

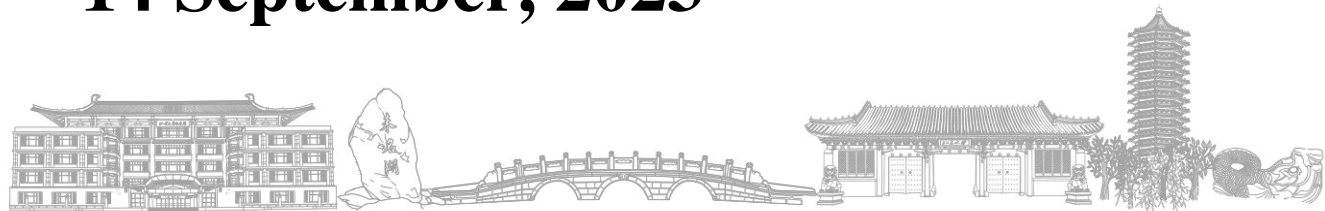
NSFC-CGIAR Joint Research Project

**Climate-Water spatiotemporal changes
and crop distribution: spatial response
and policy options**

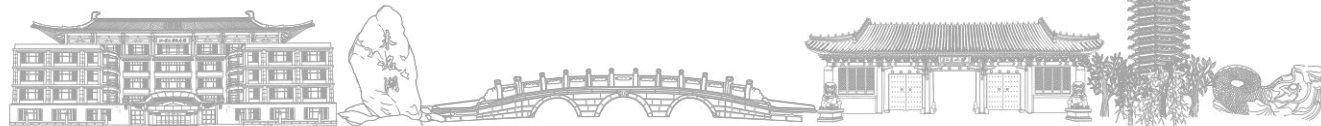
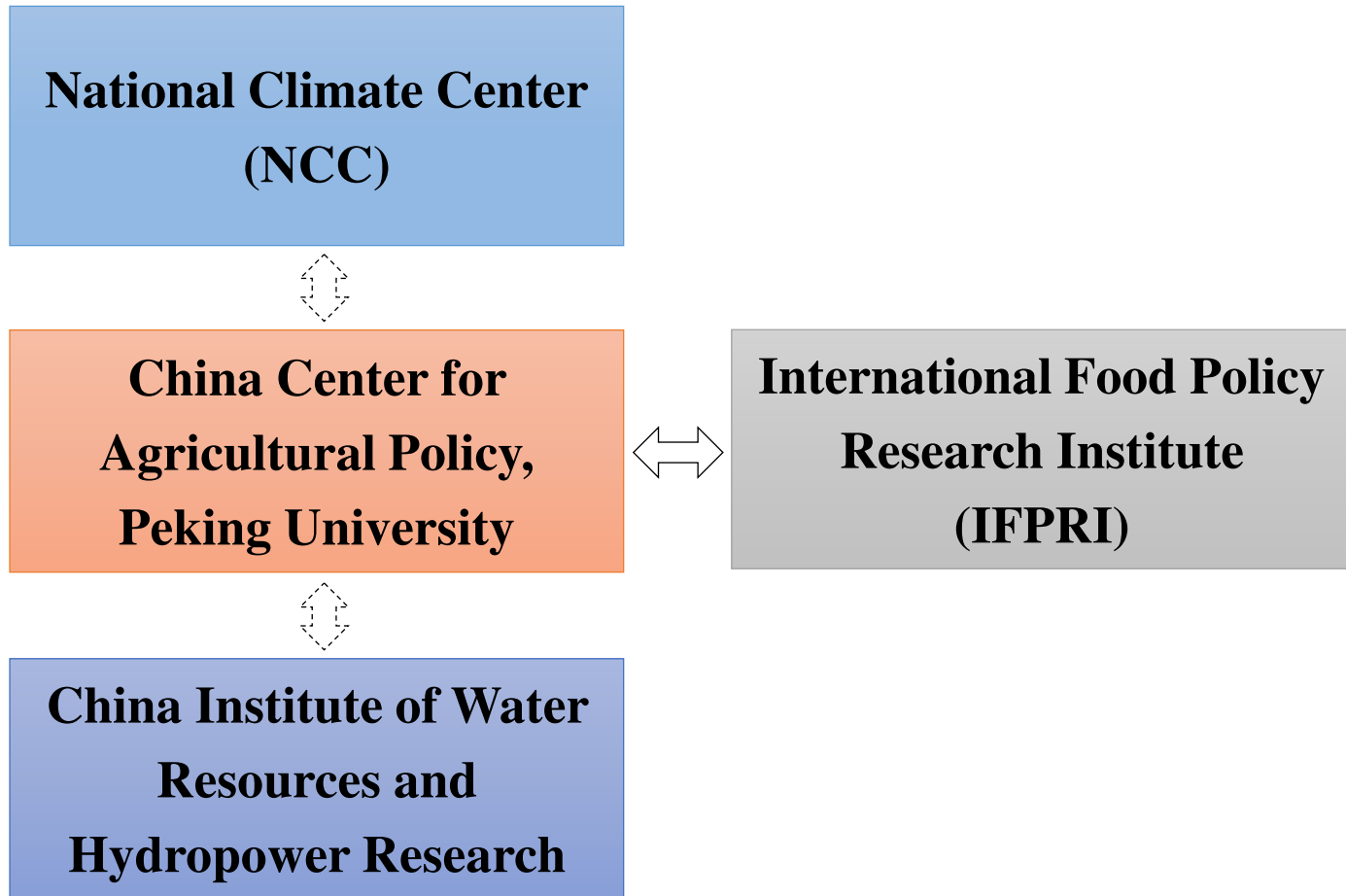
Wei Xie

Peking University

14 September, 2023

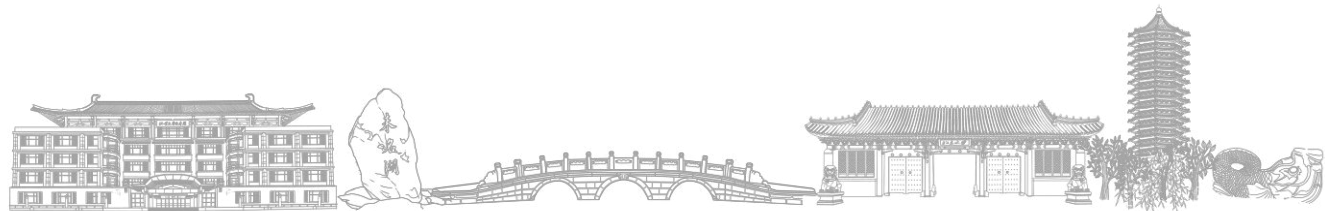


Research Team



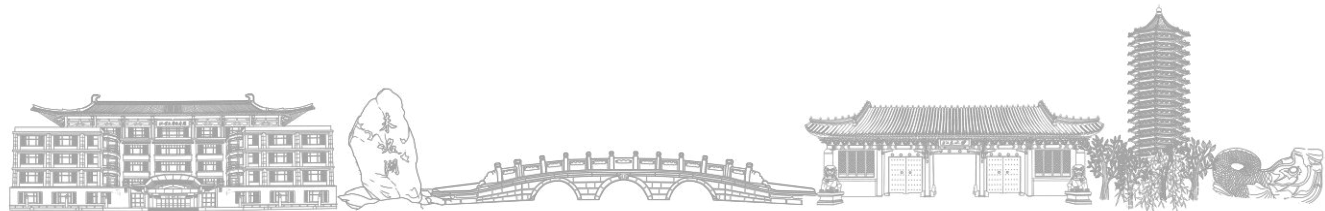
Research Team

- **Peking University:** Wei Xie, Tariq Ali, et al.
- **China Institute of Water Resources and Hydropower Research:** Yongnan Zhu, Jianhua Wang, et al.
- **National Climate Center:** Jianqing Zhai, Yuan Liu, et al.
- **IFPRI:** Claudia Ringler, Hua Xie, et al.



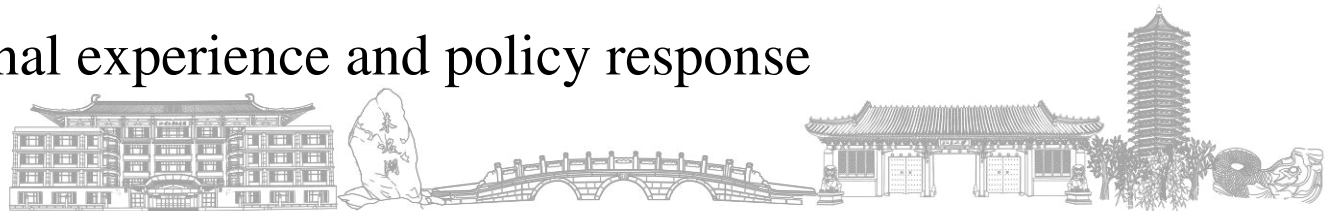
Objectives of the project

- **The project aims to evaluate the response of crop distribution to historical climate-water spatiotemporal changes and analyze its driving mechanism.**
- **On this basis, the optimal crop distribution under climate-water spatiotemporal changes in the future is simulated, and policy measures are proposed.**



Scope of the project

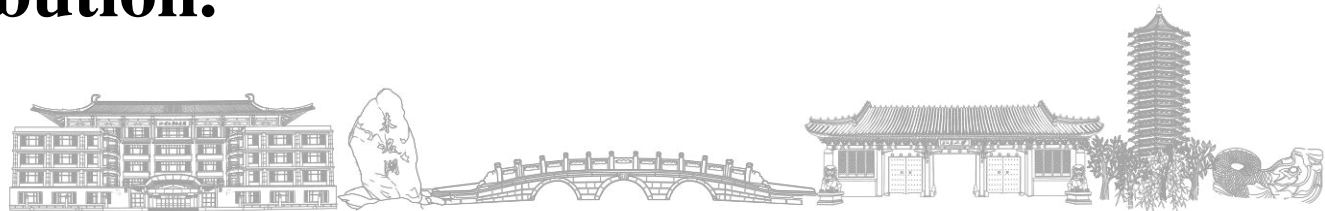
- **Unit 1:** The evolution of climate-water spatiotemporal changes and crop distribution
- **Unit 2:** The driving factors of crop distribution and the influence of climate and water resources
- **Unit 3:** An empirical test of spatial response of crop distribution to climate-water spatiotemporal changes
- **Unit 4:** The Simulation of the optimal crop distribution under the challenges of global climate change and water resources
- **Unit 5:** Policy design to promote the optimization and adjustment of crop distribution for food security strategy
- **Unit 6:** International experience and policy response



Duration of the Project: Jan 2023-Dec 2027

Expected outputs of the project:

- Strength the **collaboration** between research teams from China and IFPRI.
- Cultivate **young scientists** with an international perspective.
- Prepare and submit **policy briefs** for China's government.
- Publishing **peer-reviewed papers**.
- Developing **open-source optimization algorithm model** for crop distribution.



Thank you!

