

## Lightning, Hail Disaster and Gale Disaster in Hangzhou 1959~2012

### I. Dataset/atlas content features

#### i. Abstract

The main content of Lightning, Hail Disaster and Gale Disaster in Hangzhou 1959~2012 are the major lightning hail tornado disaster since 1959, mainly including the time and date of Hangzhou lightning hail tornado disaster, maximum Hail Diameter, hail time, wind speed, casualties, disaster degree, etc.

#### 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 |
|--|----------------|-----------------------|--------------------|------------------------|---------|
| Lightning, hail Disaster and Gale Disaster in Hangzhou | date           | Shijian               |                    |                        |         |
| Lightning, hail Disaster and Gale Disaster in Hangzhou | hail diameter  | Zuidabaojing          | Cm                 |                        |         |
| Lightning, hail Disaster and Gale Disaster in Hangzhou | Duration       | Chixushijian          | min, h             |                        |         |
| Lightning, hail Disaster and Gale Disaster in Hangzhou | The wind speed | Zuidafengsu           | m/s                |                        |         |

#### iii. Temporal cover

The time of this dataset is 1959.7.5-2012.9.9

#### iv. Spatial cover

Hangzhou urban area.

### II. Subject/industry scope of dataset/atlas

#### i. Subject scope

170 Geosciences 17015 Atmosphere Science 1701535 Climatology

560 Civil Engineering and Building Construction 56015 Basic Disciplines of Civil Engineering and Building Construction 5601530 Architectural Meteorology

560 Civil Engineering and Building Construction 56055 Municipal Engineering

570 Hydraulic Engineering 57065 Flood Control 5706510 Flood Control

5706520 Flood Prevention

610 Environmental Science and Technology and Resource Science and Technology, 61010 Basic Science of Environmental Science and Technology, 6101025 Environmental Meteorology.

#### **ii. Industry scope**

F Transportation, Warehousing and Postal Services, 51 Railway Transportation Industry 52 Road Transportation Industry 53 City Public Transportation Industry 54 Water Transportation Industry

55 Air Transportation Industry

M Scientific Research, Technical Services and Geological Prospecting Industry, 7610 Meteorological Services 7673 Planning Management

N Water Conservancy, Environment and Public Facilities Management Industry, 7910 Food Control Management 8110 Municipal Public Facilities Management

### **III. Accuracy of dataset/atlas**

#### **i. Time frequency**

(Time frequency is the representation content of datasets/atlas' time frequency, such as multi-year average, average, monthly, daily, yearly, month by month, day or hour.)

#### **ii. Spatial reference, accuracy, and granularity**

(This part is the spatial reference, accuracy, and granularity of datasets/atlas. The spatial reference includes coordinate system, projection mode, elevation system, etc. Spatial accuracy means the vector data scale or raster data resolution, etc. Spatial granularity is in accordance with the continent, the state, province, county, and other divisions.)

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

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

0.0122MB

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

The dataset is stored in the hard disk and it is table data

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

Dataset update plan: Aperiodic updating.

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

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

Data of Lightning, hail Disaster and Gale in Hangzhou in (1959-2012) was obtained based on Hangzhou Meteorological Service <http://zj.cma.gov.cn/dsqx/hzsqxj/> China Meteorological Calamity Code (Zhejiang volume) China Meteorological Disaster Yearbook (2005-2012) and electronic, digital, integrated conversion, standardized processing, computational simulation.

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

Source of data source:

Hangzhou Meteorological Service <http://zj.cma.gov.cn/dsqx/hzsqxj/>

Hangzhou Digital Local Records Museum <http://hzszfzg.wf.sh.cn/frontIndex/init.html>

Zhejiang Meteorological Service. Zhejiang province meteorological disasters yearbook

Kegang Wen. China Meteorological Disaster Code (Beijing volume) [M]. Beijing: Meteorological Press, 2005.12.

Zhengtai Ren. China Hangzhou yearbook 2001 [M]. Hangzhou : FangZhi Press, 2001.8.

Xiaofu Xu. China Hangzhou yearbook 2002 [M]. Hangzhou : FangZhi Press, 2002.12.

Xiaofu Xu. China Hangzhou yearbook 2003 [M]. Hangzhou : FangZhi Press, 2003.9

Xiaofu Xu. China Hangzhou yearbook 2006 [M]. Hangzhou : FangZhi Press, 2006.10

Xiaofu Xu. China Hangzhou yearbook 2007 [M]. Hangzhou : FangZhi Press, 2007.10

Baoshui Xu. China Hangzhou yearbook 2009 [M]. Hangzhou : FangZhi Press, 2009.9

Baoshui Xu. China Hangzhou yearbook 2010 [M]. Hangzhou : FangZhi Press, 2010.9

Baoshui Xu. China Hangzhou yearbook 2011 [M]. Hangzhou : FangZhi Press, 2011.9

Baoshui Xu. China Hangzhou yearbook 2012 [M]. Hangzhou : FangZhi Press, 2012.10

Baoshui Xu. China Hangzhou yearbook 2013 [M]. Hangzhou : FangZhi Press, 2013.11

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

Acquisition method: Book sorting on the net and field survey.

Processing method: Data registration and Object-oriented classification method.

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

#### i. Sharing methods and restrictions

Fully opened sharing

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

Contact Information for Service : No. 46, Zhongguancun South Street, Haidian District, Beijing

#### iii. Conditions and methods of usage

The dataset can be read by excel software

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

#### i. Property rights (optional)

Dataset ownership information: Institute of Geographic Sciences and Natural Resources Research, CAS

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

<Lightning, hail Disaster and Gale Disaster in Hangzhou Dataset/Institute of Geographic Sciences and Natural Resources Research, CAS>

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

Name: Service group of Disaster Risk Reduction Knowledge Service System of IKCEST

Address: A11 Datun Road, Chaoyang District, Beijing.

Postcode: 100101

Telephone: 010-64889048-8006

Email: ikcest-drr@lreis.ac.cn

### VIII. Others (optional)

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

| Data documentation author information |   |             |                  |
|---------------------------------------|---|-------------|------------------|
| Data documentation author             | Fang Yuan   | Update time |                  |
| Organization                          | Wuhan university                                  |             |                  |
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| Address                               | Luojia mountain in Wuchang District, Wuhan, Hubei | Postcode    | 430061           |
| Telephone                             | 15927651717                                       | E-mail      | 593726143@qq.com |