



# Climate projection data with 20km-mesh AGCM by SOUSEI program

## 1. IDENTIFICATION INFORMATION

Name	Climate projection data with 20km-mesh AGCM by SOUSEI program
Metadata Identifier	GCM20_SOUSEI20230727103232-DIAS20221121113753-en

## 2. CONTACT

### 2.1 CONTACT on DATASET

Name	Meteorological Research Institute
Organization	Program for Risk Information on Climate Change
E-mail	takayabu@mri-jma.go.jp

### 2.2 CONTACT on PROJECT

#### 2.2.1 Data Integration and Analysis System

Name	DIAS Office
Organization	Japan Agency for Marine-Earth Science and Technology
Address	3173-25, Showa-Cho, Kanazawa-ku, Yokohama-shi, Kanagawa, 236-0001, Japan
E-mail	dias-office@diasjp.net

## 3. DOCUMENT AUTHOR

Name	Ryo Mizuta
Organization	Program for Risk Information on Climate Change
E-mail	rmizuta@mri-jma.go.jp

## 4. DATASET CREATOR

Name	Meteorological Research Institute
Organization	Program for Risk Information on Climate Change
E-mail	takayabu@mri-jma.go.jp

## 5. DATE OF THIS DOCUMENT

2023-07-27

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## 6. DATE OF DATASET

publication : 2021-07-28

## 7. DATASET OVERVIEW

### 7.1 Abstract

(1) This is the dataset simulated by high resolution atmospheric global climate model (AGCM) of which horizontal resolution is 20km-mesh. The dataset consists of the present climate (25 years) and the future climate (4 members over the end of the 21st century under the RCP8.5 and RCP2.6 scenario: 25 years each).

(2) High resolution simulations enable to estimate the future change of extreme events, such as typhoons and localized torrential downpours, with high accuracy.

(3) This dataset provides the climate projections which adaptations against global warming are based on in various fields, for example, disaster prevention, urban planning, environmental protection, and so on. It would realize the global warming adaptations consistent not only among issues but also among regions.

### 7.2 Topic Category(ISO19139)

climatologyMeteorologyAtmosphere

### 7.3 Temporal Extent

Begin Date	1979-01-01
End Date	2099-12-31
Temporal Characteristics	1/3/6/12 hourly, daily and monthly

### 7.4 Geographic Bounding Box

North latitude bound	90
West longitude bound	0
Eastbound longitude	360
South latitude bound	-90

### 7.5 Grid

Dimension Name	Dimension Size (slice number of the dimension)	Resolution Unit
row	1920	20 (km)
column	960	20 (km)

vertical	24	1000, 925, 850, 700, 600, 500, 400, 300, 250, 200, 150, 100, 70, 50, 30, 20, 15, 10, 7, 5, 3, 2, 1, 0.5 (hPa)
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## 7.6 Geographic Description

## 7.7 Keywords

### 7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	GLOBAL CHANGE > Global climate models	AGU
theme	Models > GCM	GCMD_platform

### 7.7.2 Keywords on Project

#### 7.7.2.1 Data Integration and Analysis System

Keyword Type	Keyword	Keyword thesaurus Name
theme	DIAS &gt; Data Integration and Analysis System	No_Dictionary

## 7.8 Online Resource

file download : <https://data.diasjp.net/dl/storages/filelist/dataset:638>

## 7.9 Data Environmental Information

## 7.10 Distribution Information

name	version	specification
binary	N/A	binary with grads control files
grib	1	

## 8. DATA PROCESSING

## 9. DATA REMARKS

## 10. DATA POLICY

### 10.1 Data Policy by the Data Provider

This dataset was produced by Meteorological Research Institute of Japan Meteorological Agency, under the support of the Program for Risk Information on Climate Change (SOUSEI, FY2012-2016) and

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the Data Integration and Analysis System (DIAS), funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The Earth Simulator was used for building up the dataset. Users can access the dataset via the data server maintained by DIAS.

Terms and Conditions:

1. Individual users must register their name, affiliation, email-address and purpose of use before access to the database will be permitted.
2. Individual users should not redistribute the data to any third party.
3. The source of the database should be duly acknowledged in scientific and technical papers, publications, press releases and other communications in case of using the data.

Example:

This study used data produced with the Earth Simulator by the Program for Risk Information on Climate Change (SOUSEI) from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan.

Disclaimer:

Meteorological Research Institute of Japan Meteorological Agency is not responsible for any damage that may result from the use of this dataset. The intellectual property rights of the dataset belong exclusively to Meteorological Research Institute of Japan Meteorological Agency.

## 10.2 Data Policy by the Project

### 10.2.1 Data Integration and Analysis System

If data provider does not have data policy, DIAS Terms of Service (<https://diasjp.net/en/terms/>) and DIAS Privacy Policy (<https://diasjp.net/en/privacy/>) apply.

If there is a conflict between DIAS Terms of Service and data provider's policy, the data provider's policy shall prevail.

## 11. LICENSE

## 12. DATA SOURCE ACKNOWLEDGEMENT

### 12.1 Acknowledge the Data Provider

This study used data produced with the Earth Simulator by the Program for Risk Information on Climate Change (SOUSEI) from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan.

### 12.2 Acknowledge the Project

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## 12.2.1 Data Integration and Analysis System

If you plan to use this dataset for a conference presentation, paper, journal article, or report etc., please include acknowledgments referred to following examples. If the data provider describes examples of acknowledgments, include them as well.

” In this study, [Name of Dataset] provided by [Name of Data Provider] was utilized. This dataset was also collected and provided under the Data Integration and Analysis System (DIAS), which was developed and operated by a project supported by the Ministry of Education, Culture, Sports, Science and Technology. ”

## 13. REFERENCES

Mizuta, R., H. Yoshimura, H. Murakami, M. Matsueda, H. Endo, T. Ose, K. Kamiguchi, M. Hosaka, M. Sugi, S. Yukimoto, S. Kusunoki, and A. Kitoh, 2012: Climate simulations using MRI-AGCM3.2 with 20-km grid. *J. Meteor. Soc. Japan*, 90A, 233-258, doi:10.2151/jmsj.2012-A12.

Kitoh, A., and H. Endo, 2016: Changes in precipitation extremes projected by a 20-km mesh global atmospheric model. *Weather and Climate Extremes*, 11, 41–52.