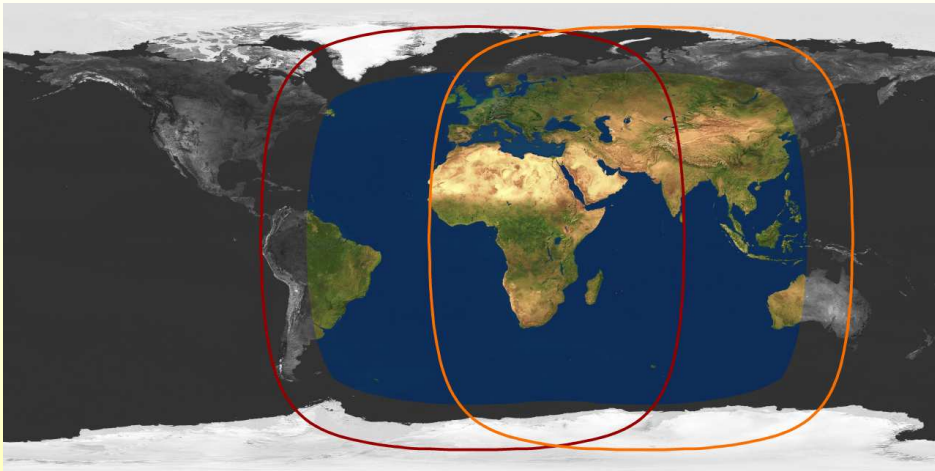


**SOLEMI** - Solar Energy Mining - is a new service set up by the DLR (Deutsches Zentrum für Luft- und Raumfahrt) providing high-quality irradiance data for the solar energy community. The service is mainly based on Meteosat-data with a nominal spatial resolution of 2.5 km and half-hourly temporal resolution. Using data from both Meteosat positions at 0° and 63°East solar radiation maps and hourly time-series can be generated for almost half of the Earth's surface.



**Meteosat Prime**   **Meteosat East**

DLR has a long term experience in atmospheric data processing and solar energy research. The service is therefore based on a high quality scientific methodology, which will be updated to the latest standards derived from further research.

For more and recent information see [www.solemi.com](http://www.solemi.com)

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Fax : +49 8153 28 1841

**SOLEMI**  
Solar Energy Mining

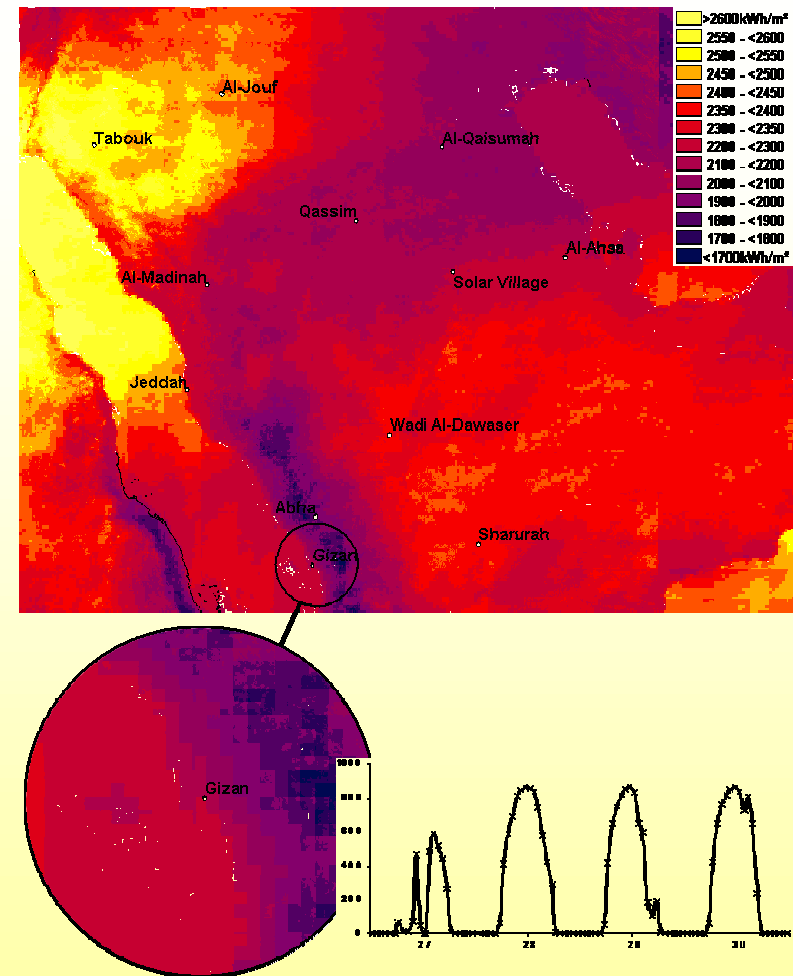
## Why use satellite data for solar resource assessment?

Site evaluation and planning of solar energy projects need precise data about the available solar resource. In most cases these data are not available in an adequate quality. Ground measurements are expensive and therefore the measurement network density is usually scarce.

The satellite based resource assessment **SOLEMI** offers an alternative.

- SOLEMI** saves you costs. No expensive instruments have to be bought and no staff for the maintenance of a measurement station has to be hired in the phase of site selection. After acquiring measurement equipment can be placed directly at the most promising sites.
- SOLEMI** saves you time as data are available in retrospect. Large areas and long time periods can be evaluated at once. You do not have to wait for time consuming from ground measurements. Preliminary planning and safeguarding of project prerequisites (e.g. land options) can start immediately.
- SOLEMI** has a comprehensive temporal and spatial data base (up to 20 years for Meteosat Prime and 7 years for Meteosat East, it covers Europe, Africa, Eastern Brazil, West and South Asia – see rear page – with a temporal resolution of one hour and spatial resolution of up to 2.5 km). Potentials of whole regions can be analysed to evaluate synergies of multiple projects.
- SOLEMI** data are very accurate. The high resolution allows the analysis of the exact location, no interpolation from far away measurements has to be done. The continuous long term data cover all year to year variabilities.
- SOLEMI** data are comparable. A ranking of sites enhances planning flexibility. The spatial measurement of the satellite is more representative for a large solar plant than a single point measurement. All measurements are done with the same sensor. A ranking based on satellite data shows you the best available site without misleading measurement equipment errors. SOLEMI supports you to find the best site but not the most “optimistic” or best cleaned instrument.

## Products



**SOLEMI** offers high quality irradiance maps of monthly, yearly and multi-annual averages. For each location hourly time-series of several years can be delivered. The map above shows the annual sum of the direct normal irradiance in kWh/m<sup>2</sup> for the region of Saudi Arabia for the year 2000. Four days in April 2000 for the location Gizan are shown as an example for a time-series.