

Typology of Agro-pastoral Complex in Inner-most Eurasia under the Light of Geo-history

OHJI Toshiaki

Kyoto University, Kyoto, Japan

OHJI Toshiaki is professor emeritus of Kyoto University. He received his Doctor of Literature in Geography at Kyoto University (1987). Starting his academic careers in 1964, he worked at several Japanese universities including Nagoya University and Kyoto University until final retirement from Ritsumeikan University in 2009. His major field of interests is impact of human presence on terrestrial world in historico- ecological perspective.

His recent major publications include “Dynamic process of [Environment—Farming] system in South Asia” (*Asia Yugaku*, 136, 2010), “Inner-most Eurasia : convergence field of three [ecology—subsistence activity] systems”, in Kubota J. et al eds., *Historical geographic articles on Ili Basin Area*, Shokado (2009), “Meaning of sea and ocean for humankind” in *What is human history?* 20, Kodansha (2008), “*Birth of modern world map*”, Nihon Keizai Shimbunsha (2007), “Discovery of cultural area and ecosystem”, in *Academic knowledge of Imperial Japan* 8, Iwnami Shoten (2007).

Abstract

Inner-most Eurasia means the border area of China (Xinjiang), Kazakhstan and Kyrgyz. As to the prevailing view on Inner-most Eurasia, especially in Japan, we can point out the following two distortions. 1) Land of extreme aridity which emphasizes climatic uniformity. 2) Land of Silk Road which understands as vacant corridor between China and the West without its own history. However, Inner-most Eurasia comprises of several types of eco-systems and has many strata of original history. Subsistence basis of local people is, through ages, agro-pastoral activities which include from pure-nomadism through mixed economy of nomadism and agriculture to pure agriculture. Combining the differences of subsistence activities with local eco-systems, we can divide Inner-most Eurasia into three sub-areas.

A) Surrounding area of Takla Makan Desert : Extreme arid climate + composite fan belt + agriculture entirely depending on artificial irrigation including karez, but low water use capacity due to less glacier development in headwaters + weakness of animal husbandry and nomadism.

B) Junggar and north Kazakhstan : Transitional zone from steppe to Taiga forest + tall grass + availability of surface waters including lakes + development of animal husbandry and nomadism + recent expansion of farming area utilizing well irrigation

C) Northern foot areas of western part of Tian Shan Mts.—Kyrgyz and south Kazakhstan : steppe with tall grass + high potential of surface water use due to many and large-scale glaciers in headwaters + extensive mountain pastures in summer + full development of mixed economy of agriculture and vertical type transhumance

Degree of sustainability of each type differs from the others. Its approximate ranking can be assumed to be C)→B)→A) from top to bottom. However, even in A) sub-region, oasis settlements and local economy has a long continuity in history. Why was it possible regardless of climatic changes ?

Climatic conditions in Inner-most Eurasia in the last 800 years show changes in both temperature and precipitation. The general trends are summarized as ①<strongly warm—strongly humid before 15th century>, ②<weakly cold—weakly dry in 17th to 19th century>, and ③<warm—humid in the last century>. Based on its trends, we can observe fluctuations of temperature have been bigger than that of humidity in the above periods.

Climate of sub-region A) is typical desert type which shows strongly high temperature combined with extremely low humidity. Under such a climatic conditions, some fluctuation in temperature has nearly no affects sustainability of subsistence activities in sub-region A). The same discussion is applied to the other two sub-regions which has higher sustainable economic bases.