degrees	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	23.2	9.2
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.2

2nd 10-day period (11-20/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	8.6	7.2	6.7
Precipitation - Reference Evapotranspiration	6.5	38.2	19.4
Number of Rainy Days	3.0	4.0	2.6
Number of Dry Days	0.0	1.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





◆ **List of Symbols and Abbreviations**

Reference Evapotranspiration ETo (mm):

Calculated by the FAO Penman-Montieth equation

$$ET_0 = \frac{0.408 * \Delta * (R_n - G) + \gamma * \frac{900}{T + 273} * u_2 * (e_s - e_a)}{\Delta + \gamma * (1 + 0.34 * u_2)}$$

using 10-day step.

R_n is estimated from sunshine measurements and G assumed to be zero.

Growing Degrees: Degrees with mean temperature exceeding the base of 5 or 10 °C.

Number of Rainy Days: Number of days with precipitation of at least 0.1 mm.

Number of Dry Days: Number of dry days recorded since the last rainy day.

Measurements Units

- ◆ Temperature : °C
- ◆ Relative Humidity : %
- ◆ Soil Temperature : °C
- ◆ Sunshine Duration : Hours
- ◆ Precipitation : mm
- ◆ Evaporation (Pan) : mm
- ◆ Growing Degrees : °C

UTC (Universal Time coordinates) in Greece

- ◆ Winter : Time(UTC) = Local time - 2
- ◆ Summer : Time(UTC) = Local time - 3

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Helliniko, Athens



**ΕΘΝΙΚΗ
ΜΕΤΕΩΡΟΛΟΓΙΚΗ
ΥΠΗΡΕΣΙΑ**

HELLENIC NATIONAL METEOROLOGICAL SERVICE

Division of Climatology-Applications

Issue Editors :

Papakrivou Anastasia

anastasia.papakrivou@hnms.gr

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