

**Bangladesh Dhaka heatwave risk assessment on 30 meters****Data Documentation****I. Dataset/atlas content features****i. Abstract**

The data set uses the surface temperature index to evaluate the risk, uses night light data, population density, population over 65 and less than 5 years old, and population without self-care ability to evaluate exposure, uses NDVI, distance from hospital, distance from water body, distance from road, impervious layer area ratio, slum area ratio index to evaluate disaster prevention and mitigation capabilities. Comprehensive risk assessment is conducted through hazard, exposure, disaster prevention and mitigation capabilities, and dataset products are produced. The spatial range is Dhaka, Bangladesh, with a spatial resolution of 30 meters.

**ii. Elements (content fields)**

Table 1 Description of data element content

Data name	Item (field)	Field name in Chinese	Field measure unit	Field code description	Remarks
Bangladesh Dhaka heatwave risk assessment on 30 meters	Value	孟加拉国达卡高温热浪灾害风险十米尺度评价			

**iii. Temporal cover**

2015.

**iv. Spatial cover**

Bangladesh Dhaka city.

**II. Subject/industry scope of dataset/atlas****i. Subject scope**

Earth science

**ii. Industry scope**

Disaster prevention and mitigation, ecological environment, climate change, tourism, social development

**iii. Other classifications (optional)****III. Accuracy of dataset/atlas****i. Time frequency****ii. Spatial reference, accuracy, and granularity**

Spatial reference: GCS\_WGS\_1984

Accuracy: 1 time

Spatial resolution: 30m×30m

Granularity: pixel

#### **IV. Dataset/atlas storage management**

##### **i. Data quantity**

4.5 MB

##### **ii. Type format**

The data set is stored on hard disk, and the data structure type is raster data.

##### **iii. Update management**

Updated from time to time.

#### **V. Quality control of the dataset/atlas**

##### **i. Production mode**

It is calculated by the analysis model of meteorological data, basic geographic data, remote sensing data, statistical data and survey data.

##### **ii. Data sources (condition selection)**

The data of land surface temperature comes from Landsat, the data of population comes from the website of Dhaka Statistical Bureau and SEDAC, the data of road and hospital distribution comes from Openstreet, and the light at night comes from "LuoJia No.1". The high temperature heat wave data are obtained by interpolation, calculation and production of NOAA daily meteorological station data.

##### **iii. Methods of the data acquisition and processing (condition selection)**

After statistical processing of daily meteorological station data, the research team formed grid data covering the whole study area through Kriging interpolation. The surface temperature data replace the high temperature heat wave intensity; Download statistical data from the website of Dhaka Bureau of statistics and spatialize it based on land use data; The distance from road, hospital and water was calculated by ArcGIS; After the night light data is downloaded from the website, its DN value is converted into the light index data.

#### **VI. Sharing and usage method of the dataset/atlas**

##### **i. Sharing methods and restrictions**

Fully shared

##### **ii. Contact information of the sharing service (condition selection)**

The service is as follows:

Name: Yang fei

Mailing address: A11 Datun Road, Chaoyang District, Beijing

Zip code: 100101

E-mail: yangfei@lreis.ac.cn

##### **iii. Conditions and methods of usage**

Use ArcGIS, ENVI and other software to open.

#### **VII. Intellectual property rights of the dataset/atlas**

##### **i. Property rights (optional)**

“Bangladesh Dhaka heatwave risk assessment on 30 meters dataset” owned by institute of geographic sciences and natural resources research, CAS.

##### **ii. Reference method of the dataset/atlas**

Bangladesh Dhaka heatwave risk assessment on 30 meters dataset. Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and

Technology (IKCEST) under the Auspices of UNESCO,2021.05.28.

**iii. Usage contacts of the datasets/atlas**

Contact person

Name: Yang fei

Mailing address: A11 Datun Road, Chaoyang District, Beijing

Zip code: 100101

E-mail: yangfei@lreis.ac.cn

**VIII. Others (optional)**

In addition to the above, other information must also be explained.

Data documentation author information			
Data documentation author	Fei Yang	Update time	2021.05.28
Organization	Institute of geographic sciences and natural resources research, CAS.		
Contact information	E-mail		
Address	A11 Datun Road, Chaoyang District, Beijing	Postcode	100101
Telephone		E-mail	yangfei@lreis.ac.cn