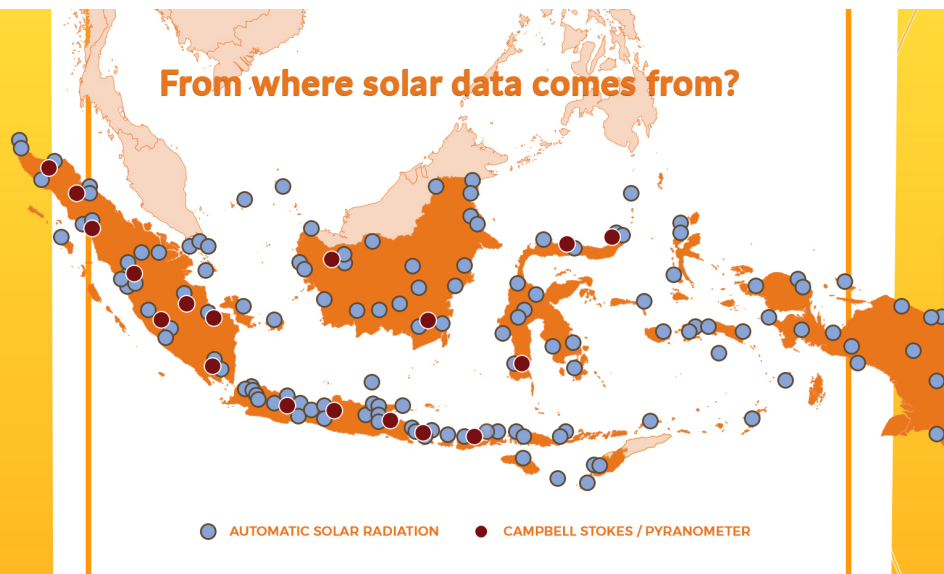


From where solar data comes from?



## SOLAR RADIANCE OBSERVATION NETWORK

## INSTRUMENTS FOR SOLAR RADIANCE OBSERVATION



### CAMPBELL STOKES

This instrument is used to measure the duration of solar radiation in percent (%). The observation takes time from 08.00 to 16.00 Local Time (for 8 hours/True Solar Day), so that the solar radiation will be said 100% if the sun shines for 8 hours a day.



### AUTOMATIC SOLAR RADIATION SYSTEM (ASRS)

BMKG use ASRS to measure the intensity of solar irradiance which fall over the earth surface, directly or being blended by the atmosphere.



### PYRANOMETER

Pyranometer is one of actinometer type which is used to measure solar irradiance over flat area. It has sensors which are able to measure flux density of solar irradiance in watt/m<sup>2</sup>.

# CLIMATE INFORMATION FOR THE ENERGY SECTOR

### Deputy DG for Climatology

Indonesian Agency for Meteorology, Climatology, and Geophysics  
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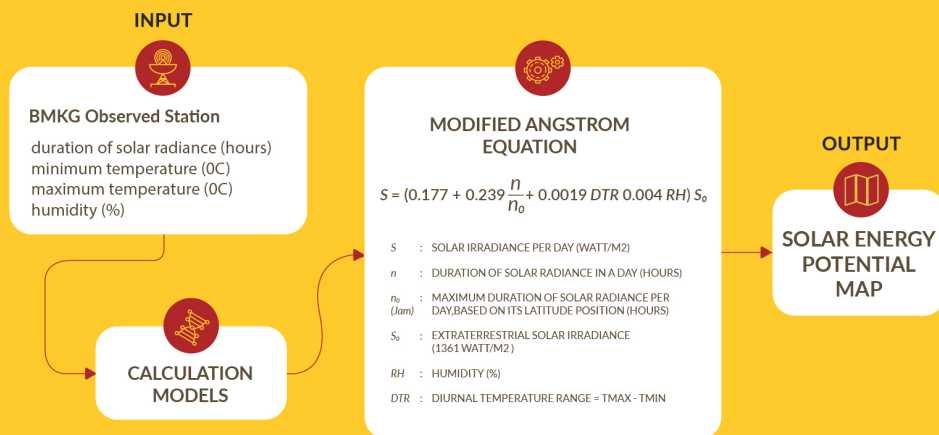
<http://www.bmkg.go.id>



Energy is essential to all aspects of human welfare. It relates to houses, transportation, industrial infrastructure, agricultural productivity, health care, education, tourism and many more. Along with the increasing of the world population, the demand for energy increasing greatly. Furthermore, emissions (i.e carbon dioxide) from fossil energy sector account for the largest share of global anthropogenic greenhouse gas emission.

As the global awareness to climate change increases nowadays, the demand for renewable energy sources is significantly increased, too. For a global warming less than 2°C, low carbon energy production must start to dominate the energy mix. One of the most promising renewable source is the solar energy. As the solar energy assessment and solar radiation data are available measured by BMKG, an opportunity to map the solar energy potential map is also possible.

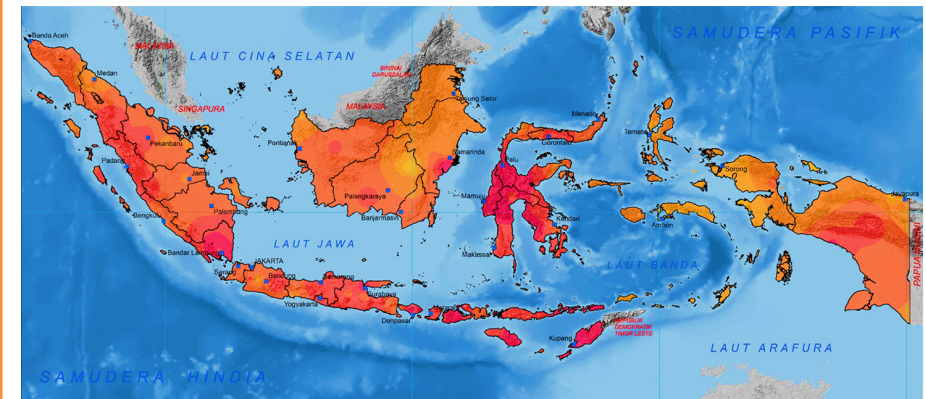
## THE MAKING PROCESS OF SOLAR ENERGY POTENTIAL MAP



The Center for Applied Climate of BMKG continuously improves the solar radiation observation network and provides climate related information for the energy sector. The information provided includes the average values of solar radiation intensity and the map of potential of solar energy in the Indonesia region.

The information is expected to be utilised as a primer consideration for related stakeholders, energy companies, public, in developing and planning their energy related activity.

## INDONESIA SOLAR ENERGY POTENTIAL MAP



### SOLAR ENERGY (kWh/m2):

