

Researchers release eight-year dataset to reveal lake-atmosphere interaction over source region of the Yellow River

March 6 2023, by Li Yuan



Credit: Unsplash/CC0 Public Domain

Lakes on the Tibetan Plateau (TP) play a critical role in the regional water cycle, weather, and climate. However, the characteristics of the

lake-atmosphere interaction over the high-altitude lakes are still unclear.

Recently, a joint research team from the Northwest Institute of Eco-Environment and Resources of the Chinese Academy of Sciences (CAS) and Chengdu University of Information Technology released a dataset of comparative observations for land surface processes over the alpine grasslands and lakes in the source region of the Yellow River (SRYR).

The study was published in *Advances in Atmospheric Sciences* on Feb. 23.

The dataset spans from 2012 to 2019 and has a high (half-hourly) [temporal resolution](#). It comprises basic meteorological variables, surface radiation, sensible and latent heat flux, soil temperature, and moisture.

The researchers collected these data from three sites located on the lake surface, in adjacent grassland, and at the lakeside in the Ngoring Lake basin of SRYR, respectively.

The dataset can be used to improve models, promote scientific understanding of lake-atmosphere interactions, and provide support for studying the [water cycle](#) and [climate change](#) in the TP. It is available via the [Science Data Bank](#).

More information: Xianhong Meng et al, Dataset of Comparative Observations for Land Surface Processes over the Semi-Arid Alpine Grassland against Alpine Lakes in the Source Region of the Yellow River, *Advances in Atmospheric Sciences* (2023). [DOI: 10.1007/s00376-022-2118-y](#)

Provided by Chinese Academy of Sciences

Citation: Researchers release eight-year dataset to reveal lake-atmosphere interaction over source region of the Yellow River (2023, March 6) retrieved 2 May 2024 from <https://phys.org/news/2023-03-eight-year-dataset-reveal-lake-atmosphere-interaction.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.