

Seasonal Bulletin on the Climate in WMO Region VI



- Europe and Middle East -

Summer 2012

Deutscher Wetterdienst



Last Change: Mon Nov 5 10:41:06 UTC
2012

The following maps are first guess products based on meteorological bulletins which have been quality checked roughly. The text is based upon these maps as well as the monthly climate bulletins of the countries of RA VI as far as they are available on the web. More detailed information including updated analyses of more data which have undergone a better quality control and further aspects like clouds and water vapour may be found on the link of the Regional Climate Centre on Climate Monitoring in RAVI:

[RCC-CM RA VI/](#)

and at the Global Precipitation Climatology Center (GPCC):

[The GPCC](#)

The Seasonal Bulletin on the Climate in WMO Region VI will usually be delivered within 2 months after the end of a season.

Highlights:

Summer 2012 was warmer, drier and sunnier than normal in the south and southeast and colder, wetter and less sunny in the north and northwest. Summer days, hot days and tropical nights were more often than normal in the warm regions and extremely hot days occurred with partly new records. Precipitation fell with high intensities (very or extremely high precipitation) not only in the south but also in the north. July brought extreme damage in connection with convective situations in the eastern Alps. The Iberian and Balkan Peninsulas again suffered from drought. Many forest fires occurred in the Mediterranean region as well as on the Atlantic Islands.

Overview:

Temperature:

Summer 2012 was warmer than normal in southern, southeastern Europe and Middle East as well as on Greenland and the northwestern North Atlantic. The positive anomalies were highest in Italy, the Balkan Peninsula and the Ukraine. The subregion 'Mediterranean, Italian and Balkan Peninsulas' (see the Annual Bulletin on the Climate in WMO region VI 2011 for definition) had a positive anomaly of +3.8 K and the Middle East of +2.25 K. Several countries reported summer 2012 to be one of the warmest summers in their time series:

Country	rank of warm summers	since	
Austria	3	1767	
Spain	4	1961	
Switzerland	2 - 10	1864	(regionally different)
Moldova	1	?	(regionally)

Remarkable is the often higher than normal number of summer days as well as the number of tropical nights (see the maps of SU resp. TR). The positive seasonal anomalies were mostly determined by June and August.

Slightly colder than normal were large parts of Scandinavia and the northern British Isles, the northern North Atlantic and northern central Europe where June and July were relatively cold and only August was warmer. For instance in Denmark summer 2012 was the coldest since summer 2000 and June 2012 in Denmark was the coolest June since 1991.

Precipitation:

Summer 2012 was drier than normal in the Mediterranean region including the Iberian Peninsula as well as the Balkan Peninsula. It was as well dry on Iceland and the northern part of Greenland. It was on the other hand wetter than normal or close to normal in western, central, northern and eastern Europe and much of the Middle East. 5-daily precipitation totals fairly above the normal values occurred in the north around the Baltic Sea as well as in the drier Mediterranean region (Northern Italy and the Alps as well as on the Balkan Peninsula (see the map of RX5day). But on the other hand the anomalies of the 3-month SPI in the dry regions showed considerable dry deviations from the normal (<-1.5) on the Iberian Peninsula and the Mediterranean Sea region, the Alpine region, the Balkan Peninsula and southeastern Europe but also partially in central Europe. **June 2012** was the wettest June across the UK in the series from 1910 (wetter than June 2007), and the equal-wettest June in the England and Wales series from 1766 (shared with June 1860).

Sunshine duration:

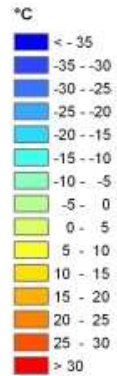
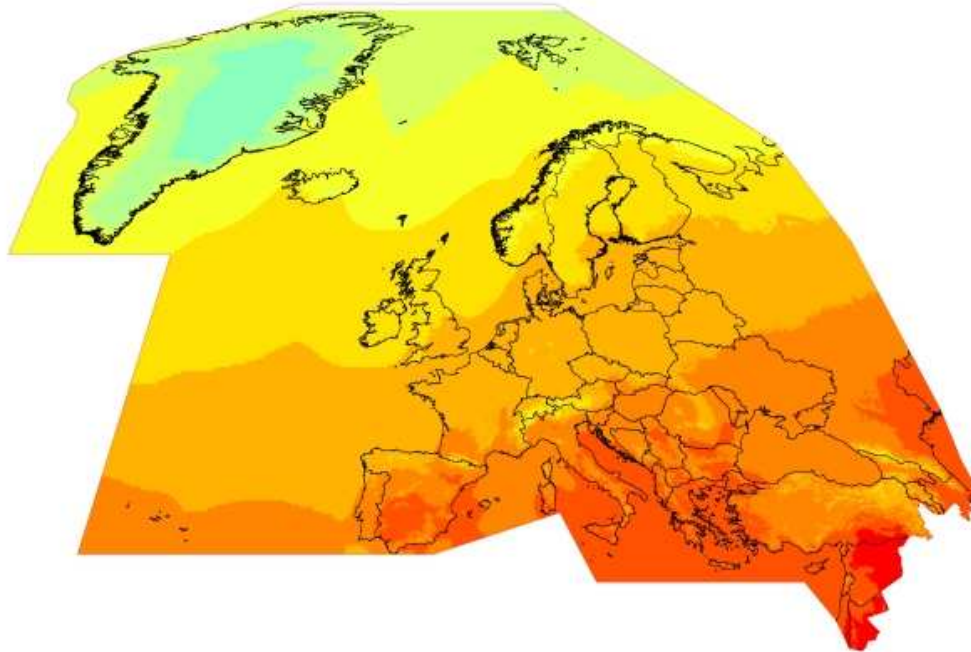
Summer 2012 was sunnier than normal on the Iberian, the Italian and Balkan Peninsulas as well as eastern central Europe and the southwestern parts of eastern Europe. This corresponds well with many fair days and only few dull days in this region. Northern and northwestern Europe and the Middle East on the other hand had less sunshine than normal. The dullest region was the United Kingdom except the northernmost and southeasternmost areas. More sunshine than normal was registered in southern Europe through all 3 months. The Balkan Peninsula received more sunshine than normal especially in June and July. On the British Isles and in central Europe especially **June 2012** was the month with a high deficit of sunshine. For UK it was probably the dullest June since 1929 and in Germany it was the 12th dullest June since 1951.

Sea surface pressure:

Lower than normal sea surface pressure over most of the RAVI region with the largest negative anomalies (-4 to -8 hPa) over and west of the British Isles and higher than normal pressure over Greenland (+4 to +8 hPa) characterized summer 2012.

Temperature:

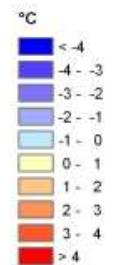
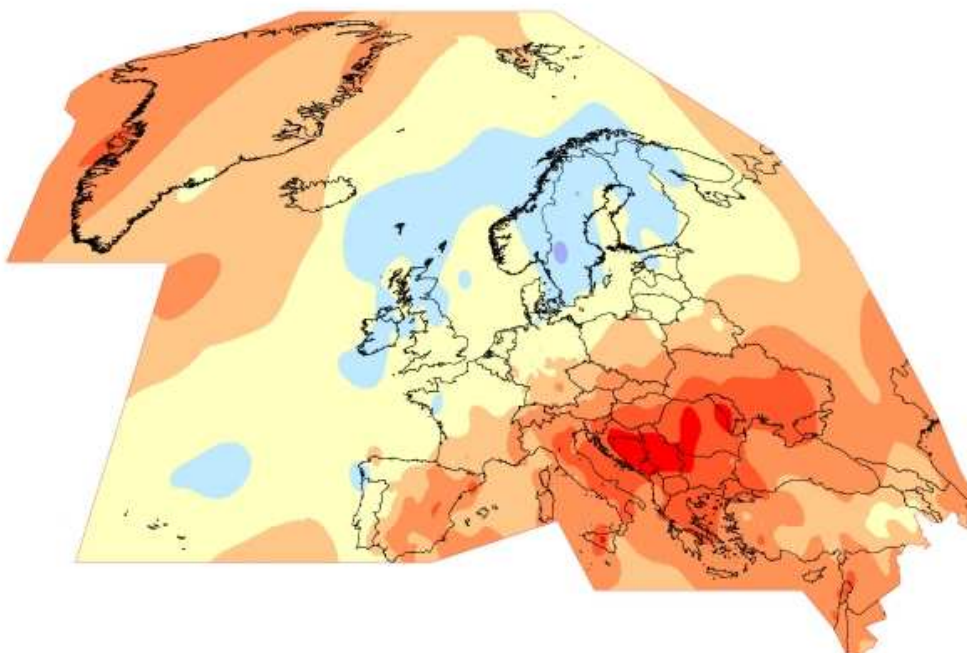
Mittlere Temperatur Sommer 2012
Mean Temperature Summer 2012



Datenbasis / Data basis:
CLIMAT und Schiffsmeldungen
CLIMAT and ship observations

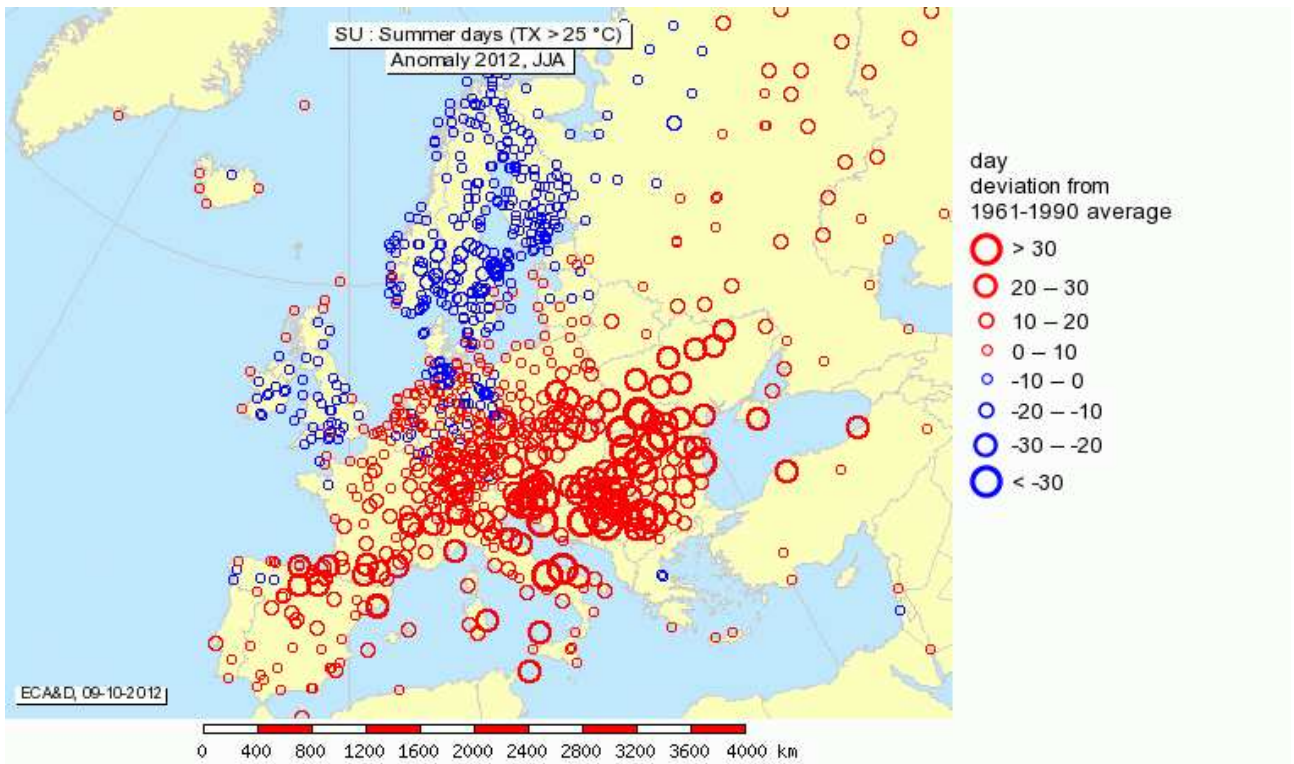
Stand / last update :
10.09.2012

Temperaturabweichung Sommer 2012 vom Normalwert 1961-1990
Temperature deviation Summer 2012 (reference period 1961-1990)

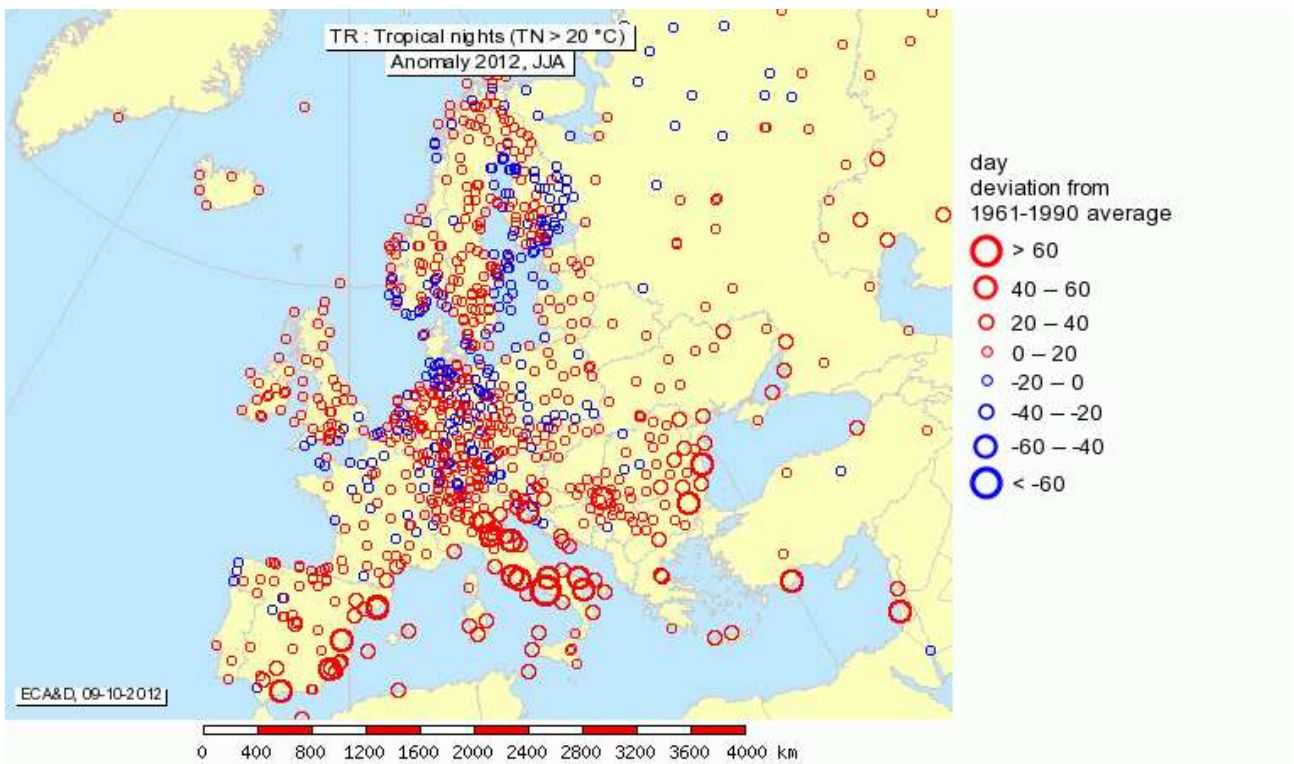


Datenbasis / Data basis:
CLIMAT und Schiffsmeldungen
CLIMAT and ship observations

Stand / last update :
10.09.2012



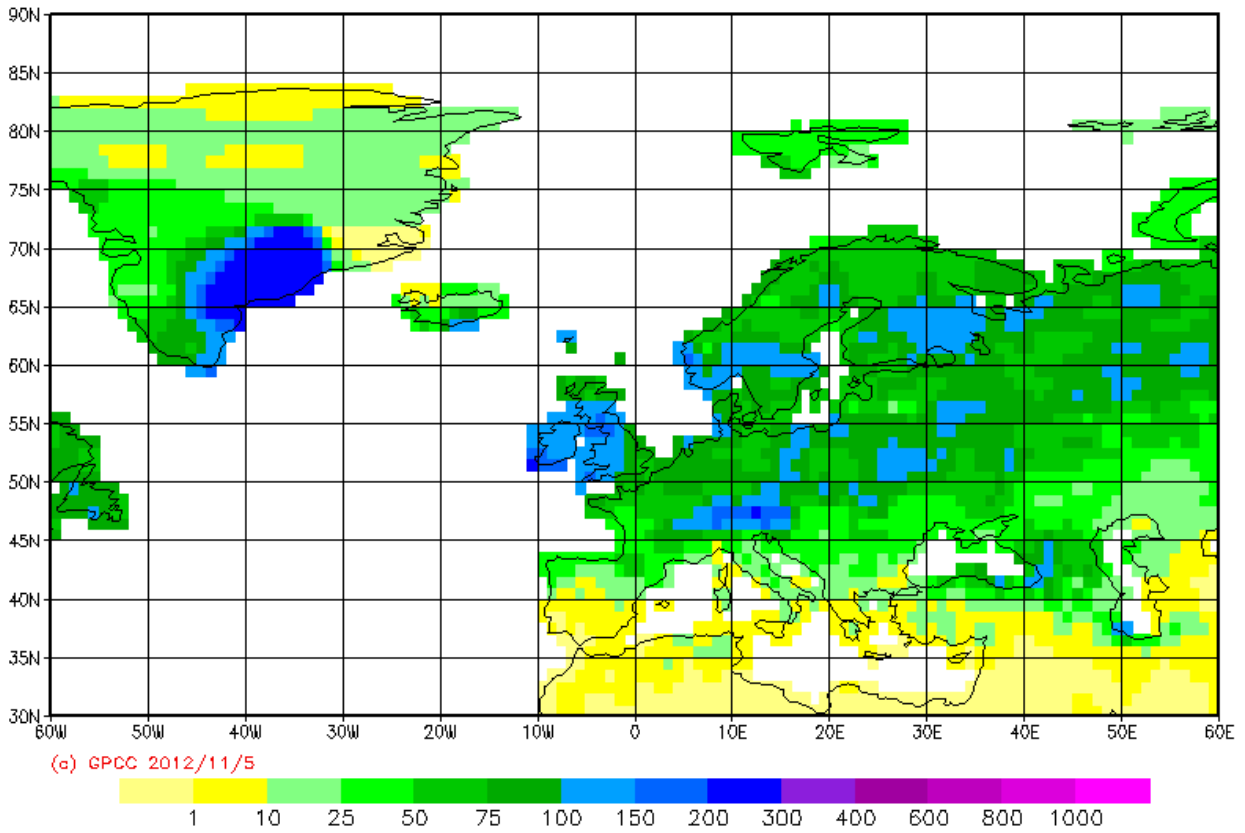
Anomalies of the number of summer days ($T_{max} \geq 25 \text{ }^\circ\text{C}$)



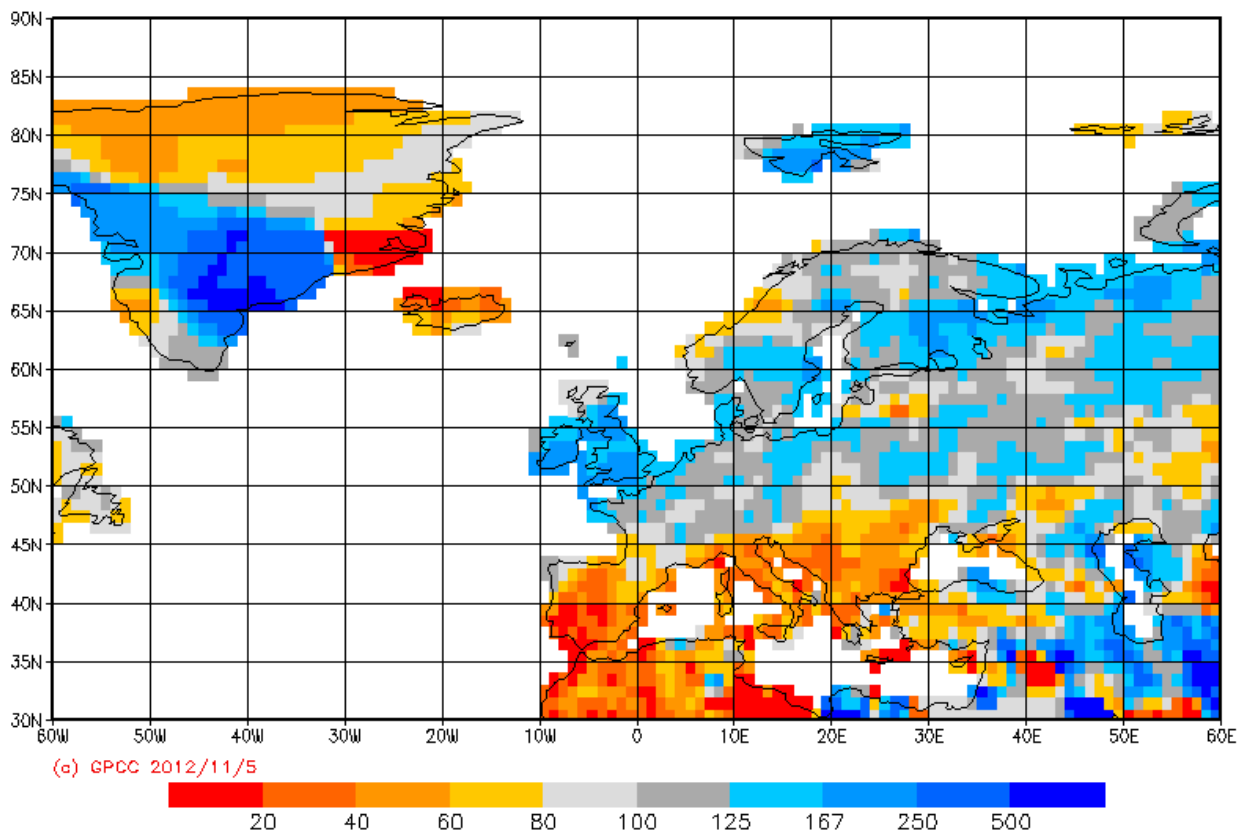
Anomalies of the number of tropical nights ($T_{min} \geq 20 \text{ }^\circ\text{C}$)

Precipitation:

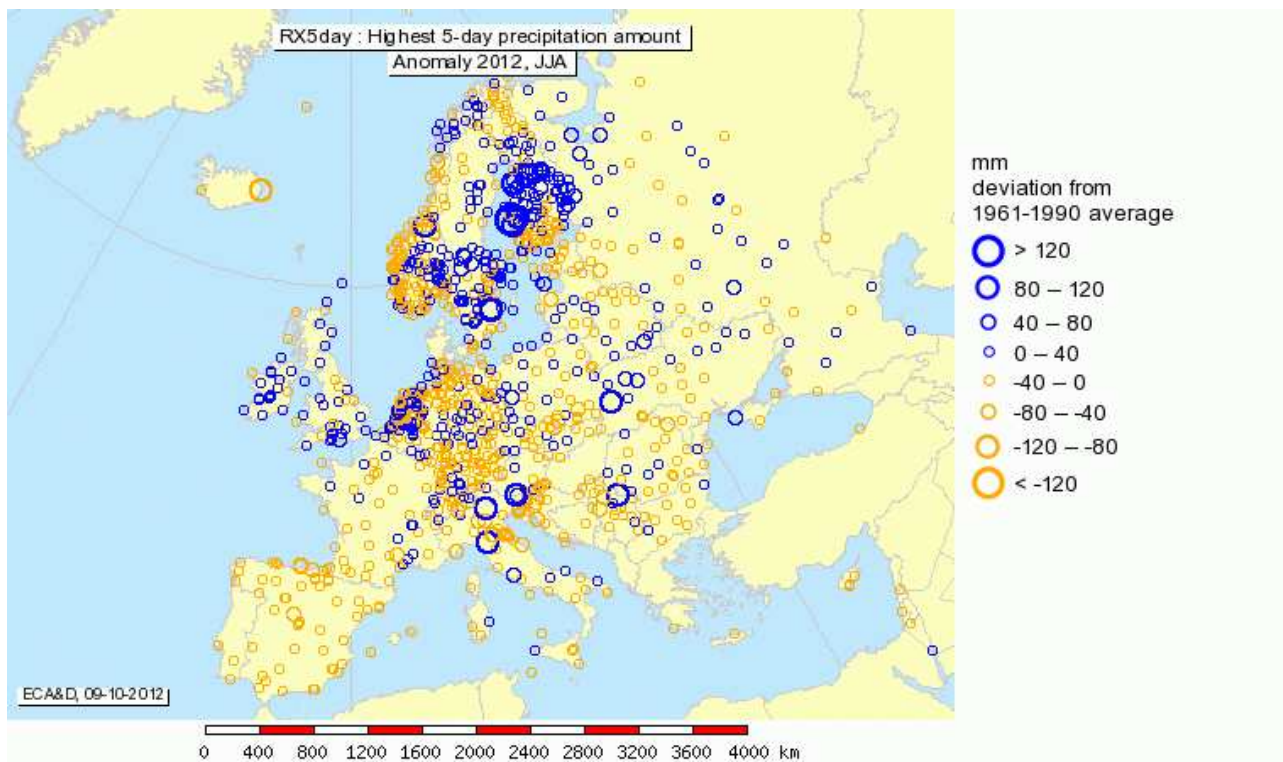
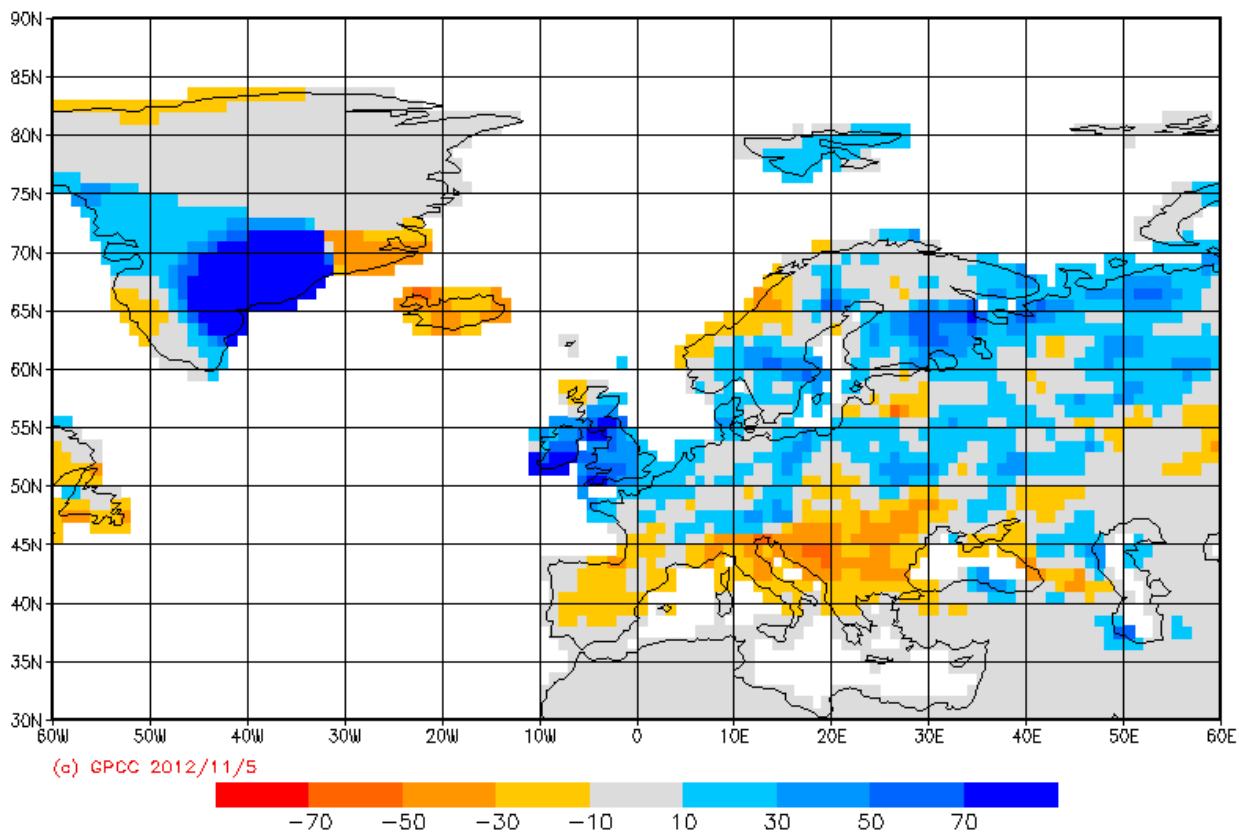
GPCC First Guess 1.0 degree
precipitation for Season (Jun,Jul,Aug) 2012 in mm/month



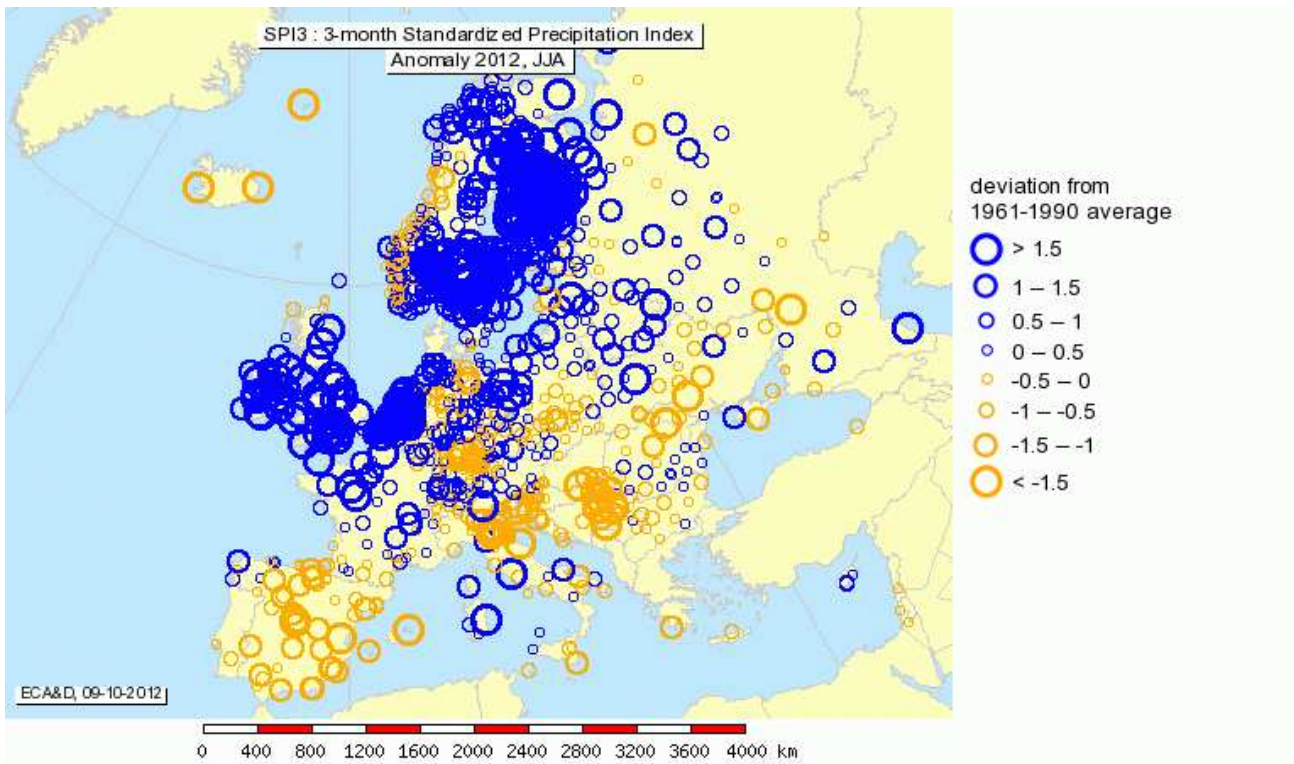
GPCC First Guess 1.0 degree
precipitation percentage of normals 1951/2000 for Season (Jun,Jul,Aug) 2012
(grid based)



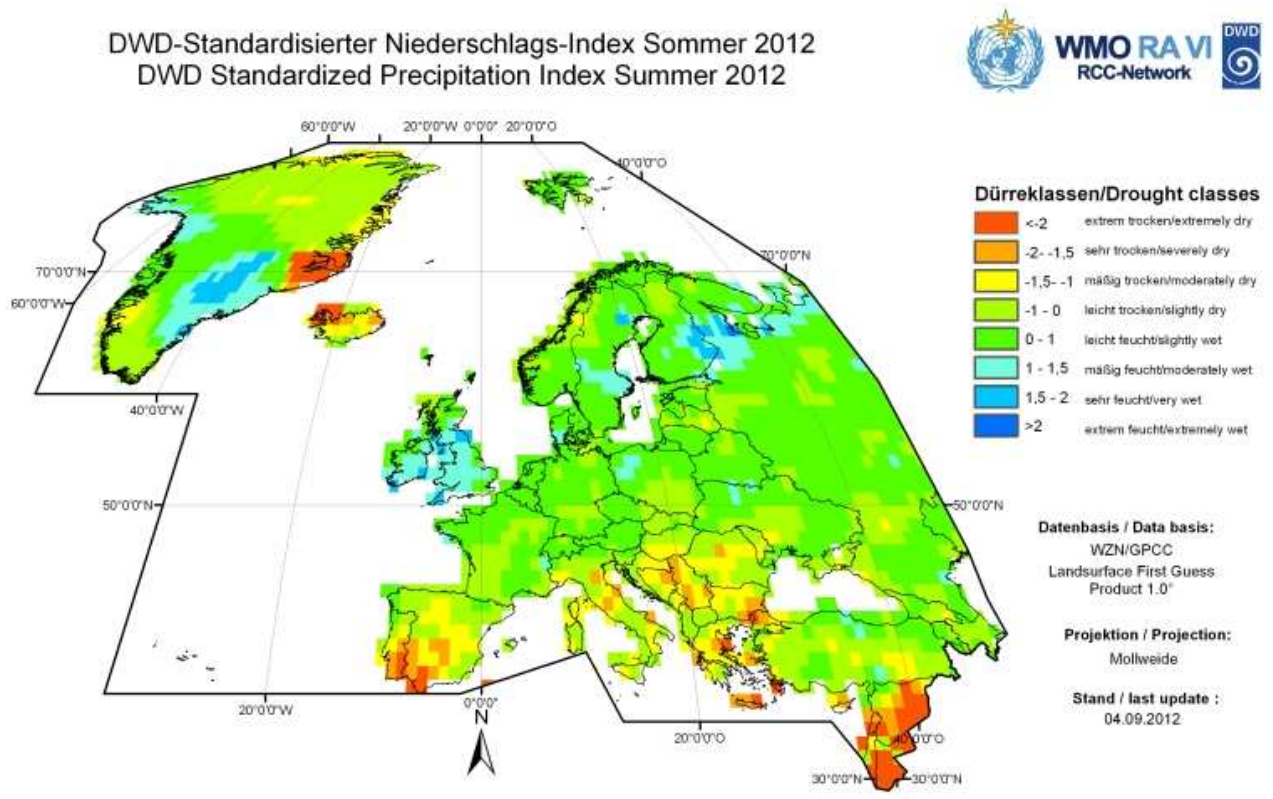
GPCC First Guess 1.0 degree
 precipitation anomaly for Season (Jun,Jul,Aug) 2012 in mm/month
 (deviation from normals 1951/2000) (grid based)



Anomalies of the highest 5-day precipitation totals



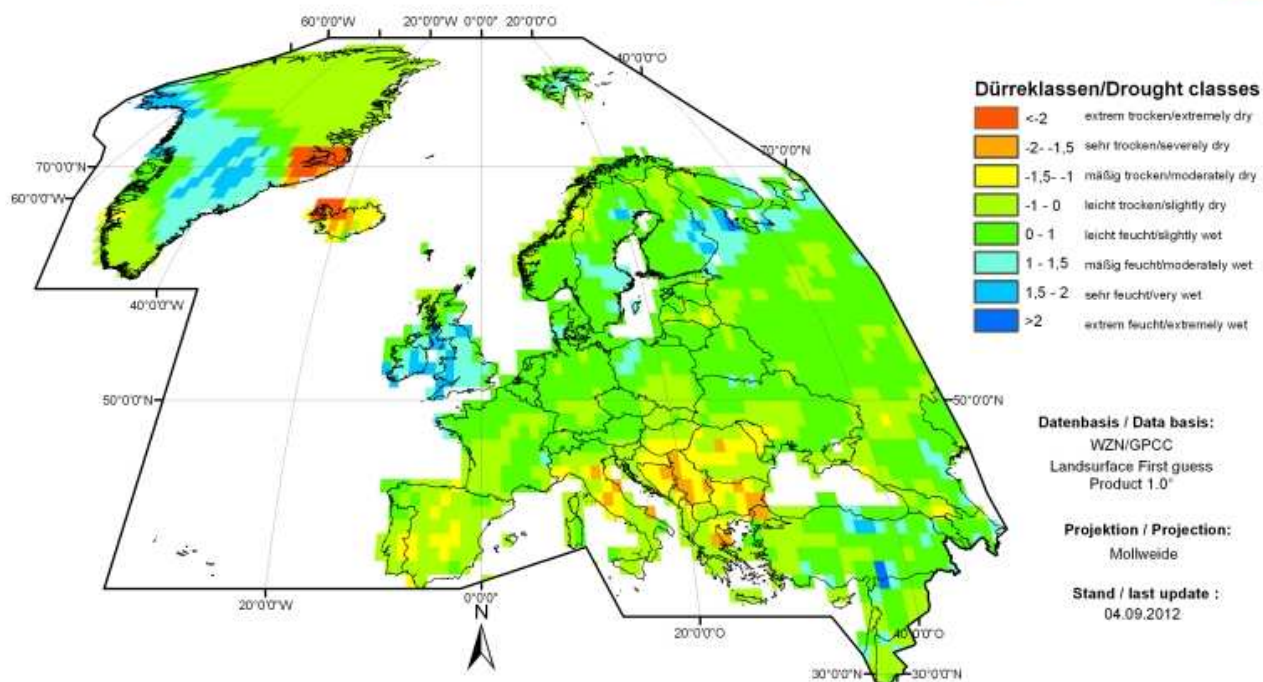
Anomalies of the 3-month SPI



Map of mean seasonal drought index (SPI, modified by DWD) Europe

DWD-Standardisierter Niederschlags-Index Sommer 2012
(Abweichung vom Normalwert 1961-1990)

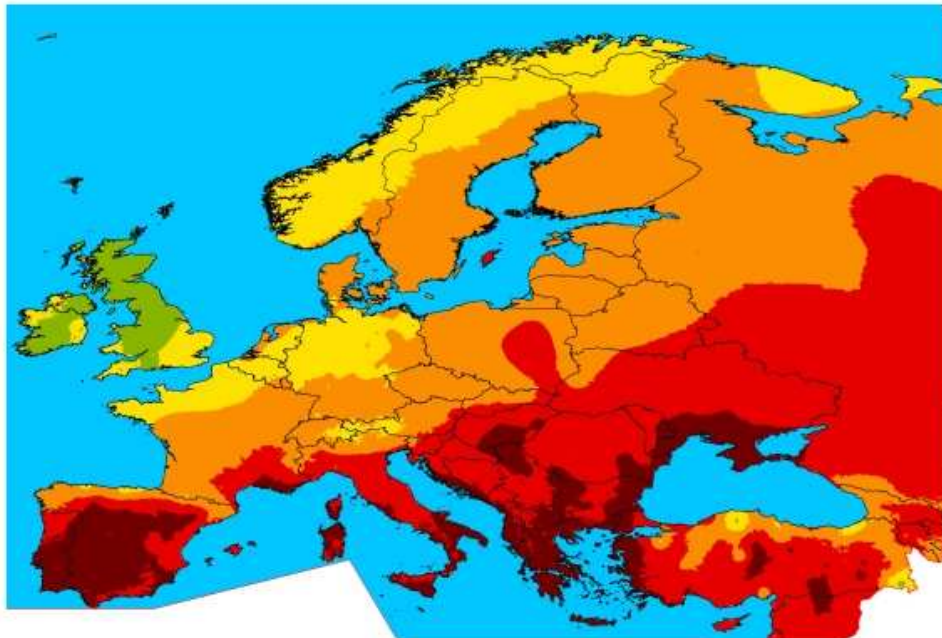
DWD Standardized Precipitation Index Summer 2012
(deviation from normals 1961-1990)



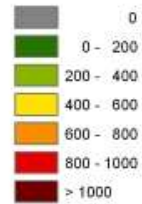
Map of anomaly of mean seasonal drought index (SPI, modified by DWD) Europe

Sunshine Duration and Cloud Cover:

Sonnenscheindauer Sommer 2012
Sunshine duration Summer 2012



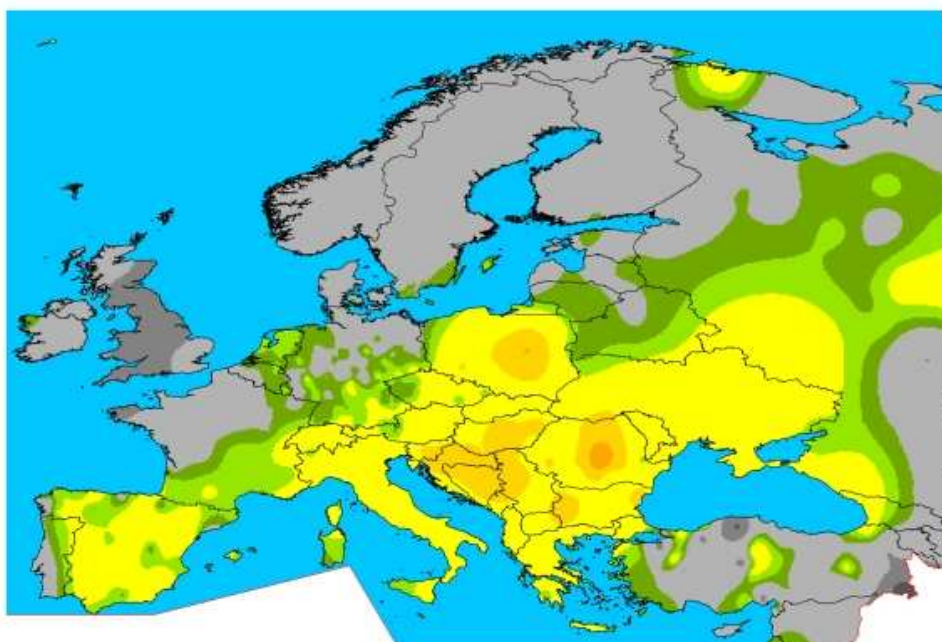
Std./h



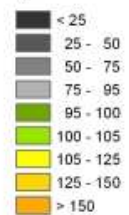
Datenbasis/Data basis:
CLIMAT

Stand / last update :
28.09.2012

Sonnenscheindauer Sommer 2012 in % vom Normalwert 1961-1990
Sunshine duration Summer 2012 in % of the 1961-1990 normal



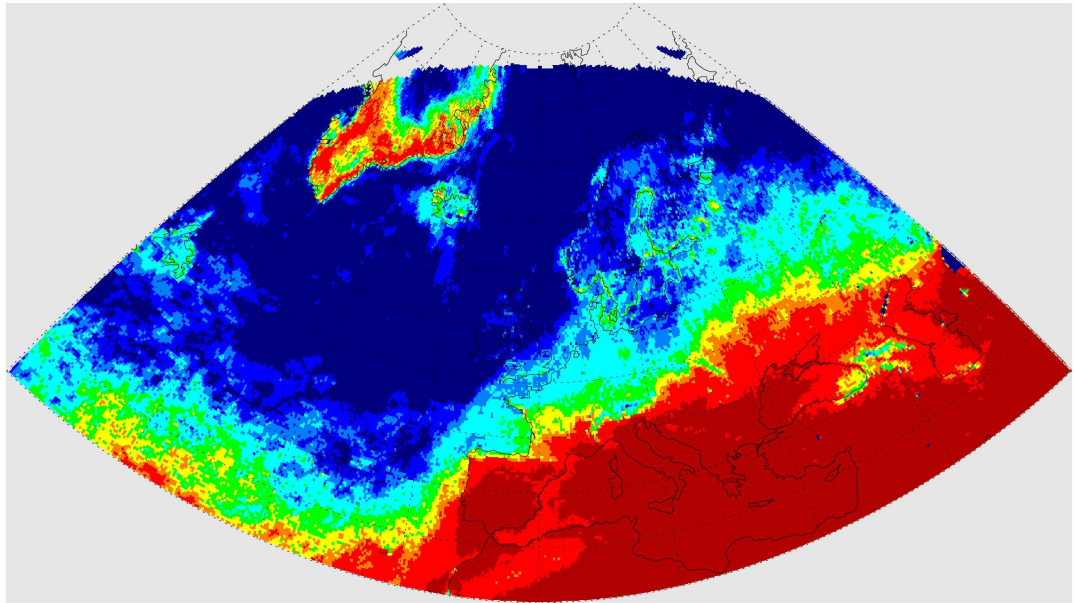
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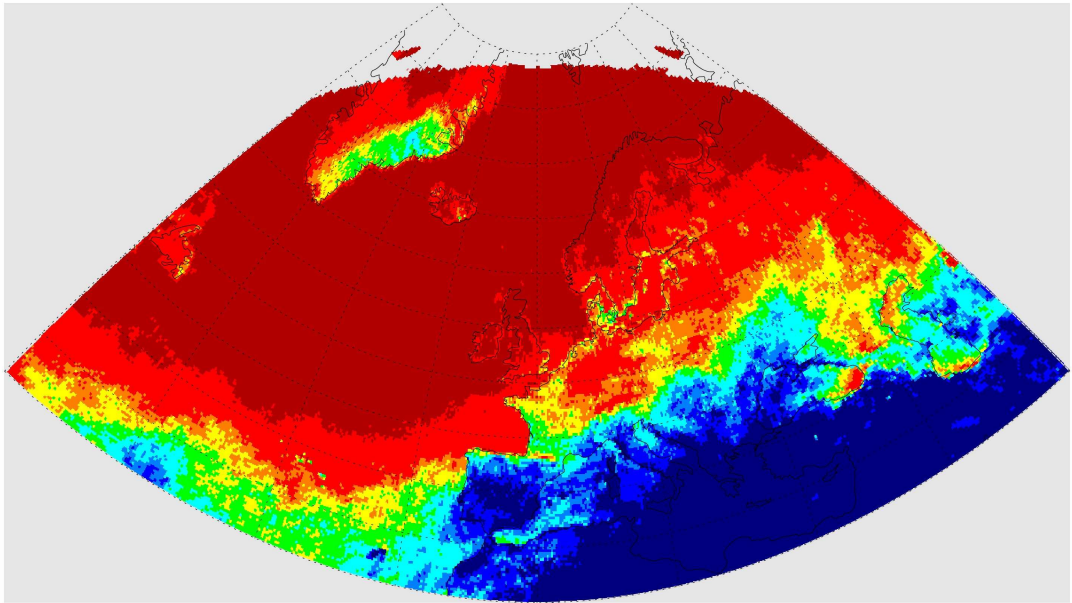
Datenbasis/Data basis:
CLIMAT

Stand / last update :
28.09.2012

Anzahl heiterer Tage (CMSAF METEOSAT) Sommer 2012
Number of days with cloud cover < 2/8 (CMSAF METEOSAT) Summer 2012

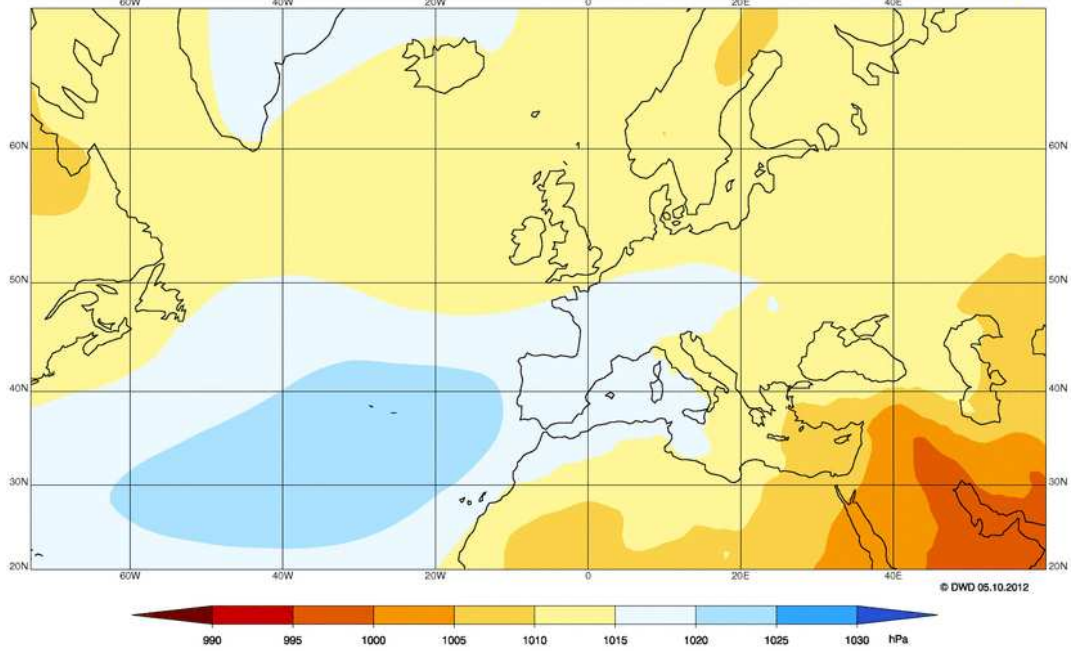


Anzahl trüber Tage (CMSAF METEOSAT) Sommer 2012
Number of days with cloud cover > 6/8 (CMSAF METEOSAT) Summer 2012

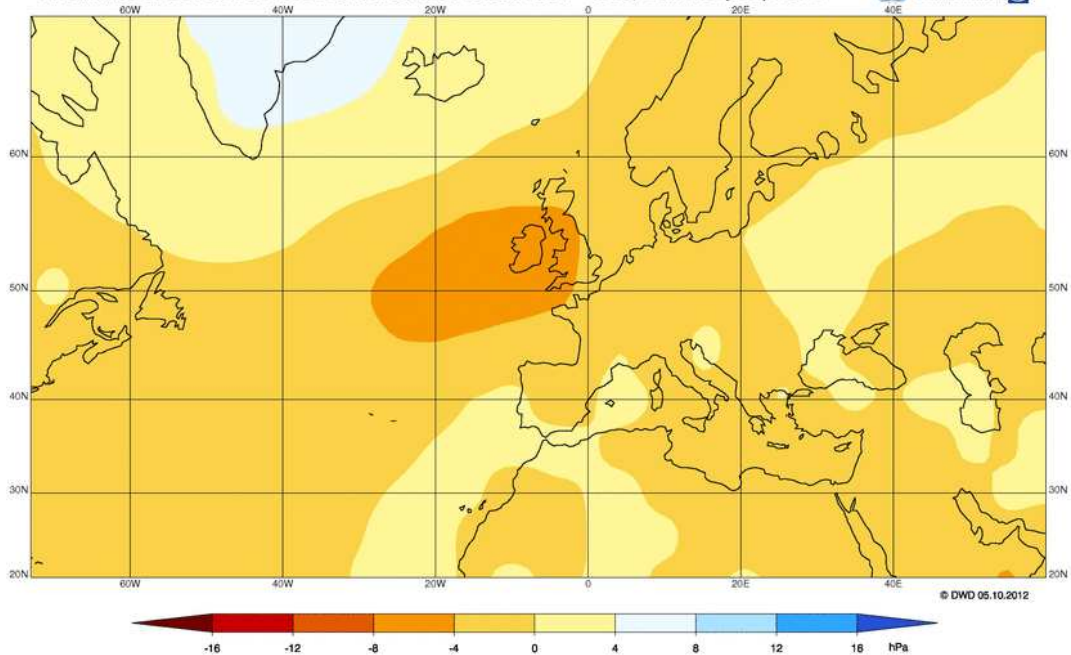


Air Pressure (surface):

Mittel des Luftdrucks in Meereshöhe, Sommer(JJA) 2012
Means of Sea Level Pressure, Summer(JJA) 2012



Anomalien des Luftdrucks in Meereshöhe, Bezugsperiode: 1961 - 1990, Sommer(JJA) 2012
 Anomalies of Sea Level Pressure, Reference Period: 1961 - 1990, Summer(JJA) 2012



Seasonal extreme values:

Data source: The RCC-CD-node: <http://www.ecad.eu>

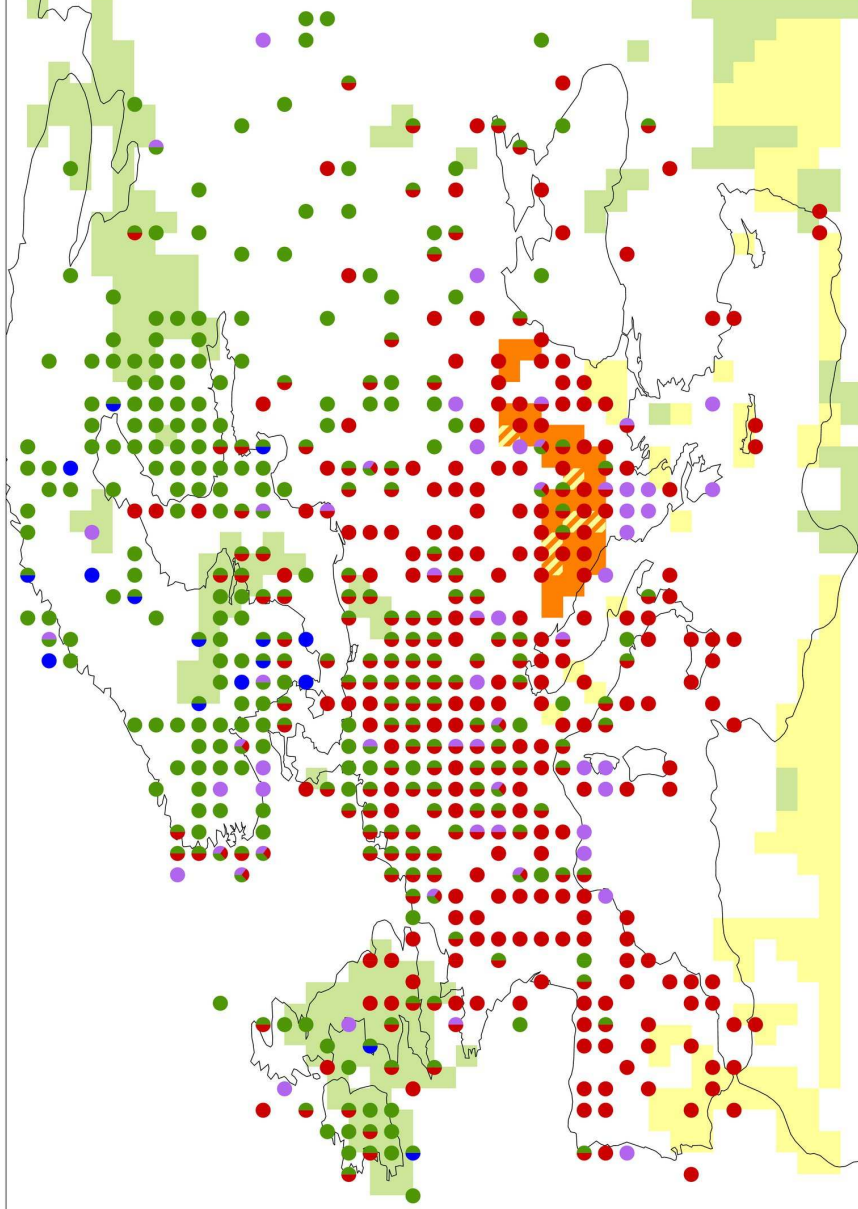
RX1d: highest 24 hours total (in mm), RX5d: highest 120 hours total (in mm), R10: highest number of days with heavy precipitation (>10 mm/d), R20: highest number of days with very heavy precipitation (>20 mm/d), TN: lowest mean minimum temperature (° C), TNN: lowest absolute minimum temperature (° C), TX: highest mean maximum temperature (° C), TXX: highest absolute maximum temperature (° C)

Country	RX1d [mm]	RX5d [mm]	RR10 [days]	RR20 [days]	TN [°C]	TNN [°C]	TX [°C]	TXX [°C]
Austria	56.0	93.1	19	9	1.8	-5.0	27.3	36.4
Bosnia and Herzegovina	26.0	26.0	3	1	-	8.6	31.3	38.4
Belgium	34.0	73.4	16	4	-	3.0	23.4	37.0
Bulgaria	38.0	48.0	6	2	-	7.2	35.4	42.5
Belarus	71.0	115.8	13	10	-	3.6	24.7	36.7
Switzerland	97.0	148.1	28	11	4.7	-2.6	27.6	35.9
Cyprus	1.0	1.0	0	0	-	-	-	-
Czech Republic	72.7	98.8	17	8	-	-0.4	-	39.5
Germany	71.0	93.8	24	10	1.5	-6.5	25.7	38.1
Denmark	-	-	-	-	-	5.1	20.2	31.5
Algeria	-	-	-	-	-	-	42.6	48.6
Estonia	59.0	85.3	10	4	-	1.0	21.9	32.9
Canar. Island	-	-	-	-	-	-	28.8	39.7
Spain	38.7	58.5	9	2	-	1.7	37.0	46.0
Finland	96.0	206.5	16	6	5.3	-4.8	20.7	31.0
France	70.0	83.0	14	5	-	2.1	31.0	40.4
United Kingdom	55.0	99.0	21	12	8.8	-0.5	21.4	30.9
Greenland	-	-	-	-	2.8	-3.5	10.6	19.0
Greece	2.0	2.0	0	0	-	-	35.2	41.9
Croatia	48.0	68.0	9	4	-	1.2	32.0	40.4

Climate Extremes and Severe Weather Events:

Map of Climate Extremes and Events of the Season:

Event map summer 2012 / Ereigniskarte Sommer 2012

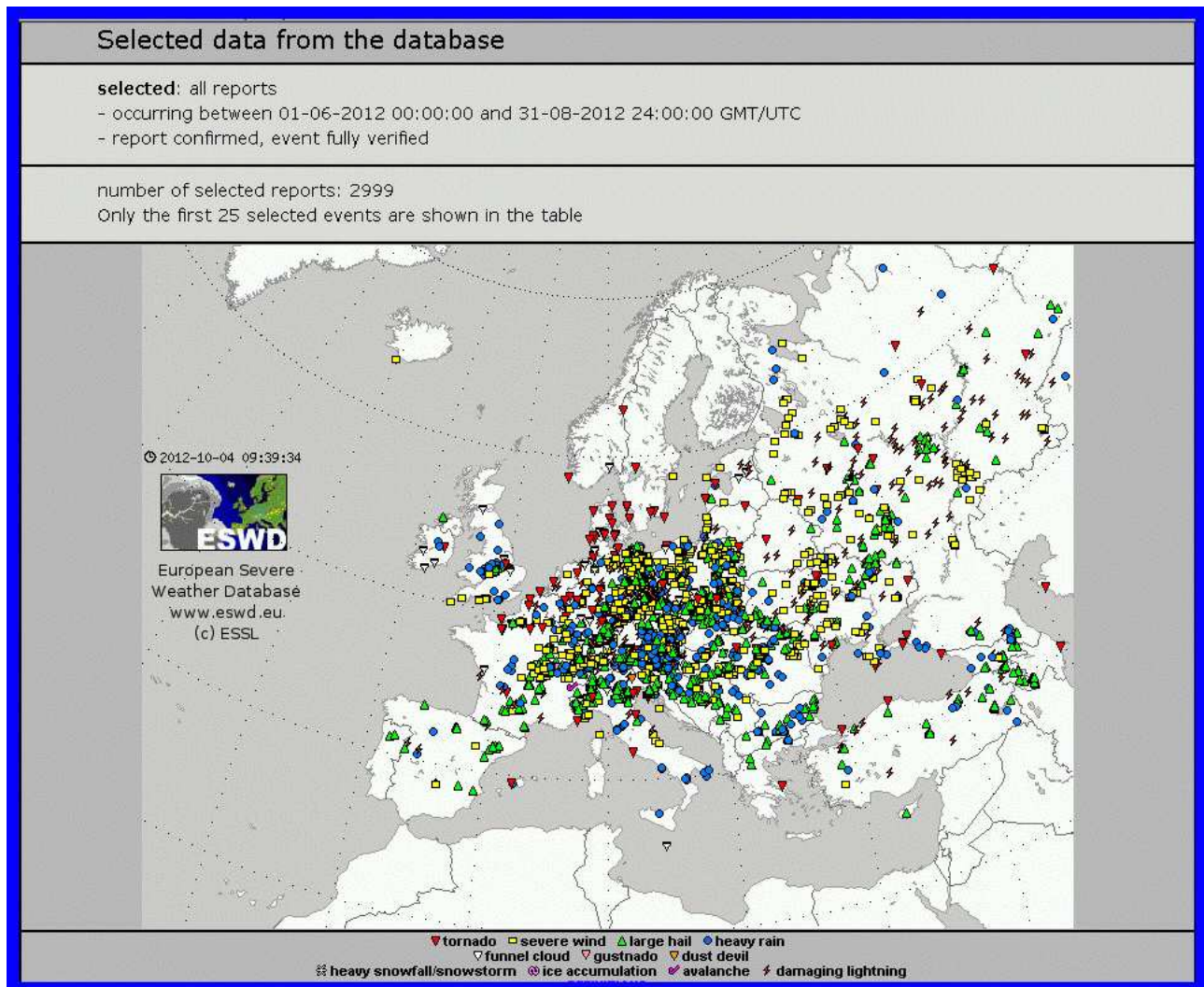


- Aridity index < -1.5 modified SPI (DWD)
- RR >= 150% of climatology (GPCC)
- Anomaly of very wet days > 0 (ECAD)
- FFX >= 32m/s (SYNOP)
- Anomaly TG <= -4K (CLIMAT a. ship obs.)
- Anomaly of cold days > 0 (ECAD)
- Anomaly TG >= 4K (CLIMAT a. ship obs.)
- Anomaly of warm days > 0 (ECAD)

based on climatology 1961-1990
(GPCC climatology 1951-2000)

Date: 04.10.2012

Map of reported Severe Weather Events of the Season:



Map of reported Severe Weather Events of the Season, Source: <http://essl.org/cgi-bin/eswd/eswd.cgi>

Web-available seasonal summaries in RA VI:

[ZAMG Austria: Einer der wärmsten Sommer der Messgeschichte](#)

[Belgium IRM: Eté 2012](#)

[Meteo Schweiz 2012: Klimabulletin Sommer 2012](#)

[DMI: Vejret i Danmark - sommeren 2012](#)

[AEMET Spain: Resumen Estacional Climatológico: Verano 2012](#)

[EMHI Estonia: Suveilmad 2012](#)

[FMI Finland: Kesätilastot - Ilmatieteen laitos](#)

[Meteo France: Bilan de l'été 2012 \(31/08/2012\)](#)

[Met eirenn Ireland: THE WEATHER OF SUMMER 2012 \(JUNE, JULY AND AUGUST SUMMARY\)](#)

[meteo.md Moldova: Recorduri înregistrate în sezonul de vară 2012](#)

[KNMI: Zomer 2012](#)

[Norway met.no: Lufttemperatur og nedbør for sommersesongen 2012](#)

[UK MetOffice: Summer 2012 was the wettest in 100 years](#)