

Hao-wei Wey

Max Planck Institute for Meteorology
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Education and Professional Experiences

Postdoctoral researcher *February ~ August 2021*

Max Planck Institute for Meteorology
Hamburg, Germany

Dr. rer. nat., Earth Sciences *February 2021*

Max Planck Institute for Meteorology
University of Hamburg, Hamburg, Germany
Advisors: Julia Pongratz, Kim Naudts

M.S. in Atmospheric Sciences *June 2015*

National Taiwan University, Taipei, Taiwan
Advisor: Min-Hui Lo

B.S. in Electrical Engineering with a minor in Atmospheric Sciences, *June 2013*

National Taiwan University, Taipei, Taiwan

Research Interests

Vegetation Modeling

- Simulating vegetation responses to water stress and the resulting feedbacks, with a focus on the Amazon basin

Land-Atmosphere Interactions

- Different types of land surface characteristics such as soil moisture, vegetation, land use and land cover change, and their interactions with the atmosphere

Climate Dynamics

- The mechanisms of General circulation, climate variabilities, and their responses to climate forcing and climate change

Terrestrial Hydrology in Coupled Climate System

- The roles of water balance and components of terrestrial hydrological cycle in climate system

Publications

- Hao-Wei Wey**, Julia Pongratz, Julia E. M. S. Nabel, and Kim Naudts (2021). *Effects of increased drought in Amazon forests under climate change: Separating the roles of canopy responses and soil moisture*. Submitted to *Journal of Geophysical Research: Biogeosciences*.
- Min-Hui Lo, **Wey, Hao-Wei**, Eun-Soon Im, Lois Iping Tang, Ray G Anderson, Ren-Jie Wu, Rong-You Chien, Jiangfeng Wei, Amir AghaKouchak, and Yoshihide Wada (2021). "Intense agricultural irrigation induced contrasting precipitation changes in Saudi Arabia". In: *Environmental Research Letters* 16.6, p. 064049. DOI: [10.1088/1748-9326/ac002e](https://doi.org/10.1088/1748-9326/ac002e)
- S. Lawal, S. Sitch, D. Lombardozzi, J. E. M. S. Nabel, **Wey, H.-W.**, P. Friedlingstein, H. Tian, and B. Hewitson (2020). "Investigating the response of LAI to droughts in southern African vegetation using observations and model-simulations". In: *Hydrology and Earth System Sciences Discussions*. In review. DOI: [10.5194/hess-2020-528](https://doi.org/10.5194/hess-2020-528)
- Chihchung Chou, Dongryeol Ryu, Min-Hui Lo, **Hao-Wei Wey**, and Hector M. Malano (2018). "Irrigation-Induced Land–Atmosphere Feedbacks and Their Impacts on Indian Summer Monsoon". In: *Journal of Climate*. DOI: [10.1175/JCLI-D-17-0762.1](https://doi.org/10.1175/JCLI-D-17-0762.1)
- Min-Hui Lo, Tzu-Hsien Kuo, **Hao-Wei Wey**, Chia-Wei Lan, and Jen-Ping Chen (2017). "Land processes as the forcing of extremes – A review". In: *Climate Extremes: Patterns and Mechanisms*. Ed. by Simon Wang and Jin-Ho Yoon. American Geophysical Union. DOI: [10.1002/9781119068020.ch5](https://doi.org/10.1002/9781119068020.ch5)
- Hao-Wei Wey**, Min-Hui Lo, Shih-Yu Lee, Jin-Yi Yu, and Huang-Hsiung Hsu (2015). "Potential impacts of wintertime soil moisture anomalies from agricultural irrigation at low latitudes on regional and global climates". In: *Geophysical Research Letters*. DOI: [10.1002/2015GL065883](https://doi.org/10.1002/2015GL065883)