Data in Brief 6 (2016) 117-120

Contents lists available at ScienceDirect

Data in Brief

journal homepage: www.elsevier.com/locate/dib



Data Article

Data from renewable energy assessments for resort islands in the South China Sea



M. Reyasudin Basir Khan*, Razali Jidin, Jagadeesh Pasupuleti

College of Engineering, Universiti Tenaga Nasional, Jalan IKRAM – UNITEN, 43000 Kajang, Selangor, Malaysia

ARTICLE INFO

Article history: Received 6 November 2015 Received in revised form 7 November 2015 Accepted 16 November 2015 Available online 25 November 2015

Keywords: South China Sea Solar radiation,wind speed rainfall microhydropower PV system Wind energy generation system

ABSTRACT

Renewable energy assessments for resort islands in the South China Sea were conducted that involves the collection and analysis of meteorological and topographic data. The meteorological data was used to assess the PV, wind and hydropower system potentials on the islands. Furthermore, the reconnaissance study for hydropotentials were conducted through topographic maps in order to determine the potential sites suitable for development of run-ofriver hydropower generation. The stream data was collected for 14 islands in the South China Sea with a total of 51 investigated sites. The data from this study are related to the research article "Optimal combination of solar, wind, micro-hydro and diesel systems based on actual seasonal load profiles for a resort island in the South China Sea" published in Energy (Khan et al., 2015) [1].

© 2015 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

Specifications Table

Subject areaPhysicsMore specific subject areaMeteorology; EnergyType of dataTable, figure

* Corresponding author. Tel.: +603 8921 2020; fax: +603 8928 7166.

E-mail addresses: Reyasudin@uniten.edu.my, Reyasudin@gmail.com, reyasudin@gmail.com (M.R. Basir Khan), Razali@uniten.edu.my (R. Jidin), Jagadeesh@uniten.edu.my (J. Pasupuleti).

http://dx.doi.org/10.1016/j.dib.2015.11.043

2352-3409/© 2015 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

How data was	Malaysian Meteorological Department.
acquired	Department of Survey and Mapping Malaysia.
Data format	Filtered
Experimental	Meteorological data extrapolation based on linear extrapolation technique
features	using Matlab software.
	Topographic map data extraction based on hydropower guidelines.
Data source location	South China Sea Islands, East Coast of Peninsular Malaysia
Data accessibility	Data is provided in supplementary materials directly with this article

Value of the data

- The data describes the meteorological and topographical conditions of the resort islands in the South China Sea
- This data contains key information for renewable energy assessments for resort islands in the South China Sea.
- This data can be used for other research fields that involve the usage of solar radiation, wind speed, rainfall and evaporation data.
- The topographic map data is valuable for determining the potential run-of-river hydropower sites in many resort islands in the South China Sea.

1. Data

The data consists of meteorological and topographical data for resorts islands in the South China Sea.

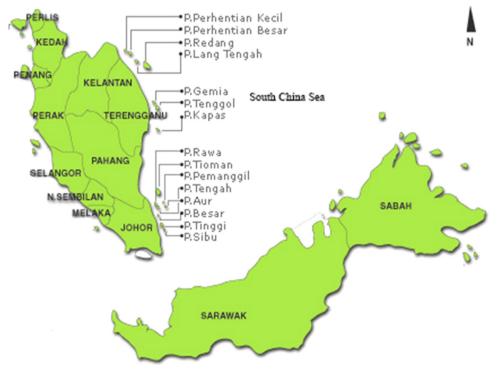


Fig. 1. Selected islands in the South China Sea.

Download English Version:

https://daneshyari.com/en/article/175042

Download Persian Version:

https://daneshyari.com/article/175042

Daneshyari.com