FIELDWORK REPORT

Proposals On land Use In Ulaanbaatar, Mongolia

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Introduction

Ulaanbaatar is a beautiful city with hospitable people and vast grassland. In recent years, with the economy developed, Ulaanbaatar has been facing a big challenge on environmental contamination. Land use is a critical problem in Ulaanbaatar because of large areas of land. How to improve living quality and provide the amenities of life for residents is an important issue for the government. Besides, as an important domestic and drinking water resource, Tuul river which runs through the whole Ulaanbaatar has been polluted seriously by heavy metal, especially chromium. So heavy metal treatment is extremely urgent.

Filed work

We had a filed work in Ulaanbaatar, Mongolia from August 13th to 16th. During these days in Ulaanbaatar, environmental experts and government officials made presentations to analyze environmental problems and pollution situation of Ulaanbaatar city. Meanwhile, some students who are concentrating on environmental issues also talked about snowfall and atmospheric circulation in Ulaanbaatar. Meteorological factors can’t be ignored in treating environmental contamination.

Summary findings

Some findings are summarized about general situation of land use and proposal methods that how to use the limited land efficiently, how to develop the land as an amenity.
Firstly, although there are many apartments and mansions in the Ulaanbaatar, Mongolians prefer to living in the Gers—the Mongolian traditional houses. Gers are distributed in the mountain area, so they are different from the concrete buildings on house structure. For example, we use some solar energy absorbing materials to build the roofs of mansions for heating. By contrast, Gers cannot be designed into such structure in saving energy. If we can change wood materials of Gers into these solar energy absorbing ones, energy efficiency will be greatly increased. I am concerned whether this method could be accepted or not. Because Mongolians have been living in the Gers for generations, they may not want to change their living environment. According to this situation, government officials need to promote advantages of new Gers or construct some model new Gers to make residents to experience. By adopting this method, on one hand, smoke emission will be decreased; on the other hand, we can also install water system in the Gers to reduce the sewage discharge, like solar energy absorbing system.

Secondly, land planning and constructing will make impacts on surrounding environment, so one point especially should be paid attention that during that time, we must minimize the damage to the environment as far as possible. There is a Chinese regulation named “Three Simultaneousness System”. No.26 document of “Environmental Protection Law of the People’s Republic of China” defines “Pollution control measures of construction project must be designed, constructed and operated with the main project simultaneously. It must be approved by the environmental protection departments, then the project may be put into production and use.” It is a very important regulation on protecting environment in China, because we cannot give up economic development completely for environment. What
we need to do is that environmental protection must be taken into consideration when developing economy. “Three Simultaneousness System” is intended to prevent enterprises from ignoring environmental protection during construction and saving project cost to gain more benefits.

In addition, how to use land more efficiently is not just proposing reasonable house design, it also includes costing limited funds to construct and selling at an acceptable house price. In terms of living facilities, some environment-friendly materials have been utilized for buildings, and roofs are designed into triangle to absorb solar energy. Moreover, we can establish a waste-recycling system around the buildings. Domestic waste like leftovers, manure and straw are piled up in the fermentation tank, which built in underground, then we can collect the methane to heat. Like this, domestic waste flowing circularly not only saves energy, but also reduces the pollutant emission. Of course, the cost of facilities should be included in the house price. But what I want to say is that should not we consider the cost of environmental pollution caused during the construction period? In my opinion, environmental pollution tax not only includes expenditure for pollution treatment after construction, but also the cost for potential environmental contamination before construction.

**Proposals and Future Plans**

Below I want to introduce some hypothetical scenarios about land use.

Scenario1: Designing reasonable land use
Scenario2: Construction with “Three Simultaneousness System”
Scenario3: Evaluating contamination degree and quantization & Calculating house price including cost of environmental Pollution & putting into use

I know there are still too much for modification in these scenarios, so in the future research, I will concentrate on this study and continue to improve it. Environmental pollution is still a big issue all over the world. We can’t sacrifice the environment to make our life more comfortable; instead, achieving the economic growth is based on the protecting environment.

Last, I would like to express my appreciations to SUSUTEP program for giving me
a precious chance to learn more about the environmental knowledge. Through this
filed work, I also collected some useful information for my future research on
improving environmental issues.

Reference

Environmental Protection Law of the People’s Republic of China, 1989