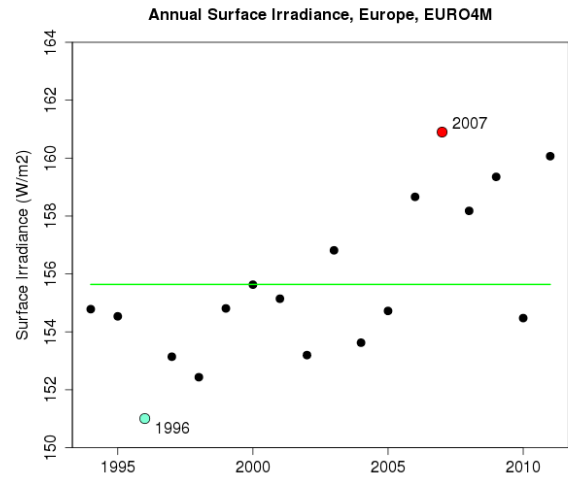
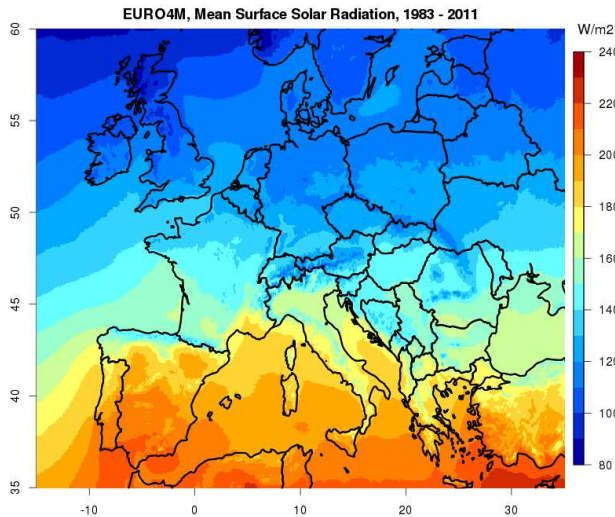


## Surface Solar Irradiance

The surface solar irradiance (also known as global radiation) is the solar radiation flux on a horizontal earth surface; it is expressed in  $Wm^{-2}$ . The EURO4M surface radiation data is available as monthly means from 1983 to 2011 and has been generated using geostationary satellite data from the MVIRI instruments (1983 to 2005) and the CM SAF CLAAS data set afterwards.



**EURO4M Surface Radiation Data Set:** (left) Temporally-averaged surface irradiance from 1983 to 2011, (right) Time series of the annual mean surface irradiance from 1994 to 2011.

### Infobox

#### SPECIFICATIONS

**Output data sets**  
 solar irradiance (SIS)  
 Surface albedo (SAL)  
 cloud albedo (CAL)  
 cloud cover (CFC)

**Data**  
 Spatial resolution: up to  $0.05^\circ$   
 Temporal resolution: monthly  
 Format: NetCDF

**Availability**  
 Area: Europe (full disc available on request)  
 1983-2011

**Related products**  
 CM SAF Surface Radiation Data Set  
 DOI:10.5676/EUM\_SAF\_CM/RAD\_MVIRI/V001

#### Validation

The surface solar radiation is derived using the MagicSol method; the validation of the CLAAS data set has been performed against high-quality surface measurements from the BSRN network.

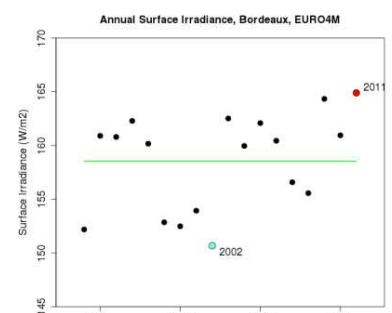
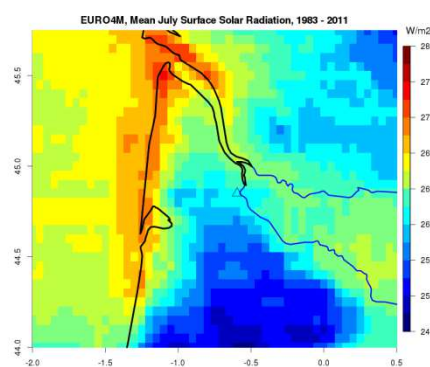
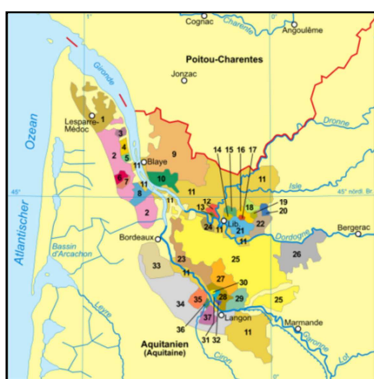
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#### Data request

Please send you request for data to:  
[contact.euro4m@dwd.de](mailto:contact.euro4m@dwd.de)  
 or have a look at  
[www.euro4m.eu](http://www.euro4m.eu)

### Example of usage: Solar irradiance in the Bordeaux Wine Regions



Spatial distribution of the surface solar radiation and the Wine regions around Bordeaux; annual variability of the solar radiation.