DIAS Bias Corrected Data of d4PDF5km(2022)

1. IDENTIFICATION INFORMATION

Name	Bias Corrected Data of d4PDF5km(2022)
Abbreviation	WBC-d4PDF5km(2022)
DOI	doi:10.20783/DIAS.668 [https://doi.org/10.20783/DIAS.668]
Metadata Identifier	d4PDF_BiasCorrection_20250220250223202907-DIAS20221121113753-en

2. CONTACT

2.1 CONTACT on DATASET

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2.2 CONTACT on PROJECT

2.2.1 Data Integration and Analysis System

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5. DATE OF THIS DOCUMENT

2025-02-23

6. DATE OF DATASET

publication : 2025-02-19

7. DATASET OVERVIEW

7.1 Abstract

The daily precipitation and daily mean temperature data from the nationwide d4PDF downscaling data have been bias-corrected using the Dual-Window method, starting from the observation point (however, this is limited to within and near the basins of 109 first-class river systems nationwide).

7.2 Topic Category(ISO19139)

climatologyMeteorologyAtmosphere

7.3 Temporal Extent

Begin Date	1981-01-01
End Date	2110-12-31
Temporal Characteristics	Daily

7.4 Geographic Bounding Box

North bound latitude	45.2483
West bound longitude	129.8783
Eastbound longitude	144.7783
South bound latitude	31.1983

7.5 Grid

7.6 Geographic Description

7.7 Keywords

7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	Atmosphere > Precipitation > Rain, Atmosphere > Atmospheric Temperature > Air Temperature	GCMD_science

7.7.2 Keywords on Project

7.7.2.1 Data Integration and Analysis System

Keyword Type	Keyword	Keyword thesaurus Name
theme	DIAS > Data Integration and Analysis System	No_Dictionary

7.8 Online Resource

National d4PDF downscaling data : https://diasjp.net/ds2022/dataset/ds16.html

Bias correction method (Dual-Window method) : https://www.jstage.jst.go.jp/article/hrl/14/3/14_117/_article/-char/ja/

file download : http://data.diasjp.net/dl/storages/filelist/dataset:668

7.9 Data Environmental Information

[Data capacity] - Daily precipitation: 10.1GB - Daily average temperature: 7.75GB

7.10 Distribution Information

name	version	specification
CSV format	ver1.00	

8. DATA PROCESSING

8.1 Data Processing (1)

8.1.1 General Explanation of the data producer's knowledge about the lineage of a dataset

① Data for observed points are calculated by using the inverse distance method from the national d4PDF downscaling data

② The bias correction rate is calculated based on the values computed in ① and corresponding observation values using Dual-Window method

③ Add the bias correction amount (rate) of ② to ①

8.1.2 Data Source

Data Source Citation Name	Description of derived parameters and processing techniques used

9. DATA REMARKS

To ensure the quality of the data, a reviewer and an assistant reviewer who were independent of the person in charge were assigned to check the calculation programs and verify the calculation results.

10. DATA POLICY

10.1 Data Policy by the Data Provider

[Purpose of Use]

- No particular restrictions. Please note that the contents may be changed or deleted without notice.

[Redistribution]

- Do not redistribute the data to third parties without permission.

[Disclaimer]

- The creator is not responsible for any damages caused by the user's use of this data.

[Acknowledgements]

Please write according to the following example.

"In this study, d4PDF was dynamically downscaled to a nationwide 5km mesh using the Earth Simulator under the Ministry of Education, Culture, Sports, Science and Technology's Advanced Research Program for Climate Change Projection, and bias-corrected data was used by the National Institute for Land and Infrastructure Management using the Dual-Window method."

[Paper citation]

- None at present. If any is published in the future, it will be listed here.

[Other]

For matters for which the data terms of use are not specified, the DIAS Service Terms of Use (https://diasjp.net/terms/) and the DIAS Privacy Policy (https://diasjp.net/privacy/) apply.

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

Please write according to the example below.

"In this study, we used data that was dynamically downscaled using the Earth Simulator on a nationwide 5 km mesh of d4PDF under the Ministry of Education, Culture, Sports, Science and Technology's Advanced Research Program for Climate Change Projection, and bias-corrected using the Dual-Window method by the National Institute for Land and Infrastructure Management."

12.2 Acknowledge the Project

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

・There are none at present. If any are published in the future, they will be listed here. References regarding the national d4PDF downscaling data and bias correction method (Dual-Window method) are as follows.

[National d4PDF downscaling data]

Kawase, H., M. Nosaka, S. I. Watanabe, K. Yamamoto, T. Shimura, Y. Naka, Y.-H. Wu, H. Okachi, T. Hoshino, R. Ito, S. Sugimoto, C. Suzuki, S. Fukui, T. Takemi, Y. Ishikawa, N. Mori, E. Nakakita, T. J. Yamada, A. Murata, T. Nakaegawa, I. Takayabu, 2023: Identifying Robust Changes of Extreme Precipitation in Japan From Large Ensemble 5-km-Grid Regional Experiments for 4K Warming Scenario. J. Geophys. Res. Atmos., 128, https://doi.org/10.1029/2023JD038513.

[Bias correction method (Dual-Window method)]

S. Watanabe, M. Yamada, S. Abe, and M. Hatono: Bias correction of d4PDF using a moving window method and their uncertainty analysis in estimation and projection of design rainfall depth, Hydrological Research Letters, 14(3), p117-122, 2020.