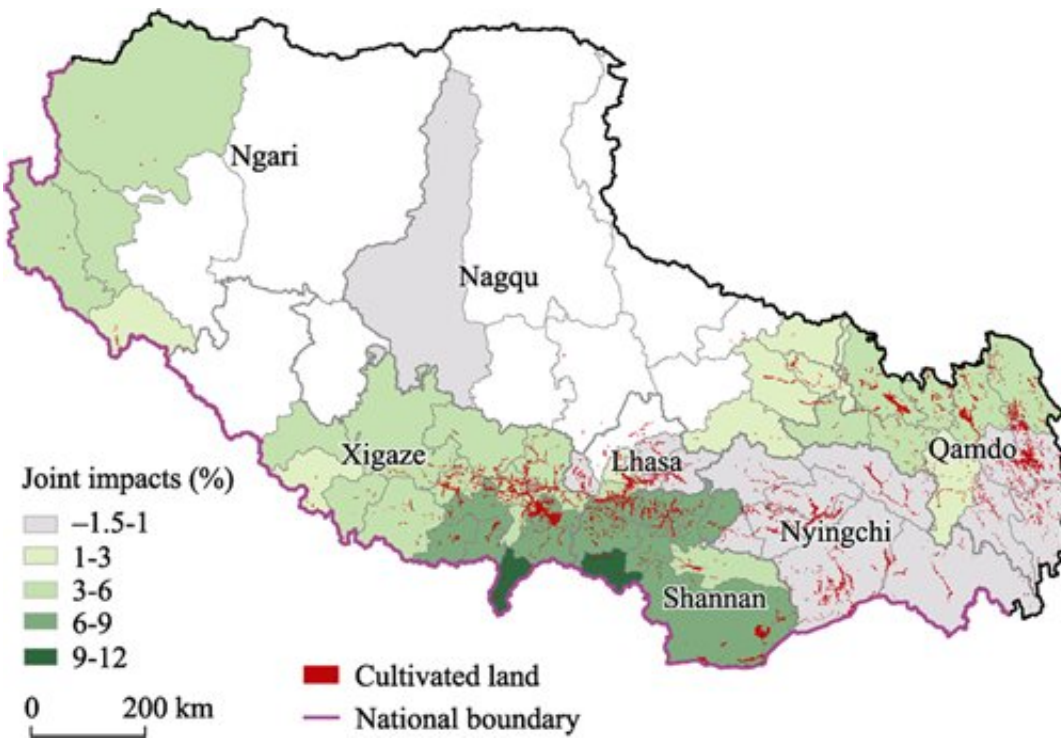


# Climate change has positive impact on Tibet's cereal yields

January 24 2022, by Zhang Nannan



Distribution of the joint impacts of climate change on cereal yields in Tibet from 1993 to 2017 based on the fixed-effects model. Credit: Shi Wenjiao

Food supply has always been a major concern in Tibet's development. As the Qinghai-Tibet Plateau is particularly sensitive to climate change, it is important to clarify the impact of climate change on the yield of cereal, the main crop in Tibet.

Prof. SHI Wenjiao's team at the Institute of Geographic Sciences and Natural Resources Research (IGSNRR) of the Chinese Academy of Sciences has found that the [climate change](#) positively affects the cereal yields with a rise of 1.5 percent to 4.8 percent. Relevant results were published on *Journal of Geographical Sciences* on Jan. 6.

The researchers adopted datasets of meteorological stations and statistical yearbooks and used three types of statistical models to assess the impacts of climate change (minimum temperature, precipitation, growing degree days and solar radiation, etc.) on cereal yields in Tibet from 1993 to 2017 at the county, prefecture-level city and autonomous region scales.

Ding Rui, the first author, a [graduate student](#) supervised by Prof. Shi, conducted the analysis. Results indicated that the impacts of climate change on cereal yields in Tibet were generally positive. Cereal yields in Tibet were more sensitive to temperature (minimum temperature and growing degree days) than precipitation and solar radiation.

In addition, the greatest impacts of [minimum temperature](#), precipitation, and growing degree days were in Lhasa, whereas the greatest impacts of solar radiation were in Shannan. The fixed-effects model was the most robust among the three models adopted.

These results are helpful for implementing more spatially targeted agricultural adaptation measures to cope with the impacts of climate change on agricultural ecosystems on the Tibetan Plateau.

**More information:** Rui Ding et al, Contributions of climate change to cereal yields in Tibet, 1993–2017, *Journal of Geographical Sciences* (2022). [DOI: 10.1007/s11442-022-1938-0#citeas](https://doi.org/10.1007/s11442-022-1938-0#citeas)

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