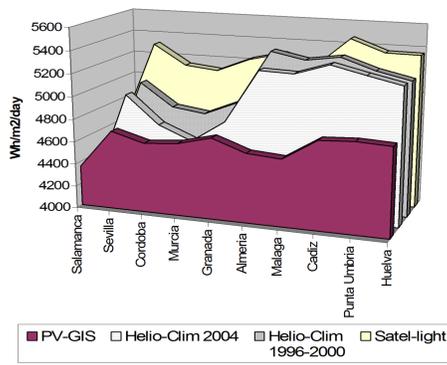


MESoR



Sample of a comparative analysis of different data sources (Source: Enecolo AG)

MESoR – MANAGEMENT AND EXPLOITATION OF SOLAR RESOURCE KNOWLEDGE

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There are various source for solar radiation data (e.g. Meteonorm, PVGIS, Satel-light, SOLEMI, Helio-clim) all having different regional and temporal coverage, resolutions and are based on different methods (from satellite and ground measurements). Additionally each source has its own way of accessing it. The users comparing information from different data sources for the requested sites may end up with uncertainty that is difficult to deal with. MESoR intends to guide the users in selecting data sources and to ease access to the data.

Objectives of MESoR

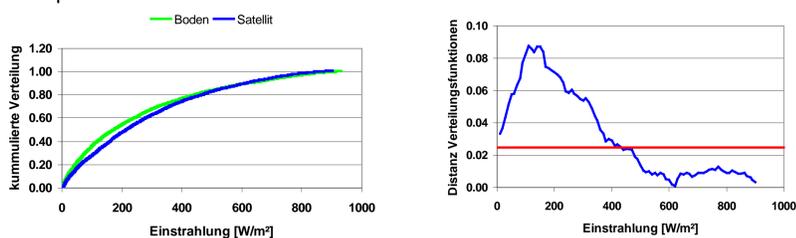
Guidance

- Improved comparability of data source through standardised benchmarking procedures
- Development of a guide of best practice for the use of solar resource knowledge

Sample: New quality indicators

The classic measures (bias, standard deviation, correlation) show how good data pairs match for the same point in time. They do not state anything about the quality of distribution functions.

New tests based on the Kolmogorov-Smirnov test enable the comparison of distribution functions.



The left figure shows plots of the cumulative distribution of models and measured hourly values of solar radiation. The right figure shows the distance between the two plots. The lines shows the critical value based on the Kolmogorov-Smirnov test. As the difference exceeds this value in the area below 400 W/m², the two time series can not be seen as statistically similar. We propose the KSI% value as a measure for distribution functions. The KSI% is the integral below the distance functions divided by the area under the critical line.

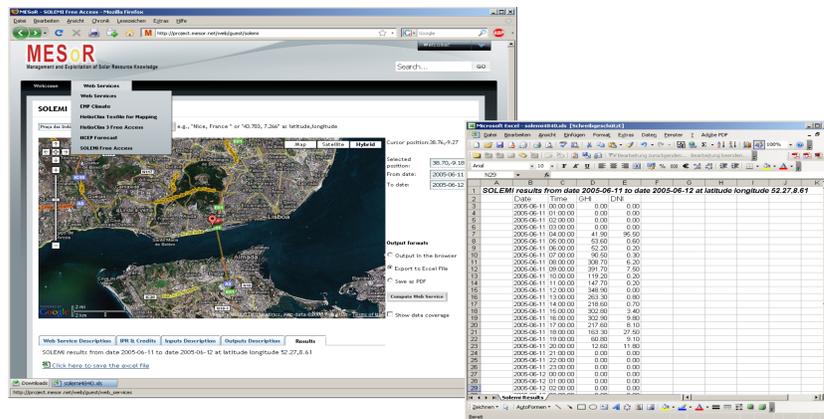
MESoR Partners are:



MESoR has been supported with the 6th Framework programme of the EC

Unifying Access

The second major objective of the MESoR project is to unify and ease access to solar resource information. The portal serves as a broker to solar resource information and services. It does not itself contain and maintain data; instead it links databases and service within one single point of entry and a common user interface. Data is delivered in common formats.



The prototype of the MESoR broker portal. A sample time series has been extracted in an Excel spreadsheet format. The prototype is accessible at <http://project.mesor.net>.

Conclusions

- Standardised rules are defined for transparent benchmarking of solar radiation products
- A new web portal has been developed, offering technology for harmonised and easy-to-use access to solar radiation and related databases and tools
- The handbook on solar resources and best practices summarises the existing knowledge in a user friendly interpretation and layout