

Study on Farmland Utilization in Chennai Metropolitan Area in India

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Key Words: *Land-Use Change, Urbanization, Population, Rural Area, Farmland Management*

1. Study Background

Farmland is the foundation for farmers' survival. Farmland exploitation and utilization contribute to the synthetical balance on renovation and protection of farmland resource, and help to make overall arrangements to reach the purposes of reasonable land resource utilization. Nowadays, a large proportion of urban land is changed into residential settlements, factory sites, etc. urbanization is extending its hand at a rapid speed from a city's center areas to suburban areas in almost every country, especially in developing countries.

In India, with establishment and improvement on modern industrial system, urbanization, as the product of industrialization, is expanding itself both on amount and scope. And lots of farmers were forced to leave their hometown because of losing their land under the urbanization. These farmlands used to be their main livelihood source, but now quite a part of them have no choice but to face to such a condition.

2. Study Objectives

- (1) To master the farmland utilization situations nowadays and change processes on the base of field investigations and interviews with locals during the internship period.
- (2) To study the changes on the farmland utilization, sum up its change regulations and forecast future development trends on the basis of two stages (1991, 2006) of satellite data's image interpretation and validation.
- (3) To summarize the reasons and explain the changes of farmland utilization, and make some recommendations on how to realize reasonable and efficient farmland management.

3. Study Methods

- (1) The internship period in Chennai, India was about 2 and half months (2011.8.22~2011.11.4).

On-the-spot investigations were done to master the local areas' natural conditions, land-use types and so on, and make interviews with rural locals to receive information on their daily life styles and local socio-economic situations. Three typical regions in northern, southern and western parts were selected where have the prominent contradiction between population and land for fieldwork.

- (2) Data analysis (Image Interpretation) were done to identify the land-use types and calculate their areas to summarize the disciplines on land-use change, and made forecast on its future development trends.

4. Study Results

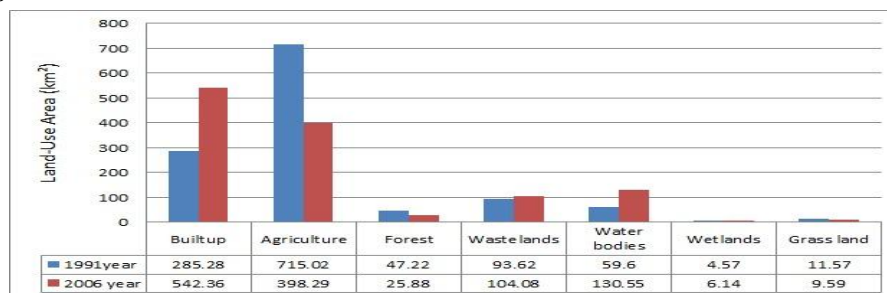


Figure 1 Land-Use Areas Change between 1991 and 2006

- (1) Urbanization in Chennai began at least 20 years ago, and is still at its rapid pace now. Lots of suburban areas' farmland has been used for city's further economic development. And in fact, more villagers choose to leave for city areas to work.
- (2) Compared to the two years' data analysis result (Figure 1), we can know that, almost half of farmland areas decreased while builtup areas increased over one time. Most of those farmlands were replaced by builtup. And this trend is still continuing.
- (3) The reason why Chennai's farmland is disappearing is obviously urbanization. Under that high-speed urbanization process, in order to solve land-use issues, appropriate and comprehensive regional development planning should be drafted as soon as possible, and implement it in a practical and effective way. At the same time, on the basis of satisfying residents' needs by nation or local government, the whole region's sustainable exploitation including economic development and social development should also be paid high attention on.