

The Construction of Urbanization in China from the Perspective of Eco-civilization

Liu Guangyue

School of Marxism, Jiangsu University, Zhenjiang 212013, Jiangsu, China

** Corresponding author: Liu Guangyue*

Abstract

Urbanization is a necessary way to realize industrialization and modernization. However, with the advancement of urbanization, not only have humans achieved rapid development of economic society, but also met ecological crisis. Therefore, eco-civilization, followed by industrialization, becomes a new way of survival and development which is established gradually by humans. But in China, there has been a serious conflict between traditional urbanization and eco-civilization in construction theory, resource utilization and environmental influence, causing a series of ecological problems. A new-type urbanization must persist in eco-civilization, renew the concept of urbanization and strengthen the ecological consciousness; reinforce the planning of urbanization as well as scientific and rational distribution; transform the development mode of urbanization and make a intensive use of resources; complete the ecological remediation of urbanization, optimize human settlements and achieve a harmonious coexistence between human and nature by way of eco-urbanization.

Key words: eco-civilization; China; urbanization; construction.

0 Introduction

Modern civilization is a process of continued urbanization. With the development of urbanization, China's economy has developed rapidly, and more and more people have enjoyed the spiritual and material civilization. However, we also are confronted with many issues such as dense population, high dissipation of resources and a variety of serious pollution. In the new era, ecological civilization has become the important sign of human civilization development, therefore, China's urbanization has stepped into a new stage of drawing lessons from the past and entering a new type of

urbanization. Faced with the development trend of ecological civilization and the ecological problems brought by urbanization, China must push the construction of the new-type urbanization with the concept of ecological civilization.

1 The pursuit for ecological civilization values of Chinese new pattern urbanization

1.1 Ecology and ecological civilization

The word “ecology”, deriving from Greek, means home and environment. In contemporary context, it mainly refers to the mutual relation and existential state between living beings, and between living beings and environment. Human beings, in the long course of development, need to obtain materials from mother nature to survive and develop so that people utilize and transform the nature continuously and consequently affect the ecology. However, due to low production capacity in the early times and thus having little effects on the nature, coupled with ecology’s ability to self-repair, ecological problems were not serious. After the Industrial Revolution, owing to the rapid increase in human material productivity and increase in the request for natural resources, people have exerted greater influence on ecology, resulting in a series of environmental problems such as a shortage of resources, environmental pollution, the extinction of animals and plants and so on. It began to poise a threat on production and life and forced people to pay more attention to this problem. In 1972, the United Nations held its first “Conference on the Human Environment”, calling on the world to protect and improve the environment.

In this case, scholars from various countries have begun to think of human civilization and try to come up with the Notion of Ecological Civilization of post-modernism which is beyond modern ecological civilization. In 1987, Mr. Ye Qianji , a Chinese ecologist, used the term —ecological civilization; In 1988, Liu Sihua, an ecological economist, proposed “creating ecological civilization” theory, emphasizing the coordinated development between economy and natural environment. In 1995, the famous American writer, critic Roy Morrison published *Ecological Democracy*, which clearly presented the concept of "ecological civilization", and believed that it was a new form of civilization after the industrial civilization. Ecological civilization is a new way for survival and development, which is established after human beings faced up to ecological crisis brought by industrial revolution and learned lessons from the past, and the sum of material and spiritual achievements , which is obtained from the fact that people followed the coordinated rule between people, nature and social development.

1.2 New-type urbanization and the value pursuit of ecological civilization

The concept of urbanization was first proposed by the Spanish engineer A.Serda in his book “Urbanization Basic Theory” in 1867. In an international sense, the urbanization can make the substantial growth in urban areas due to rural migrants into the cities or suburbs’ integration into the large cities. Urbanization is a natural course of history that is accompanied by the industrial development, the aggregation of non-agricultural industries and rural population in towns. Therefore, urbanization is the objective trend of human social development and an important symbol of national modernization

The concept of the new-type urbanization, a new stage of urbanization construction, is put forward by China in the new century after they learned the lessons from the development of the world’s and domestic urbanization. The specific connotation of the new-type urbanization should include several aspects, such as, adhering to putting people first, setting up the scientific development concept, taking the new industrialization as a driving force and urban agglomeration as the main form, promoting the coordinated development of big and medium and small towns, stimulating the synchronous development of industrialization, informatization, urbanization, and agricultural modernization, optimizing the urban spatial structure and management pattern, advancing the development of green, recycling, low-carbon, constructing the urbanization new path with modernity, humanity, coordination, culture, ecology, characteristic and sustainability.

From the progress of the development in urbanization, it is a distensible process of population and scale of land use, which promotes rapid growth of economy, and transformation of modern society. However, it also leads to a series of natural and social problems, including ecological imbalance, resource shortage, poor differentiation. As a new type of urbanization, which is promoted by traditional urbanization, it must learn from later and change traditional economic development model at the cost of consuming resources excessively and damaging the environment. We must treat ecological attributes as their own natural attributes, and vigorously promote the construction of ecological civilization and only in this way can we realize continuous and healthy development of it. From the progress of the development in civilization, ecological civilization is a new form of primitive civilization, agricultural civilization and industrial civilization and a higher stage of industrious civilization and human civilization development. In the development of ecological civilization, the construction of urbanization is bound to reflect the pursuit of ecological value. Town is a necessary space carrier of ecological civilization construction. The new form of urbanization and ecological civilization construction is the process of China’s modernization. New urbanization in the era of ecological civilization must adhere to the concept of ecological development, systematic consideration and deal with population, resources, environment and industry relations to promote urbanization and ecological integration. It also needs stick to the green, low-carbon, intensive, livable

and harmonious new road and optimize the ecological environment, as well as building ecological civilization.

2 Conflict between Chinese Traditional Urbanization and its Ecological Civilization Construction

China began its rapid advance of urbanization with the implementation of the policy of reform and opening up, and has achieved great progress over the past thirty years. From 1978 to 2013, the urban resident population has grown up from 170 million to 730 million, the urbanization has increased from 17.9% to 53.7%, with an average annual rate of 1.02%, the number of cities has rose from 193 to 658, and the number of towns has ascended from 2173 to 20113. The push of Chinese urbanization promotes its economic development, creating a miracle in the world economy development. According to the statistics of the National Bureau of Statistics, from 1979 to 2012, with an annual increase of 9.8% on average in China's gross domestic product, China's GDP has jumped from 364.5 billion Yuan in 1978 to 5.18942 trillion Yuan in 2012, ranking itself as the world second largest economy, just behind the US. China's gross income per capita has ascended from 190 USD in 1978 to 5680 USD in 2012, lifting itself from a low-income country into an upper-middle -income one, in accordance with the World Bank standards.

Along with the development of economy, the conflict, resulting in a serious of ecological problems, between the urbanization of traditional mode and the ecological civilization is increasingly apparent. It mainly shows itself in the following aspects:

2.1 The conflict of construction concept

The industrial revolution has created the industrial civilization featuring the formula of human conquering the nature and aiming at realizing economic growth by industrialization. This kind of development model is also viewed as the only way which must be passed for building up modernization. Since the World War II countries of the world have increased the input in capital and resources, expanded the production scale, constructed hypermarkets and helped improve the aggregation of population in pursuit of speeding up the economic development and promoting the increase of GDP. China, after the opening up and reform, began to learn from the western developed countries and therefore, inevitably followed this development path. In its economic development, China has paid high attention to the endless growth of material wealth, which resulted in the economic growth of high input, high energy consumption and high pollution. In the course of urbanization, the cities emphasized the expansion of scale and the aggregation of population. Consequently, excessive population was aggregated in cities. Cities, large cities in particular, keep enlarging their scales. "From 2000 to 2010, the built-up areas, in districts of cities at and above

the prefecture level, has grown by 95.8%. And that in towns of cities below the county level has increased by 50.9%.”In the process of achieving traditional urbanization, the interior relations and balance were destroyed because of excessive exploration, intensive utilization of various resources and concentrated population, causing severe negative effects on the ecological environment including unbalanced development in cities, towns, industry and agriculture, incomplete urban functions and inadequate carrying capacity. All of these have led to the frequent occurrence of all kinds of urban diseases, such as traffic congestion, soaring housing price, environmental pollution, etc..This is inconsistent with the commitment of ecological civilization to the balanced and sustained eco-development .

2.2 The conflict of utilizing natural resources

Traditional modernization mainly depends on natural resources that we humans rely on to live. The process of continual construction is the process of asking for nature by human beings and this process leads to exploitation of plenty of energy sources, lop of forests, occupation of plow lands. This kind of extensive cultivation caused rapid economic development but at a large price of natural resources. “China, as the nation of the fastest growth rate in economy, has an average annual rate of 9% from 1979 to 2011. But the consumption of energy of unit GDP in China towered above 20% higher than the average of 30 nations in APEC.” Taking lands as an example, in the traditional modernization, the excessive extension of the city and disordered occupation of lands resulted in disordered expansion of lands and lack of land resources. As the 2nd survey of State Department indicates, from 1996 to 2009, construction lands in the whole nation increased from 291.8 billion hectares. to 350 billion hectares, up 58.19 billion hectares while plow land per person decreased from 1.59 mu to 1.52 mu, less than the average of 3.38 mu around the globe; lawn dropped 106.67 hectares, marsh and swamp with the function of ecological conservation reduced 10.7% and glacier and firn lowered 7.5%. Ecological endurance is a serious problem. This form of utilizing natural resources that neglects the limitation of resources are responsible for the lack even the exhaustion of natural resources. This is obviously in contradiction to green, circulatory and low-carbon proposition of Ecological Civilization.

2.3 The environmental impact conflict

In the era of industrial civilization, people’s understanding of ecological construction is still insufficient, and the traditional method of urbanization is protecting after destroying and polluting. Rural urbanization is often at the expense of environment. On the one hand, high energy-consuming and high emission enterprises play the leading role in the urban development. These enterprises will produce a large number of waste residue, water and gas of various kinds in processes of production. Some of

these enterprises discharge illegally, which caused serious industrial pollution. On the other hand, in the urban area, the continuous accumulation of population has brought about sharp increasing demand of living land, water and consumer goods. And at the same time, a lot of domestic sewage, vehicle exhaust and household garbage are produced. Because most people have poor awareness of environment, these wastes can't be centralized treated properly and timely, which led to serious influence and damage to the surrounding environment. The traditional urbanization method has caused many kinds of pollution, such as soil, water, air, noise and so on. In some places, the arbitrary emissions of waste residue and water have affected local people's living and even lives. "In 2013, the national wastewater discharge was 69.54 billion tons, increased by 1.5% over the previous year. With a decrease of 5.3% compared with the previous year, the effluent amount of industrial wastewater was 20.98 billion tons, and took up 30.2% of total wastewater discharge, declined 2.1% over the last year. Urban sewage discharge were 48.51 billion tons, increase by 4.8% over the previous year, and occupied 69.8% of total amount of wastewater discharge, rose by 2.2% over the past year." Water pollution has caused many cities to be faced with water shortage.

3 The path of China's urbanization in the era of ecological civilization

Urbanization is the only way to modernization. However, only by adhering to the concept of ecological civilization, the new urbanization can be conducive to promoting the scientific use of resources and improving the ecological environment, and development will be more sustainable and healthy. If the construction of urbanization separates from the ecological civilization, it will inevitably result in wasting resources, increasing environmental pollution, affecting the health of the masses as well as restricting economic and social development. Therefore, in the new urbanization construction, we must adhere to the concept of ecological civilization, use the system concept, scientific planning, coordination to promote and create features, and strive to achieve the harmonious development of man, nature and society.

3.1 Update of the concept of urbanization and strengthening of ecological awareness

Man is the main body of the construction of urbanization and ecological civilization. The way of people's consciousness and behavior influence the way of urbanization. In the process of building new urbanization, we must give full play to the main role of people to update the concept of the cadres and the masses of urbanization and abandon the traditional ideas of industrial civilization to establish ecological civilization concept.

Firstly, we should take the ecological crisis as the breakthrough point, strengthen ecological civilization construction education, lead people generally to establish ecological consciousness, enhance the sense of responsibility and urgency of ecological construction and guide them to take active ways in the production and life, and promote new urbanization construction practice with the concept of ecological development.

Secondly, we should promote harmony between man and nature, and guide people to establish ecological values and concepts as well as ecological way of life, carry out ecological family, ecological schools, ecological communities and ecological towns to create a social atmosphere of respect, love and kindness for nature, improve the ecological, environmental protection, conservation awareness to change the consumption habits of luxury and live a green low-carbon life.

Thirdly, we should strengthen public opinion environment, propagandize the typical case of ecological urbanization construction and introduce experience of domestic and foreign ecological urbanization construction, meanwhile, introduce the ecological impact of traditional urbanization, exposure the waste of resources and destruction of ecological to alert human being.

3.2 Strengthening of the construction of urbanization and planning of scientific and reasonable layout

The great importance attached to city not township, as well as a blind pursuit of scale expansion in the traditional urbanization, are thought to be one important factor which causes the ecology environment deprivation of the area.

To accelerate a new-type urbanization, it is necessary to adhere to the philosophy of systematic ecospecies, to plan the scientific layout, as well as to instruct and promote healthy development of urbanization.

Firstly, we should analyze seriously ecological carrying capacity and current development status of every area. With the concept of coordinating all the activities of the nation like pieces in a chess game, we should also view city groups as main parts and focus on complementary advantages between cities and towns. Besides, we need to distribute scientifically, and plan strategic layout from a long-term perspective, thus pushing forward the healthy and orderly development of urbanization.

Secondly, we should propel the integrative development of industries and towns, in order to motivate synchronous development in terms of industrialization, urbanization and agricultural modernization. Meanwhile, we should base on the actual planning of key industries and let the development of special industries give impetus to the construction of urbanization with Chinese characteristics, so that we can form a new pattern of dislocation construction.

Thirdly, aiming at the city agglomeration, cities and towns, we should attach importance to their scale development plans, and scientifically ensure their

development orientation, What's more, we should control their scale of construction and density of population. Meanwhile, improve their ecological carrying capacity and life quality of residents. One important thing is that we should avoid to blindly pursue scale expansion. Instead, we should solve ecological contradictions with might and main.

Fourthly, as a saying goes. "Village ignition, household smoke", it has no time to delay for us to revolutionize this disorderly development condition. Furthermore, we should program scientifically all kinds of industrial parks according to particular advantages of each region, to promote cross-regional cooperation, encourage businesses to get concentrated in industrial parks, develop industrial parks toward specialization, as well as avoid overlapping investment and recourse wastes.

3.3 Transforming of urbanization mode

The urbanization guided by the ecological civilization is against the predatory resource exploitation and harm to nature and it advocates harmony between human beings and nature. So we should speed up the process of economic transformation and upgrading to promote intensive and coordinated development. As a result, we can improve the resource utilization efficiency and improve ecological productivity.

Firstly, we need to optimize industrial structure to change the developing mode merely in the pursuit of industrialization and pay more attention to the balanced development among primary industry, secondary industry and tertiary industry. Also, we should develop ecological agriculture and the tertiary industry, which is less polluting and energy-intensive. We are ought to be environment-friendly by optimizing structures to reduce energy consumption.

Secondly, the economy should be developed in an intensive way. We should promote the upgrading of traditional industries by enhancing technology innovation to realize the System of Utilizing Resources with Compensation and the System of Ecology Environment Compensation. The enterprises who are using green technology and promote energy saving and emission reduction should be given preferential policies and financial support while those which are high in input, consumption and pollution but unproductive should be shut down. As a result, the structural pollution can be eliminated. What's more, the sustainable development of new urbanization should be realized by developing high and new technology industries.

Thirdly, in order to promote the ecologicalization of industrial development and the industrialization of ecological construction, we should make great efforts to push the development of ecological technology by carrying out joint project research, supporting demonstration projects, promoting environmental-friendly producing technology and producing sanitarily. Furthermore, we should also develop circulating economy, and promote the rational exploitation of resources, comprehensive utilization and protection.

3.4 Accomplishment of ecological restoration and optimizing of living environment

In the construction of new urbanization, we not only need to reduce the damage to the ecology, but also strengthen the restoration and protection upon it.

Firstly, we should make full use of the self-adjustment of the ecological system while at the same time, not only actively promote the conversion of farmland to forests, return farmland to the lake, return grazing land to grassland, reduce human activities on the ecological system interference, and promote self-repair, but also use ecological technology to a great extent to carry out plant, animal and microbial remediation and other means to strengthen the ecological system of self-repair.

Secondly, the process of building the urban ecological infrastructure should be accelerated. We should attach great importance to collecting sewage and solid waste and building the disposing equipment. The improvement of ecological infrastructure in large and medium cities should be focused on. Moreover, more investment should be committed to the construction of small cities, towns and rural areas to make up for the history.

Thirdly, on one hand, the construction of ecological civilization system of urbanization should be intensified. On the other hand, the ecological protection responsibility of governments at all levels should be implemented while ecological civilization construction should be brought into the evaluating system on the government and related cadres at all levels. To maintain the ecology, we should improve laws and regulations, upgrade supervision system and intensify social supervision. More efforts should be made to investigate on the behaviors of damaging ecology and the punishment standard for the destruction of it should be improved as well.

Reference

1. Roy Morrison. *Ecological democracy*, South End Press, Boston, 1995.
2. Baber W F, Bartlett R V. *Deliberative environmental politics: Democracy and ecological rationality*, The MIT Press, London, 2005
3. Callicott S J. *Environmental philosophy: From animal rights to radical ecology*. Prentice Hall PTR, New Jersey, 1993.
4. Pjman L P. *Environmental ethics: readings in theory and application*, Jones and Bartlett Publishers, Boston, 1994.
5. Foster J B. *Max's Ecology: Materialism and Nature*, Monthly Review Press, Mew York, 2000.
6. Hu Jintao. *Firmly March on the Path of Socialism With Chinese Characteristics and Strive to Complete The Building of a Moderately Prosperous Society in All Respects :Report to the Eighteenth National*

- Congress of the Communist Party of China*, People`s Publishing House, Beijing, 2012.
7. Shen Shuguang, Theory and Reality Basis of Ecological Civilization, *Journal of Peking University: Philosophy and sociology*, 1994(3).
 8. Hu Jiquan. *China`s new urbanization development road*, Chongqing Press, Chongqing, 2008.
 9. Liu Haiping. The new urbanization connotation analysis, *Policy research & Exploration*, 2012(7).
 10. Qiu Baoxing. Six changes promote the new urbanization, *Urban Development*, 2012(1).

Correspondence Address for hard copy:

School of Marxism, Jiangsu University, Number 301 of University Road,

Zhenjiang City, Jiangsu Province , P.R.China

Postal code: 212013

Recipient: Liu Guangyue

Telephone: +86115906106558