



The Relationship between Ecosystem Evolution and Vegetation Succession: Chinese dryland - Ebinur Lake Basin

x. Bai (1), y. Hai (2), and hl. Jin (2)

(1) Department of Geography, East China Normal University, Shanghai, China (tlfbx@yahoo.com.cn), (2) Department of Geography, Xinjiang Normal University, Urumqi, China

In response to several ecological environmental problems of Ebinur lake basin in the arid region of northwest China (Xinjiang Uyghur Autonomous Region), the natural background, expounds of ecological existing problems the area's and its negative impacts during the past 50 years evolution process have been studied to clarify the mechanisms and influencing factors of ecological environment evolution in Ebinur Lake Basin.

The main objectives of the study are to evaluate the relationship between ecosystem and vegetation succession in the Ebinur Lake Basin ecosystem during past 50 years leads to the precipitation, temperature change, evaporation, surface runoff, the area changes of the lake, the changes of land-use, quantitative analysis of the vegetation resources, estimation of standing crops of vegetation and finally the influence of the natural change and human activity on the ecosystem evolution.

For our study, we analyzed based on the twice investigation on the spot and the present situation of vegetation resources in Ebinur Lake Basin are estimated as follows: the standing crops of herbaceous and shrub vegetation types is about 1.738×10^{10} Kg, tree vegetation types is about 6.1753×10^{10} Kg, the whole standing crops in Ebinur lake basin is about 7.9133×10^{10} Kg.

The result of the investigation shows that the ecological evolution of study area is affected by natural change and human activity, among which the latter plays a leading role.