



Innovative Program of Climate Change Projection for the 21st Century (KAKUSHIN program) CMIP5 simulation data by Earth System Model MIROC-ESM-CHEM

1. IDENTIFICATION INFORMATION

Name	Innovative Program of Climate Change Projection for the 21st Century (KAKUSHIN program) CMIP5 simulation data by Earth System Model MIROC-ESM-CHEM
Abbreviation	CMIP5, CMIP, MIROC, MIROC-ESM-CHEM
Metadata Identifier	CMIP5_MIROC_ESM_CHEM20230727101805-en

2. CONTACT

2.1 CONTACT on DATASET

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2.2 CONTACT on PROJECT

3. DOCUMENT AUTHOR

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5. DATE OF THIS DOCUMENT

2023-07-27

6. DATE OF DATASET

publication : 2012-01-23

7. DATASET OVERVIEW

7.1 Abstract

As part of this national strategy, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) had launched a 5-year (FY2007 - 2011) initiative called the Innovative Program of Climate Change Projection for the 21st Century (KAKUSHIN Program), using the Earth Simulator (ES) to address emerging research challenges, such as those derived from the outcomes of the MEXT's Kyosei Project (FY2002 - 2006), that had made substantial contributions to the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). The KAKUSHIN Program was expected to further contribute to the Fifth Assessment Report (AR5).

The research items include the advancement and forecasting of global warming models, the quantification and reduction of model uncertainty, and the evaluation of the impacts of natural disasters based on forecast information.

Much of the data submitted to CMIP5 from Japan were generated under this KAKUSHIN program using the global climate models and the Earth system models developed in Japan.

This dataset is the result of using the Earth System Model MIROC-ESM-CHEM.

All CMIP5 data are collected, managed, and published by the Earth System Grid Federation (ESGF), and DIAS serves as an ESGF node. All public datasets, including this dataset, are available from ESGF. For information on how to use these datasets, including this dataset, see "CMIP5 Data - Getting Started" (URL is available in the online information below). Please note that an ESGF account is required to download the CMIP5 data.

Because the terms of use for CMIP5 data are different from CMIP6 in many respects, please check the following Terms of Use carefully:

<https://pcmdi.llnl.gov/mips/cmip5/terms-of-use.html>

Currently, all CMIP5 data, including this dataset, is classified as "unrestricted" within it.

7.2 Topic Category(ISO19139)

climatologyMeteorologyAtmosphere

7.3 Temporal Extent

Begin Date	1850-01-01
End Date	2300-12-31

7.4 Geographic Bounding Box

North latitude bound	90
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West longitude bound	-180
Eastbound longitude	180
South latitude bound	-90

7.5 Grid

7.6 Geographic Description

7.7 Keywords

7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	Climate	GEOSS
theme	GLOBAL CHANGE > Global climate models	AGU

7.7.2 Keywords on Project

7.8 Online Resource

KAKUSHIN Program Web : <http://www.jamstec.go.jp/kakushin21/jp/index.html>

Description of MIROC-ESM by MIROC group : <http://cemaesm.jamstec.go.jp/esm/esm.html>

Article about CMIP5 and KAKUSHIN Program, published on the bulletin of the Meteorological Society of Japan (in Japanese). : https://www.metsoc.jp/tenki/pdf/2013/2013_04_0003.pdf

CMIP5 Project Web : <https://pcmdi.llnl.gov/mips/cmip5/>

CMIP5 Data Terms of Use : <https://pcmdi.llnl.gov/mips/cmip5/terms-of-use.html>

CMIP5 Data Access Getting Started : <https://pcmdi.llnl.gov/mips/cmip5/data-access-getting-started.html>

ESGF, Search Variables (in LLNL) : https://esgf-node.llnl.gov/search/cmip5/?data_node=esgf-datal.diasjp.net&project=CMIP5&model=MIROC-ESM-CHEM

ESGF, Search Variables (in DKRZ) : https://esgf-data.dkrz.de/search/cmip5-dkrz/?data_node=esgf-datal.diasjp.net&project=CMIP5&model=MIROC-ESM-CHEM

7.9 Data Environmental Information

7.10 Distribution Information

name	version	specification
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netCDF	3	
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8. DATA PROCESSING

9. DATA REMARKS

10. DATA POLICY

10.1 Data Policy by the Data Provider

This dataset is delivered under the condition of "CMIP5 Data Access Terms of Use" as "unrestricted" data.

<https://pcmdi.llnl.gov/mips/cmip5/terms-of-use.html>

10.2 Data Policy by the Project

11. LICENSE

12. DATA SOURCE ACKNOWLEDGEMENT

12.1 Acknowledge the Data Provider

"We acknowledge the World Climate Research Programme's Working Group on Coupled Modelling, which is responsible for CMIP, and we thank the climate modeling groups (listed in Table XX of this paper) for producing and making available their model output. For CMIP the U.S. Department of Energy's Program for Climate Model Diagnosis and Intercomparison provides coordinating support and led development of software infrastructure in partnership with the Global Organization for Earth System Science Portals."

Where "Table XX" in your paper should list the models and modeling groups that provided the data you used.

(See <https://pcmdi.llnl.gov/mips/cmip5/citation.html> for details)

12.2 Acknowledge the Project

13. REFERENCES