Learn experience of open space protection of U.S.

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Green open space

Definition of green open space

Green open space include mountains, farmland, rivers, green space and so on. Green open space associated with the development of urban development, urban ecological system, visual landscape, recreation activities, economic and many other functions, is an integral part of the city, in the modern urban development is playing an increasingly important role.
Issues of green open space

The urban sprawl makes green open space to be eroded continuously. The destruction of open space, including the occupation of farmland, land of landscape fragmentation, severe damage to natural water systems, habitat loss and migration corridors. How to deal with the threat to the green open space caused by urban sprawl is increasingly becoming a global problem.
Green open space

Farmland protection is a key means to implement green open space

Farmland protection is not only a fundamental to protect the interests of farmers, to protect the bottom line of urban survival, but also an important means to build the system of open space, to improve the city environment and shape the regional characteristics.
Learn from American experience

America also has the issues of reduced farmland. American agriculture is developed, known as “World's Bread Basket,” which thanks not only to its unique natural conditions, advanced science and technology and management level, but also to its a long time policy of farmland protection.
Learn from American experience

The means of farmland protection in America

Faced with these problems, since the 1960s, the United States started movement of farmland protection.

We should learn from U.S. experience about the protection of agricultural land and industry guidance, namely planning control, transferable development rights, tax incentives and urban agriculture.
Learn from American experience

Planning Control

Government planned urban growth boundary (UGB), urban built-up areas and agricultural areas by legislation or administrative authority, non-agricultural uses on farmland are not allowed, so as to achieve the purpose of protecting farmland.
Learn from American experience

Planning Control

Low cost and easy to operate are the advantages of planning control. However, in practice, planning control for farmland protection is limited, mainly due to its poor stability. On the one hand, the government may be subject to political interests or economic interests of the drive and legally change planning, this situation often occurs in the change of government; the other hand, farmland owners retain the opportunity cost of farmland without compensation, they have a strong wish to change the plan, and through the political process to become a reality.
Learn from American experience

The experience of Oregon

“To make a great place for current and future residents, the region's plans and policies protect farms and forests while revitalizing downtowns and main streets. “is the first sentence at the outset of regional planning and policy(Oregon Department of Land Conservation and Development, 1991)

Agriculture data show that between 1978 and 2007, the rate of loss of both large (500+ acres) and midsized (50-499 acres) farms in Oregon was less than one-third the rate of loss for the nation as a whole.
Learn from American experience

Transferable development rights (TDR)

Set limits on farmland for non-agricultural use, transfer the farmland development rights to others according to a one-time transfer in different ways, so that farmland will lose the right for the development of urban construction forever, but loss of development rights of farmland can still be traded. This means of protection of farmland have two steps for operation. The first is to purchase development rights, the second is the transfer of development right.
Learn from American experience

Tax incentives

Tax incentives such as tax rebate, tax cuts and other concessions, can retain agricultural uses on farmland, many states have implemented such means of farmland protection.

For example, in 1965, the United States, California passed the famous "Williamson Act" (The California Land Conservation Act), the law designed to protect the use of tax incentives to encourage farmers to the terms of arable land. By law, the county government can follow the status of the assessed value of farmland property tax levy, rather than speculative land for urban development value of real estate taxes levied, the state government will pay the resulting loss of county property tax revenues. In exchange for a lower tax, farmland owners must promise to maintain farmland for agricultural purposes for 10 years, although the law also allows owners of farmland can be changed in 10 years commitment, but must return the income tax benefits, some 15 million acres of agricultural land have participated in this program.
Learn from American experience

Urban agriculture

In 1950s-1960s, “Urban agriculture” concept was first proposed by some economists in United States. Urban agriculture is located in the city and the extension zone, closely rely on agriculture and services in the city. It is the largest city in suburban and metropolitan economic circle within the modern city to meet the survival needs of the formation and development of modern agriculture.
Learn from American experience

Characteristics of U.S. farmland protection

Based on the above analysis, we can see the method of farmland protection in United States has the following features:

1. The means of farmland protection is diversification, and with a clear purpose and theoretical guidance.

2. In the United States social and economic systems environment, farmland protection is not just the government's problem, it has a high level of public participation.

3. The purpose of farmland protection in United States is not only in order to protect farmland protection and conservation, but also actively take a variety of ways to encourage and support agricultural development and increase farmers' income.
China has the world's most stringent policy of farmland protection

Similar to the policy of farmland protection in United States, China has always attached great importance to make policy of farmland protection, food security and sustainable development. January 1, 1999 implementation of the revised "Land Administration Law" will protect the arable land to the height of the basic national policy, and developed a dynamic balance of the total arable land protection, land use control, basic farmland protection system, which more effectively prevent the momentum of farmland land for construction in 1990s.
The reference to Beijing

Farmland is the main of green open space in Beijing

Farmland protection is a top priority to implement the open space in Beijing. Beijing city's land area is 16,410 km². Plains area is 6338 km², accounting for 38.6% of all area. The total open space area is about 13,371 km², including 10,020 km² of mountain open space area, 3351 km² of plain open space area, of which 2300 km² of farm land, accounting for 68.6% of total open space.
The reference to Beijing

Plain open space system

Plain open space is divided into three circles.
The first circle
The first greenbelt areas, open space in planning area is about 171 km².
The second circle
The second greenbelt areas, open space in planning area is about 1061 km².
The third circle
The plain open space areas outside the greenbelt areas, open space in planning area is about 2526 km².
The reference to Beijing

The first circle: the first greenbelt

Introduction

The first greenbelt area located in the city center, which around the central region, with a total area of about 310 (240+70) km², open space is about 171 km² in planning area.
The reference to Beijing

The first circle: the first greenbelt

Policy
Beijing municipal government declared No. 7 and No. 20 policy, by means of a market economy to implement the city's public green space in the short period.
The reference to Beijing

The first circle: the first greenbelt

Situation

The first green belt prevented the expansion of urban growth boundary by strict zoning, preserved and implemented open space effectively. At the end of 2007, the implementation of green space was about 110.4 square kilometers, accounting for 64% of the total of 171 square kilometers.
The reference to Beijing

The second circle: the second greenbelt

Introduction
The second greenbelt located between outlying regions of Beijing city center and the 6th ring road, the region's total area of about 1650 square kilometers, which including 1061 square kilometers of open space.
The reference to Beijing

The second circle: the second greenbelt

Policy
In the second greenbelt area, there is a clear boundary of restricted construction of green areas between construction groups, the ratio of which allowed to construct is 32%, the basic farmland protection area is about 249 km².

Specifically including
Planning of urban construction land accounted for 32%, non-urban areas accounted for 68%, the total area of green space is 1061 square kilometers, accounting for 64.3% of the total. Construction land of satellite city accounted for 15% or less of total. The construction area outside satellite city construction areas accounted for 20% or less. Grant policy implemented in Forests, ecological forest conservation area. 3% construction land of green implementation area should be permitted as a reward.
The reference to Beijing

The second circle: the second greenbelt

Situation
In the absence of appropriate policy measures, the construction land sprawl has not been prevented, and implementation is not in accordance with the planning. In 2010, the ratio of construction land in the region increased from 30% to 50%.
The reference to Beijing

The third circle: the plain open space outside Greenbelt area

Introduction
The third circle refers to the plain open space locating outside Beijing greenbelt areas and new city, the total open space area of 2526 square kilometers, of which an area of 2051 square kilometers of farmland.
The reference to Beijing

The third circle: the plain open space outside Greenbelt area

Policy
Metro growth boundary and basic farmland protection areas were designated, most of the town plan have finished for the need of implementation of open space, but specific policy was in absence.
The reference to Beijing

The third circle: the plain open space outside Greenbelt area

Situation
A large number of basic farmlands have been preserved, income of farmer is lower than the average income in Beijing. There is also phenomenon of scattered layout, land waste, low employment.
What can we do?

China's per capita possession of resources cannot be compared with the United States

China's land area is basically the same with the United States, the population is 4.3 times the United States population, the farmland area equivalent to 64% of the United States, per capita farmland area equivalent to 14% of the United States.

From 1978 to 2007, 29 years, China's farmland area decreased 12.7 million hectares, average annual decrease 0.45 million hectares. "State Statistical Yearbook."

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<td>Per capita farmland</td>
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**How can we do?**

**Summary**
China and U.S. have some differences in the field of historic, system, develop stage and resource, but the opinion to eliminate the gap between rich and poor, to achieve urban health and sustainable development is the same. We must learn from the experience of the developed countries, find a way to develop independently, realistic with Chinese characteristics.

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**Learn from U.S.**
1. to designate urban growth boundaries and strict basic farmland protection areas.
2. to use the method of transferable development rights, finish part of farmers’ relocating.
3. to develop urban agriculture.
4. to allow the construction of agricultural areas a certain percentage of facilities for the development of urban agriculture.

**Integrated**
The way with Chinese characteristic

| experience |？ |
THE END, THANK YOU!