

Attempt to restore the forest cover in China's planned economic period using declassified American and Soviet reconnaissance information: A case of Northern Shaanxi Loess Plateau

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Land degradation caused by agricultural activities is a major issue which further gives rise to the problems of poverty, inequality and environmental deterioration. This is the case in the Loess Plateau, which is a semi-arid rural region in central China. In the Loess Plateau, many measures have been taken over the past 100 years for the various problems caused by land degradation, and the Conversion of Cropland to Forest Program (CCFP) has been implemented as the culmination of these previous measures since 1999. During the past 20 years, after the CCFP, the terrestrial ecosystem in the Loess Plateau has been being monitored by the scientists of such as ecology, geography and remote sensing. However, the rural natural environment is unclear before the above afforestation program when the planned economic period of P. R. China (1950s-1970s). There are mainly three reasons for this. First is because the quantitative domestic statistic data and research results is limited due to the civil wars and social disturbances. Second is because information is often dramatized in the form of sensational revelation due to the propaganda. Thirds is because there are not the multispectral satellite images until 1972 when Landsat/MSS appeared. Thus, two evaluations for the landscape in the planned economic period coexist in the Loess Plateau. One is that agricultural development was taken precedence and ecosystem were more seriously injured than before. The other one is that greening for wasteland was promoted temporarily to mitigate land degradation from premodern period.

This study focuses on the location and the distribution changes of forest resources in the Loess Plateau during the China's planned economic period, using the declassified reconnaissance photographs and maps made by the US and Soviet Union. The target area is Huanglong and Ziwu mountains, where the valuable forest area in the northern Shaanxi Province. It is thought that the progress of this study will be able to provide important information for the present vegetation monitoring and management, as well as the vegetation reconstruction in premodern period.

Keywords: semi-arid climate, Land degradation , Soviet Military Topographic Maps, CORONA Satellite Photography, Modern history