



AGROMETEOROLOGICAL BULLETIN

*January 2022
3rd 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



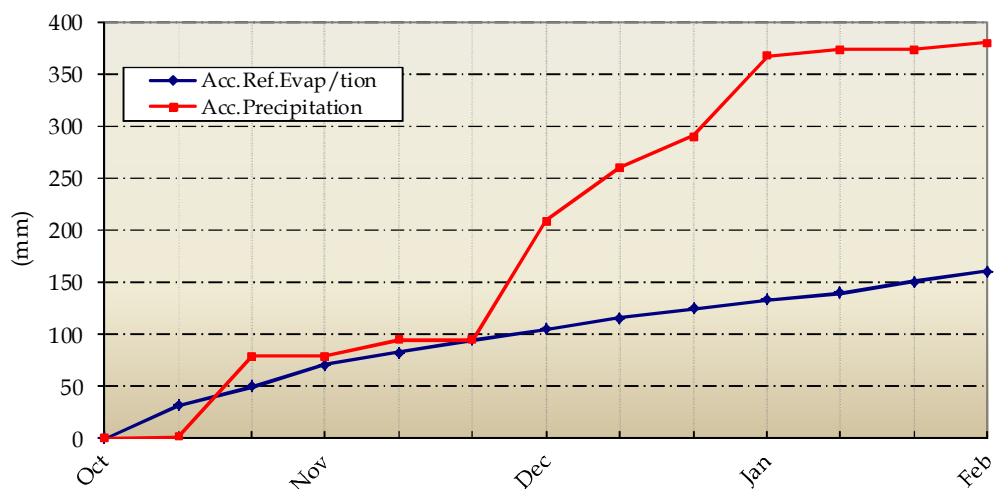
Hellenic National Meteorological Service
Division of Climatology-Applications
El. Venizelou Street 14, 16777
Helliniko, Athens

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

3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.2	4.6	4.6	1.6	2.6	5.0	8.2	10.0	8.0	9.4	10.8	6.8	13.3	8.9
	Min	2.0	-1.8	-3.0	-3.8	-5.8	-9.0	-5.0	-3.8	2.0	-4.6	-1.8	-3.1	4.7	1.4
Relative Humidity	Max	90	89	79	84	70	90	90	88	84	81	84	84	92	90
	Min	69	34	29	35	39	41	32	50	38	59	42	43	61	60
Soil Temperature at 10 cm	06 UTC	5.0	3.4	2.0	1.6	1.4	1.0	1.2	1.8	3.6	2.6	3.4	2.5	7.3	5.3
	12 UTC	6.4	5.0	2.8	2.0	1.6	1.4	2.6	5.0	4.8	5.2	5.8	3.9	8.8	6.2
Sunshine Duration		1.7	7.8	6.5	5.8	8.4	8.2	2.1	6.1	0.0	4.4	8.9	5.4	3.6	3.6
Precipitation		6.5	0.2							0.0			6.7	134.7	25.0
Evaporation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	22.5
Growing Degrees	5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	46.6	19.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	3.2

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	10.1	12.2	8.4
Precipitation - Reference Evapotranspiration	-3.4	122.5	16.6
Number of Rainy Days	2.0	5.0	2.9
Number of Dry Days	10.0	11.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

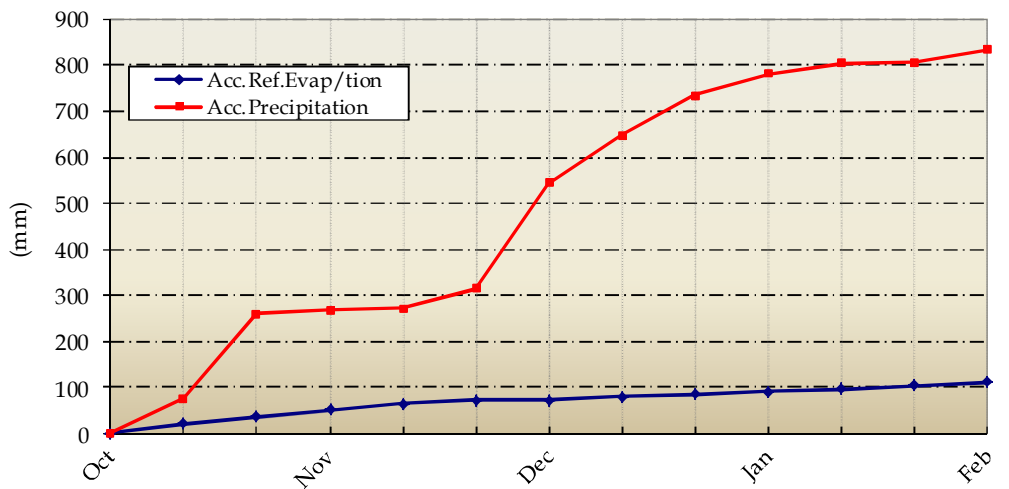


3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.0	10.7	7.2	6.7	7.6	9.0	12.4	13.5	8.4	12.6	15.2	10.8	15.2	13.6
	Min	6.4	4.0	2.3	-2.2	0.8	-5.0	1.1	-0.2	6.0	5.8	0.5	1.8	7.9	5.3
Relative Humidity	Max	95	98	87	83	65	85	93	95	97	88	94	89	94	91
	Min	65	42	30	39	33	27	38	59	60	49	49	45	56	56
Soil Temperature at 10 cm	06 UTC	10.2	9.6	8.0	6.4	5.4	5.0	5.2	6.4	8.2	8.0	7.0	7.2	10.5	8.9
	12 UTC	10.0	10.0	8.0	8.0	6.2	5.7	8.0	8.5	8.8	8.0	8.6	8.2	11.0	10.8
Sunshine Duration		3.0	6.0	7.1	6.0	6.1	7.1	7.1	7.5	0.0	8.8	8.0	6.1	4.0	4.0
Precipitation		3.5	6.3							18.7			28.5	85.8	33.1
Evaporation		0.7	2.0	1.2	1.0	0.5	1.0	0.8	0.7	0.2	0.6	0.4	9.1	13.6	36.6
Growing Degrees	5	5.7	2.4	0.0	0.0	0.0	0.0	1.8	1.7	2.2	4.2	2.9	20.7	72.1	40.9
	10	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	22.9	7.6

3rd 10-day period (21-31/01/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	7.8	- 9.6
Precipitation - Reference Evapotranspiration	20.7	- 23.5
Number of Rainy Days	3.0	9.0 3.8
Number of Dry Days	3.0	2.0 -

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

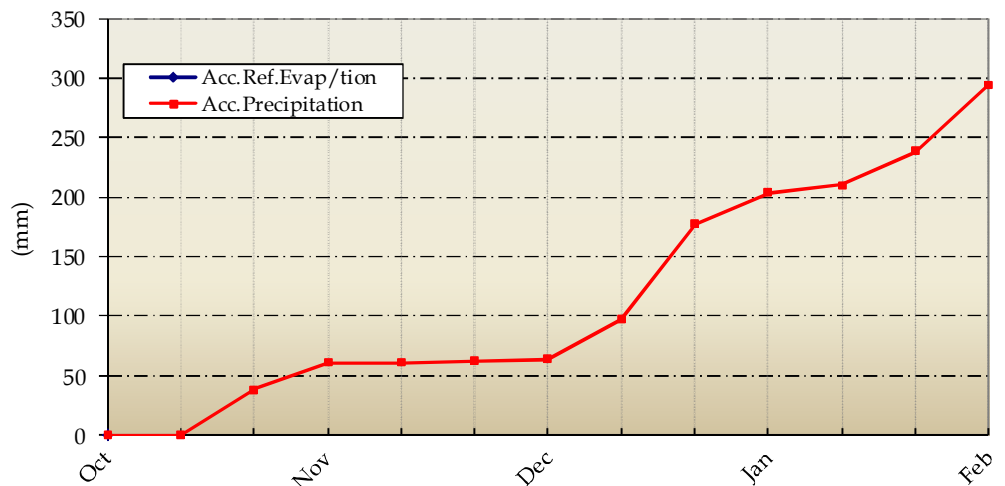


3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.0	15.2	6.8	8.2	8.4	8.2	9.6	13.0	15.6	15.2	15.2	11.9	17.1	15.2
	Min	9.4	9.4	6.6	1.4	3.2	3.8	6.4	5.4	5.4	9.0	10.4	6.4	10.1	9.0
Relative Humidity	Max	83	93	90	93	91	88	91	85	90	93	85	89	83	83
	Min	65	59	59	67	46	48	68	52	55	63	55	58	54	56
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.2	2.1	0.3	0.6	0.5	0.4	0.4	5.6	4.6	6.7	7.6	2.9	6.2	4.5
Precipitation		0.1	10.5	19.0	5.2	7.8	5.0	3.9		0.1	2.3	2.0	55.9	13.3	25.4
Evaporation		1.3	1.3	0.0	0.0	8.3	1.7	0.3	1.4	0.4	0.6	13.8	29.1	28.6	35.6
Growing Degrees	5	7.2	7.3	1.7	0.0	0.8	1.0	3.0	4.2	5.5	7.1	7.8	45.6	94.8	68.6
	10	2.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.1	2.8	9.9	39.8	22.3

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	10.0	2.0	4.5
Number of Dry Days	1.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

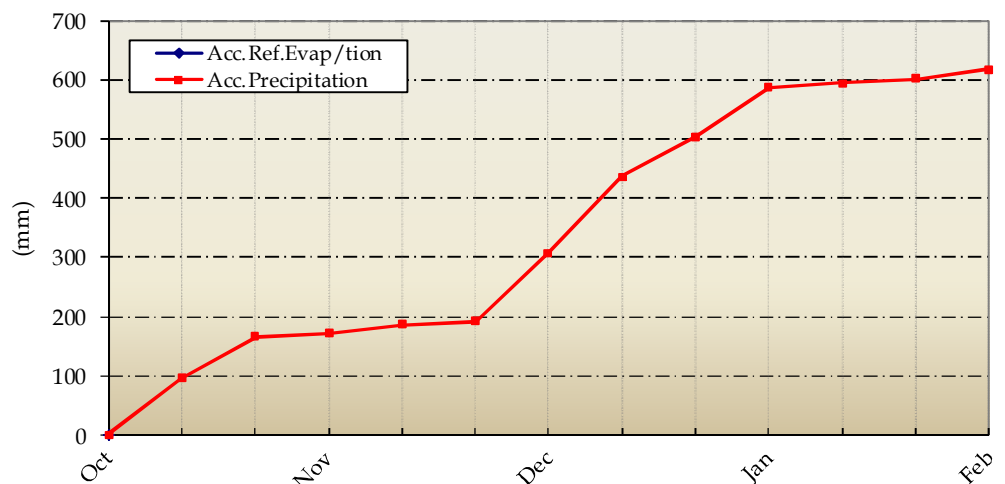


3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	8.3	5.8	4.9	1.0	5.5	8.7	9.3	11.1	7.5	12.2	11.6	7.8	9.9	9.1
	Min	4.6	-2.7	-4.5	-4.2	-4.9	-10.4	-8.4	-8.2	-0.5	-5.5	-7.4	-4.7	2.3	0.0
Relative Humidity	Max	100	92	75	45	77	90	93	95	97	87	99	86	96	97
	Min	81	29	21	26	13	28	34	37	37	26	20	32	68	62
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5
Sunshine Duration		0.2	7.3	8.2	4.1	8.4	8.4	8.0	6.6	3.8	8.7	7.4	6.5	2.6	2.5
Precipitation		14.7	0.6							0.0			15.3	137.1	37.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	21.0	9.3
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	6.8
Precipitation - Reference Evapotranspiration	-	-	31.1
Number of Rainy Days	2.0	9.0	3.7
Number of Dry Days	0.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

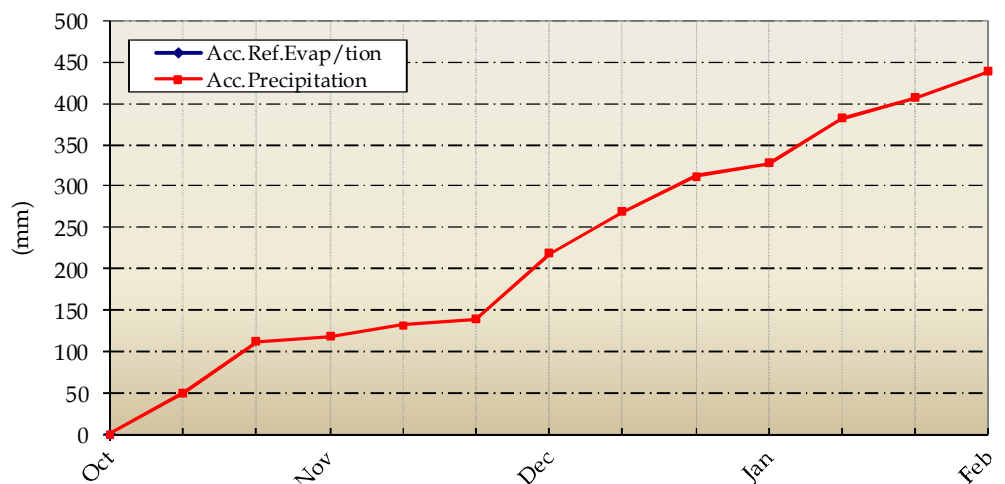


3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.0	13.2	9.0	9.3	9.2	11.0	13.2	16.0	9.6	16.3	15.1	12.3	15.2	14.7
	Min	6.1	5.8	-1.1	-1.8	2.8	-3.1	-3.0	0.2	3.5	6.1	3.6	1.7	5.7	5.3
Relative Humidity	Max	98	99	75	75	51	78	76	96	96	46	84	79	96	91
	Min	49	38	59	29	27	15	38	40	40	41	44	38	57	53
Soil Temperature at 10 cm	06 UTC	9.4	-	-	6.2	6.2	5.4	5.0	6.4	-	-	7.8	6.6	9.6	9.6
	12 UTC	9.0	-	-	7.4	7.0	6.4	6.6	7.4	-	9.6	8.6	7.8	10.6	10.5
Sunshine Duration		0.9	6.8	8.9	7.5	7.8	9.1	4.0	9.0	0.0	9.0	9.2	6.6	3.5	4.4
Precipitation		7.0	3.2	0.0				0.0		20.6	0.0		30.8	52.9	43.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	11.1	26.0
Growing Degrees	5	4.6	4.5	0.0	0.0	1.0	0.0	0.1	3.1	1.6	6.2	4.4	25.4	60.4	49.8
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.2	16.1	9.2

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	12.3
Precipitation - Reference Evapotranspiration	-	-	31.4
Number of Rainy Days	3.0	10.0	4.7
Number of Dry Days	2.0	2.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



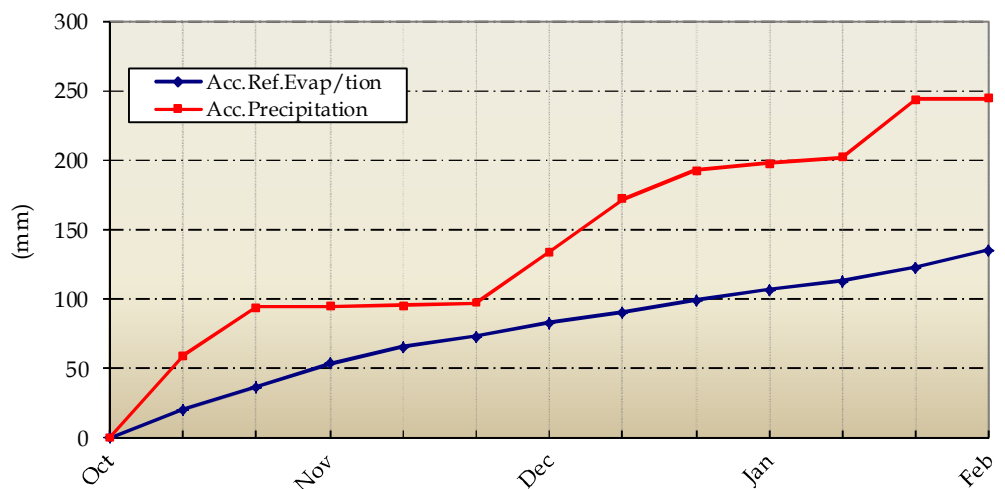
Larisa

3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.0	6.2	6.4	2.6	5.0	7.4	8.4	10.6	7.4	11.6	12.8	9.1	12.8	10.5
	Min	2.4	0.8	-3.2	-3.8	-5.0	-10.0	-6.4	-7.0	-2.0	-2.4	-4.4	-3.7	1.6	0.9
Relative Humidity	Max	92	83	65	65	80	82	83	88	87	95	92	83	92	96
	Min	51	27	23	22	23	27	36	40	44	36	33	33	51	56
Soil Temperature at 10 cm	06 UTC	0.0	5.8	3.4	3.8	3.6	2.8	2.6	2.6	3.4	4.2	3.6	3.3	-	5.9
	12 UTC	5.6	5.6	5.8	3.6	3.8	4.4	3.8	2.8	4.0	4.4	5.0	4.4	-	6.6
Sunshine Duration		4.9	5.9	8.1	7.9	7.9	8.2	7.8	7.3	0.0	8.3	7.3	6.7		3.9
Precipitation			0.9							0.0			0.9	13.2	12.9
Evaporation		1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	8.8	13.3
Growing Degrees	5	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	26.8	16.6
	10	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.4	1.2

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	13.0	-	10.9
Precipitation - Reference Evapotranspiration	-12.1	-	2.0
Number of Rainy Days	1.0	4.0	3.3
Number of Dry Days	10.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



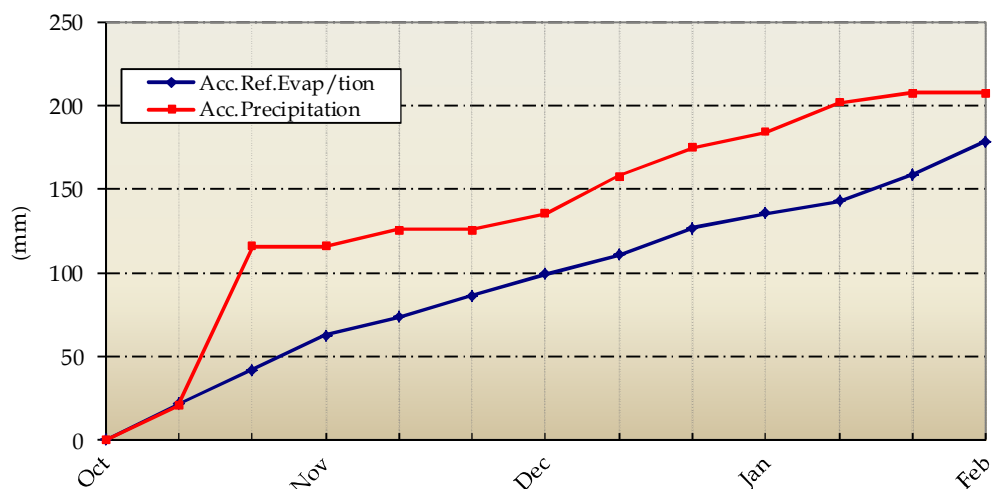
Mikra

3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	9.5	7.4	5.1	4.0	3.2	7.0	7.6	9.8	8.4	9.9	12.0	7.6	12.3	9.7
	Min	-0.4	0.2	1.0	-1.4	-2.6	-8.0	-4.5	-3.9	2.7	-3.6	2.0	-1.7	3.7	1.9
Relative Humidity	Max	95	66	60	76	55	73	84	84	87	91	60	76	89	89
	Min	43	36	37	27	34	37	46	45	46	36	29	38	52	55
Soil Temperature at 10 cm	06 UTC	4.6	4.2	2.6	2.8	2.2	1.6	1.4	2.6	4.6	4.0	4.8	3.2	6.3	5.5
	12 UTC	5.4	4.2	4.0	3.2	4.8	2.4	4.2	4.0	4.4	4.8	5.6	4.3	7.5	7.0
Sunshine Duration		6.3	7.8	7.7	3.7	8.6	7.9	0.5	8.2	0.0	8.5	7.5	6.1	4.0	4.1
Precipitation														10.4	14.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	17.6
Growing Degrees	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	2.0	2.6	34.9	18.6
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	1.6

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	19.8	17.6	7.7
Precipitation - Reference Evapotranspiration	-19.8	-7.2	7.2
Number of Rainy Days	0.0	4.0	3.3
Number of Dry Days	19.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



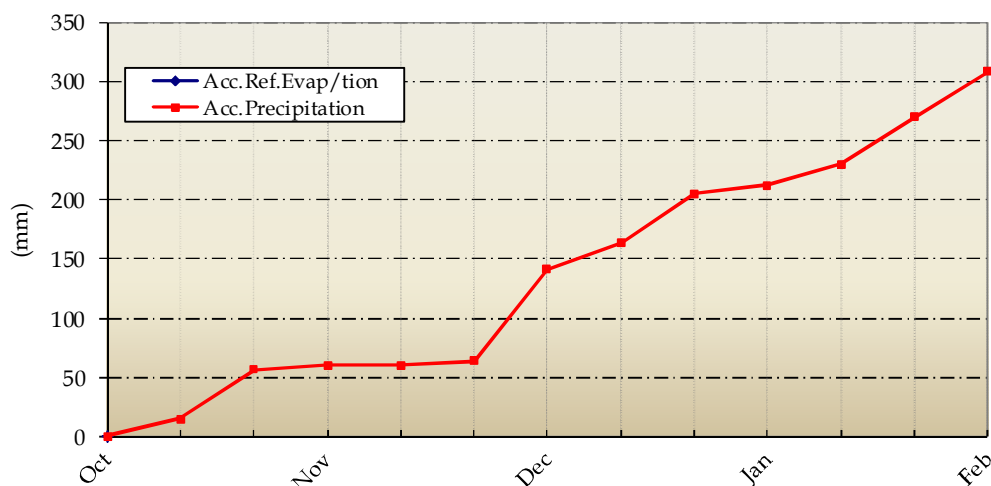
Tanagra

3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.6	3.5	3.7	0.0	1.3	3.9	4.7	7.6	3.6	9.0	12.2	5.9	14.6	11.5
	Min	0.8	3.0	-1.6	-2.6	-0.4	-4.6	-5.2	-4.8	-1.0	2.2	0.2	-1.3	3.5	3.4
Relative Humidity	Max	97	93	96	100	100	72	78	98	100	96	94	93	92	94
	Min	42	49	48	68	52	33	56	51	75	54	34	51	44	55
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		8.6	0.0	4.2	0.0	1.3	8.3	8.2	8.5	0.0	3.6	8.4	4.6	4.8	3.9
Precipitation			5.0	0.9	11.2	12.3				5.9	2.3		37.6	23.9	25.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	24.6
Growing Degrees	5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	5.0	46.9	28.3
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	4.5

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	6.0	5.0	3.9
Number of Dry Days	5.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



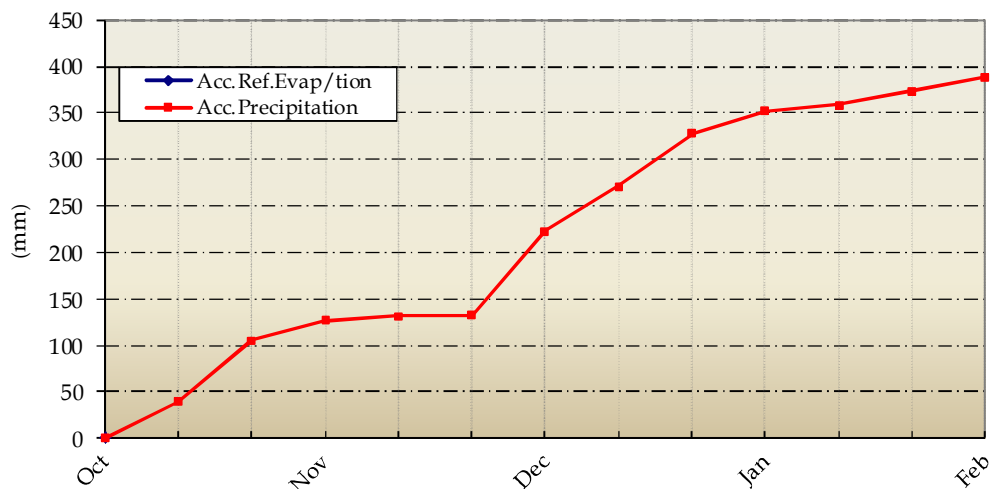
Tripoli

3rd 10-day period (21-31/01/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.3	7.5	3.1	0.9	0.8	5.3	6.8	12.0	5.2	10.4	12.8	6.8	10.4	9.6
	Min	0.9	3.2	-4.4	-9.7	-4.3	-12.4	-9.7	-6.6	-0.8	0.3	-3.9	-4.3	2.6	0.2
Relative Humidity	Max	97	98	87	98	98	96	96	99	98	100	100	97	93	95
	Min	63	29	18	46	52	18	37	31	79	53	27	41	53	56
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5
Sunshine Duration		3.0	6.4	8.3	3.9	7.0	6.3	4.6	6.9	0.0	8.2	7.3	5.6	4.3	4.0
Precipitation		1.4	1.7		0.0	1.7				5.1	4.8		14.7	60.8	36.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	5.6
Growing Degrees	5	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.3	25.3	11.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6

3rd 10-day period (21-31/01/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	9.2	-	6.0
Precipitation - Reference Evapotranspiration	5.5	-	30.0
Number of Rainy Days	5.0	7.0	4.2
Number of Dry Days	7.0	3.0	-

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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Issue Editors :

Papakrivou Anastasia

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