

## The Relationship between the Food production and Water Resources of Xinjiang Province

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In this study, To identify the relevance of snow cover and food production which is the main snow-ice melted water resources for an arid and semi-arid region of Xinjiang province, by Spot Vegetation data(1999-2012years).First,calculated Normalised Difference Snow Index(NDSI) by Spot Vegetation data. Second, according to the NDSI value snow cover map of study area drawn. Third, examined and analyzed spatiotemporal changes of snow cover area of study area. In addition from the Xinjiang statistical yearbook extracted cultivated land area and effective irrigation area data further digitized by GIS making map and analyzed spatial variations of food production stouts in Xinjiang province.

The result of the spatiotemporal changes of snow cover area was that the snow caver area is increased from 9636.5000km to 13957.2000km from 1999 to 2012. it has been increasing approximately by 4320.5000km in the recent 14 years.Remarkable increasing has happened that the snow cover area at

Kulun mountains side of North Xinjiang. Tianshan Mountain's snow cover areas also has increased but shows fluctuated trend.It was confirmed that Xinjiang statistic yearbook shows that cultivated land area and effective irrigation areas are increased same results that snow cover area are increased especially in fan-like area around at Kunlun Moutian side of North Xinjiang.

Keywords: Xinjiang uyghur autonomous region, Food production, Snow area, Water, SPOT/VEGETATION, NDSI