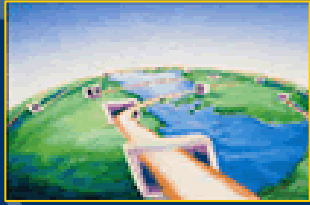


SEMIDE
EMWIS



Drought Indicator Malta

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MEDWIP EMWIS workshop
3rd/4th July 2007



Overview

- Availability of data
- Coverage and accessibility
- Usefulness of indicator
- Additional Comments



Data Availability

Indicator

Evapotranspiration



Precipitation deficiency





Data sources

Type of Data	National Source	Availability
Daily weather data but no evapotranspiration data	Malta Meteorological Organisation	Local and National No URL access Available on request
Data on average precipitation and Evapotranspiration	NSO Environmental Statistics 2006	document accessible online and free of charge

Environmental Statistics 2006 - data as from 1990

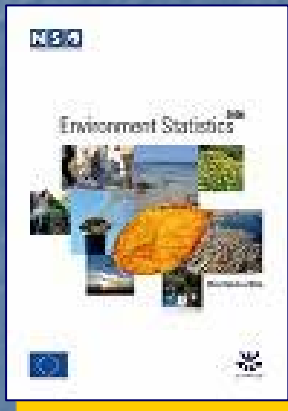


Table 2.1 Mean Wind Speed (Knots)

Table 2.2 Mean Monthly Temperatures (Degrees Celsius)

Table 2.3 Monthly Mean Bright Sunshine Duration (Hours)

Table 2.4 Total Seasonal Rainfall (mm)

Table 2.5 Temperature and Sunshine in Malta (2005) 10

Environmental Statistics 2002 - data as from 1961



Table 11 Yearly and monthly rainfall

Table 12 Monthly mean duration of bright sunshine hours

Table 13 Number of days with wind gusts equal to one greater than 34 knots

Table 14 Yearly and monthly relative humidity at different times of the day

Table 15 Yearly and monthly lowest recorded maximum temperature

Table 16 Highest recorded maximum temperature and date

Measuring drought and water scarcity

Yearly and monthly rainfall																		
Year	WINTER				SPRING				SUMMER				AUTUMN					
	JAN	FEB	MAR	Average	APR	MAY	JUN	Average	JUL	AUG	SEP	Average	OCT	NOV	DEC	Average		
1990	197.3	1.3	6.5	68.37 w	15.6	10.3	0.03	8.64 mod	1.5	0.03	0.03	0.52 e	52.5	105.3	112	89.97 w		
1991	96.7	63.5	19.8	60 w	23.2	18.5	1.8	14.5 w	0	1	10.5	3.83 e	34.4	5.6	133	57.8 s		
1992	159.4	58.2	22	79.87 w	8.5	7.2	0	5.23 e	0.03	0	0.03	0.02 e	20.3	1.5	67.9	29.9 e		
1993	32.6	28	18.4	26.33 e	2	22.6	0.03	8.21 mo	0	0	23.6	7.87 e	53.7	65.5	57.3	58.83 s		
1994	42.8	40	8	30.27 e	102	0.2	0.03	34.01 w	0	0	3.3	1.1 e	225.9	51.3	22.2	99.8 w		
1995	83.3	12.6	25.9	40.6 s	24.1	0.03	1.4	8.51 s	0	2	142.1	48.03 w	74	57.5	90.7	74.07 mi		
1996	42.1	105	67.4	71.5 w	23.3	2.5	4.2	10 mi	0	14.7	29.3	14.67 mo	56.6	9.8	35.3	33.9 e		
1997	37.3	37.4	30.6	35.1 e	7.8	1.5	2.2	3.83 e	0	55.1	123.8	59.63 w	100.5	98.2	57.4	85.37 w		
1998	26.3	4	22.5	17.6 e	17.9	0.7	0.03	6.21 e	0	0.03	82	27.34 w	2.3	56.9	20.5	26.57 e		
1999	46.6	43.2	26.1	38.63 e	2	0.2	0	0.73 e	0.03	12.5	9.6	7.38 e	13.6	292.9	146	150.67 w		
2000	120.9	118.5	6.4	81.93 w	22.5	5.3	0.02	9.27 mo	0.02	0	23.1	7.71 e	75	14.6	65.4	51.67 e		
2001	74	38.1	36.3	49.47 mo	12.6	30.9	0.02	14.51 w	0.02	13.5	14	9.17 e	11	38.5	72.4	40.63 e		
2002	22	60.6	9	30.53 e	5.7	9.2	0.02	4.97 e	0.02	17.2	21.4	12.87 s	22.4	180	107	103 w		
2003	151.8	150	55.4	119.07 w	21.4	27.2	16.2	21.6 w	0.02	0.8	260.1	86.97 w	37.4	85.4	102	74.93 mi		
2004	48.8	14.8	21.6	28.4 e	30.2	3.2	3	12.13 w	0	0.02	79.8	26.61 w	19.8	148.6	91.6	86.67 w		
2005	36.2	82.6	7.8	42.2 w	15.2	1.2	0.4	5.6 e	0.02	20.8	39	19.94 w	94	61.2	147	100.8 w		
2006	232.4	63	30	108.47 w	0.6	0.8	2.5	1.3 e	0	8.6	37.8	15.47 mo	82.5	57.2	108	82.53 w		
MEAN	85.324	54.165	24.34	54.6082	19.7	8.325	1.8753	9.955882	0.098	8.6047	52.9094	20.53706	57.41	78.24	84.4	73.3594		

LEGEND	Precipitation:
Extreme (e)	<70% of normal precipitation
Severe (s)	between 70% and 80% of normal precipitation
Moderate (mo)	between 80% and 90% of normal precipitation
Mild (mi)	between 90% and 100% of normal precipitation
Wet (w)	100% and above of normal precipitation

Additional Indicators

Indicator Expectations

Indicator	Usefulness
Evapotranspiration	5 – it is being measured and utilised to assess climate change Apart from being an indicator it is also used to assess moisture deficiency and national water balance
Precipitation deficiency	4 – has only been recently calculated due to climate change priority. It is envisioned that this will have a major impact in the future.

Additional Comments

- Drought has only started to be assessed in the Maltese Islands. A rainfall deficiency indicator after a period of 30 yrs is being modeled but is still at the initial stages
- Data on drought indicators will now become increasingly available since drought has become of a concern due to climate change related impacts

Thank you