

STUDY ON EVALUATIONS OF IMPACTS ON THE FOOD SUPPLY CAUSED BY “CONVERSION OF CROPLAND TO FORESTS PROJECT”: A CASE OF WUQI COUNTY, SHAANXI PROVINCE IN CHINESE LOESS PLATEAU

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Management in Semi-Arid Area, the Loess Plateau, China*

1. BACKGROUND & OBJECTIVES

In Chinese Loess Plateau, “Conversion of Cropland to Forests Project (CCFP)” which encourages to plant trees at the steep croplands has been conducted to mitigate the serious soil erosion. Besides, the tastes of residents living there changed and as a result, wheat and rice which cannot be yielded in this region are widely eaten due to the rations of grains and finances by CCFP. These shifts have been one of the remote causes throwing up potential risks of food supply in target areas of CCFP and, examined and evaluated in social-economic researches in China. However, there would be two kinds of problems in the previous researches’ framework. First one is that these researches do not grasp the local situations because most of the previous researches focus on the self-sufficient capacity of intra-CCFP target areas. Most of international researches regarding local food-security point out the facts that food problems are related to many factors and criticize the evaluation framework in these previous researches in China. Besides that, they refer the necessities to take the relationships among regions and the individual decision making as well as action into account. Another one is that they discussed the food supply characteristics at wide scale of regions ignoring them at small scale which consists of the regions. According to international researches regarding the rural-China studies, it can be assumed that there would be social-economic gaps among villages due to intricate landform and increase of regionality by economic reform so that these previous researches in China would be lacking of the important perspectives. Therefore this study verified the impact evaluations of food supply, by focusing on the situation of local main grains produced, relationships among regions through the food supply, and the regionalities of each village.

2. STUDY AREA & METHODOLOGY

Wuqi County of Shaanxi Province as a study area is the pioneer as well as national model region of CCFP application and lost 46.3% of its cropland by CCFP from 1998 to 2010. The study methods are; (1) observational research of land use distribution and spatial analysis by GIS, (2) interviews to bureaucrats, merchants, and local residents, (3) market research in a periodic market and permanent stores, and (4) multivariate analysis of Village Committees (VCs) unit using the non-public social statistical data by township-level government.

3. RESULTS & DISCUSSION

The new findings in this study are as follows.

- 1) The dominant land use at the river bank as flat terrain is mainly cash and forage corn while the greenhouse and nursery-tree for the purpose of increase income for farmers can be limitedly found.
- 2) Both wheat and rice are supplied from outsides and residents bought them at permanent stores while these foods were not being marketed at periodic markets. The non-commercial marketing of wheat by expat workers was found in their working places as a non-related regional marketing.
- 3) Classifying each VCs by nonhierarchical K-means clustering based on their social attributes and distributing these results in the map, the VCs having small cultivated land per person, high income, and small economic gap among households distribute only in the river banks that close to arterial road.

Considering these findings, it would be important to establish the evaluation methods of impacts on food supply and policy making process which is reflecting the regional situations.