

Monitoring and Evaluation in China's Urban Planning System: A Case Study of Xuzhou

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Introduction

In China, modern urban planning has been followed since the end of the 1970s. In the last thirty years, it has played an important role in the construction of cities and increased their sustainable development in parallel to their constant and rapid economic development. However, rapid urbanization has deeply affected the construction of the country's cities. China's urbanization and industrialization are unprecedented in terms of scale and complexity, with no parallel in other countries (Wu and Rosenbaum, 2008). In order to catch up with rapid urbanization and to accommodate large migrations of rural people moving into cities in search of improved opportunities, more and more plans have been prepared to guide city development.

In western countries, research and discussion about monitoring and evaluation in urban planning have been in progress for the past 40 years, but in China, evaluation and monitoring are not popular research topics, and have a minimal role only in the large number of plans prepared every year. The types of evaluation are limited; most planning evaluation uses formative¹ evaluation approach. The focus is on evaluation of alternative plans, and a few attempts have been made at summative evaluation. However, it has recently been observed that, with the social, economic, and public reforms and the improvement of information systems, increasing attention has been paid to evaluation and monitoring in planning policy making, in academic research, and in practice during the last ten years. It is expected that evaluation and monitoring will play more important roles in the future and lead to improvement in planning procedures and management.

This paper introduces the policies and practices used in monitoring and evaluation in Chinese urban planning. The focus is on monitoring and evaluation in Chinese master plans² (*cheng shi zong ti gui hua*), the top tier in the urban planning system and a statutory tool to control urban development. Through examining how monitoring and evaluation in one specific city's (Xuzhou's) Master Plan has been carried out, this paper makes recommendations for improving their use in Chinese urban planning to promote sustainable urban development.

Background on Urban Planning in China

Evaluation and monitoring in urban planning in China are performed in a Chinese political environment and based on Chinese urban planning systems and the Chinese Urban and Rural Planning Act.

The Government system

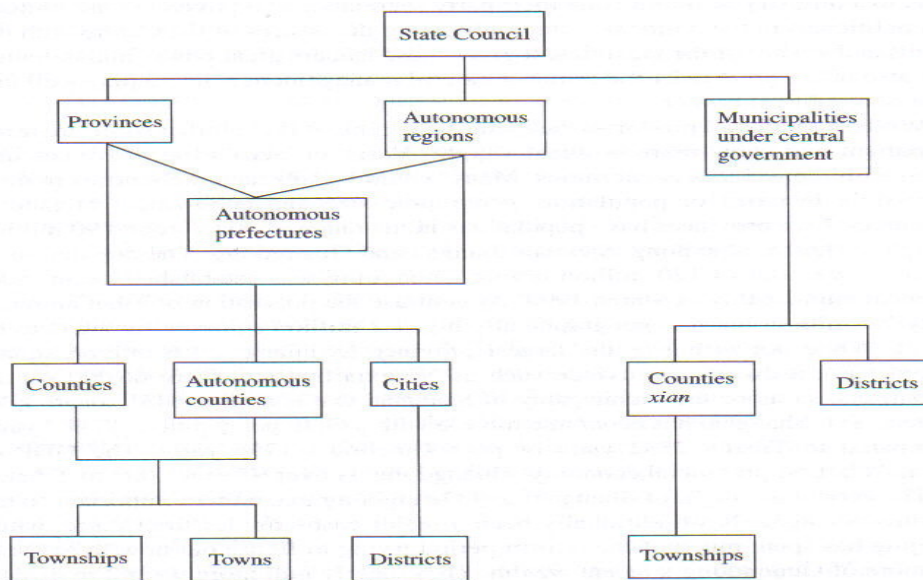
In China, the people's congress is an organizational form for state power and is the nation's fundamental political system. Multi-party cooperation and political consultation under the

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1. A formative evaluation is a method of judging the worth of a program while the program activities are forming or happening. Formative evaluation focuses on the process (Bhola, 1990).
 2. The master plan is called an official plan, comprehensive plan, etc. in other countries.

leadership of the Communist Party of China, the country's political party in power, is the basic political system. The central administrative system includes the central administrative organs, the State Council, under the system of the National People's Congress and the leadership of the central administrative organs over local administrative organs at various levels.

There is a three-level administrative network of prefectures, counties and cities, and townships and districts (see Figure 1) under the provinces and equivalents. These three levels of government below the centre are organized in basically the same way as the centre, with government (*shi zheng fu*) and party (*shi wei*) organizations paralleling one another. The people's congresses (*ren da*) are the local organs of state power and are able to elect and recall members of the people's government. The people's government is the administrative organ of the people's congress and is responsible to both the people's congress and its standing committee at the same level, and to the organs of state administration at the next highest level, and is ultimately subordinate to the State Council. The local people's congresses have the power to adopt local regulations and those above at the county level. The local people's congresses can monitor any performance of the local government, including urban planning.

Figure 1. Levels of Government under the State Council



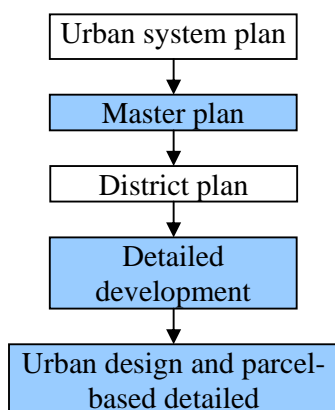
Note: In addition, there are the two Special Administrative Regions of Hong Kong and Macao that will retain their existing political and economic system for up to 50 years.

Source: Saich, 2001.

The Chinese planning system and the Planning Act

According to the Chinese Urban and Rural Planning Act (has been in effect since 1 January 2008), the Chinese urban planning system consists of two tiers: the master plan (*zong ti gui hua*) and the detailed plan (*xiang xi gui hua*). The top tier is the master plan that outlines the general land use pattern of a city. Another tier, below the master plan, is the detailed plan, which deals with areas that face immediate development or are specified in the master plan. The detailed plan is composed of the detailed development control plan (*kong zhi xing xiang*

Figure 2. Chinese Planning System



Note: Shaded plans are included in the 2008 Chinese Urban and Rural Planning Act.

Source: Yeh and Wu, 1998.

xi gui hua) and the urban design and parcel-based detailed construction plan (*xiu jian xing xiang xi gui hua*.)

A master plan usually has a planning horizon of 20 years and should consider long-range development strategies. The main content of master plans includes the city's development direction, the function of each district, land use layout, comprehensive transportation planning, construction-forbidden areas, construction-constrained areas, and construction suitable areas, green land planning, tourism planning, etc.

Urbanization in China

The process of urbanization in China has accelerated since economic reforms in 1978. The urbanization rate increased from 17.9 per cent in 1978 to 43.9 per cent in 2006 (Table 1). Cities are expanding quickly with rapid increases in population (Table 2). At the same time, the economy is also increasing steadily and quickly, at more than 7 per cent every year. According to the National Bureau of Statistics of China (2007), there were 333 municipalities, 2860 counties, and 41,040 townships (towns) in 2006.

Table 1. Rates of urban growth in China (1978–2006)

Year	Urbanization rate (%)
1978	19.72
1980	19.39
1985	23.71
1990	26.41
1995	29.04
2000	36.22
2005	43.0
2006	43.9

Source: The National Bureau of Statistics of China, 2007.

Table 2. Number of Chinese cities by size of non-agricultural population

Year	Super-large cities >2 million	Very large cities 1–2 million	Large cities 0.5–1.0 million	Medium cities 0.2–0.5 million
1949		5	7	18
1978		13	27	60
1995	10	22	43	192
2000	13	27	53	218
2006	37	80	106	59

Source: The National Bureau of Statistics of China, 1996, 1999, 2001, and 2007.

Evaluation and Monitoring of Urban Planning in China

As noted above, during the last ten years the importance of evaluation and monitoring in urban planning has been realized by planners, planning administrative officials and the public. The subject is being explored in policy making and academic discussions and is also starting to be considered in some planning practices.

The practice of evaluation in Chinese urban planning

There are evident differences between western countries and China in planning evaluation, due to differences in city development (Sun and Zhou, 2003). In developed countries that are experiencing high levels of urbanization, great focus can be put into evaluation and monitoring because of the rarity of large-scale urban development, the sophistication of the information systems, and the maturity of the planning systems. In contrast, China is undergoing rapid urbanization, and responding to many demands to prepare plans to guide city development. Evaluation in planning, especially in plan implementation, is normally of secondary consideration. There is an absence of discussion and dialogue about planning performance among both local authorities and professional planners. In most cases, evaluation of plans occurs as required by the Planning Act or other regulations.

Before 2003, most evaluation focused only on evaluation of alternative plans,³ which is an important component in the planning process and is a crucial strategy to improve the planning quality in China. The subjects of evaluation are broad, and include urban transit planning, water resources, environmental impact, land use development near high-speed railway stations, green space, etc. Such subjects had and still have different indicators based on a plan's character. For example, indicators for evaluating a new district's location generally include land potential, geographic situation, accessibility, connection to its original city, environmental effect, etc. Indicators for land use near high-speed railway stations include the transportation organization, cost, green space, the project image, the usage of underground space, etc.

From 2003, planning researchers started to look into evaluation. Sun and Zhou (2003) comprehensively introduced western evaluation theories to China. Since then, some explorations have been made analyzing planning documents and planning practices (Talen, 1996), for example, a study on Wuhan City's Master Plan's implementation (Wang, 2005), a study on implementation of Tianjin City's Master Plan (Pu, 2005), research on evaluation systems in the implementation of Yuyao City's Master Plan (Li, 2006), etc. However, most research was made in the academic field. These evaluations did not share research methods and indicators.

In China, it is generally the government and developers who carry out planning evaluations. Most evaluation is carried out internally, i.e., within the planning organisation, municipality, and higher levels of planning departments. In-house staff usually only assess a plan's adherence to its own stated goals and objectives (e.g., plan conformance (Talen, 1997)). There is seldom any involvement of external evaluators such as community groups. Internal staff, composed of academic experts, officials, and professional planners, often have a comprehensive and sound understanding of the Planning Act, regulations, policies, resources, and project context. However, the Chinese experience confirms what Palys (1997) noted as important considerations—personal bias, as well as organizational politics and culture, which may affect those internal evaluators and monitors.

3. Evaluation of alternative plans is to assess the impacts of different planning proposals.

For various reasons, evaluation is not popular in China.

- Many factors, such as the insufficiency in information systems and the lack of money and expertise restrict or limit the implementation of evaluations (Sun and Zhou, 2003; Lu and Wu, 2007).
- Planners often pay much more attention to plan preparation, less attention to evaluation. They are often unsure about the effectiveness, efficiency, and impact of plans they are involved in.
- Some planning officials feel that the authority of planning administrative departments is challenged by evaluation. Thus, they do not have much enthusiasm for evaluation, sometimes even rejecting it (Sun and Zhou, 2003).
- The complexity of planning evaluation also results in its unpopularity. The effect of implementation of urban planning occurs because of many factors, including the plan and social and economic situations, etc. Typically, as in some western planning systems, many non-planning factors determine the outcome of planning implementation and programs (Seasons, 2002). This ambiguity in cause-and-effect relationships causes trouble in evaluation.
- The implementation of urban planning has extensive influence. Plans are not only relative to physical environment, but also to economic activity and residents' attitude. People's relationships, often complicated and even hard to perceive, often cause barriers in building up an evaluation framework. Any attempts to monitor and evaluate a plan need to address the difficult task of determining how to monitor and evaluate its conditions and any changes (Seasons, 2002).
- The activities of urban planning involve different interest groups, classes, organizations, which hold different values, have different needs from, and expectations about the evaluation process. Those values, needs, and expectations will affect planners when they evaluate plans.

Currently there is a dilemma in evaluation in China. The governments and the planners keep preparing plans to catch up with rapid urbanization; normally they just repeat what they did before and have no time to improve flawed or outdated practices (Sun and Zhou, 2003). They also realize the difference between plans and their implementation. The situation is that no matter what the results of plan implementation, new plans will be prepared soon. Due to the lack of evaluation institutions and procedures, planners can only judge plans effectiveness and failure or success based on their social positions and the public's attitude (Zhang, 1996) Furthermore, urban planning is often a target and is seen as responsible for many unexpected urban issues that are actually caused by a series of social and economic problems (see Baer, 1997). Hence, there is an urgent need to improve planning evaluation in China.

The practice of monitoring in Chinese urban planning

Monitoring implies a continuous evaluation of activities in policies, processes, and plans (Seasons, 2002). Before 2002, local administrative departments were responsible for monitoring plans. Monitoring focuses on city master plans, scenic reserve plans, historic city plans, and detailed plans. Generally speaking, plan monitoring plays only a small role in planning management in China. On the one hand, there are deficiencies in the methods of monitoring plan implementation; on the other hand, monitoring is normally carried out after the construction or development has started— even after it is finished, when any damage has already occurred. The facts only emerge through disclosure by the mass media or public outcry. By then, negative social impact and economic loss are hard to alter.

Apart from administration monitoring, a system of individual monitors now helps to enforce planning monitoring. This monitor program was first held by the Ministry of Housing and Urban-Rural Development in 2006. In the same year, 27 planning monitors were sent to 18 cities for a one-year program. Monitors are usually experienced retired planners or planning officials. They are familiar with planning regulations, standards, and management processes and are good at communicating with different departments. Hence, they can identify most problems in plan implementation and provide measures to solve these in a timely manner.

This monitor system is an innovation to reinforce the current monitoring system. Its implementation has had remarkably effects: planning departments have improved their performance, and many illegal construction sites have been found at an early stage. Although some progress has been made in planning monitoring, many aspects need to be improved, especially those that involve the public.

Evaluation and monitoring in planning regulations and policies

Monitoring and evaluation, important management tools in urban planning that have great potential to assist many planning practices, should be carried out during the whole process of plan preparation and implementation (Sun, 2002). However, acts and regulations for monitoring and evaluation were lacking before 2006 in China. In the Chinese Urban Planning Act,⁴ there is little specific information about evaluation and monitoring. Hence, these processes were seldom carried out, and the authority of plans has always been challenged. In recent years, with policy reforms and the advancement of information, many efforts have been made in evaluation and monitoring reform, which are first reflected in planning laws, regulations, and policies.

Policies and regulation relative to monitoring in urban planning are as follows. On 23 February 2006, a regulation in the form of 'A circular concerning improving the quality of master plans' was promulgated by the Ministry of Housing and Urban-Rural Development. In this regulation, two monitoring strategies were proposed. The first was to enhance the monitoring mechanism through adopting a monitor system nation wide and improving urban information management of urban planning (as mentioned in the above section). Monitors with professional experience in urban planning are sent by provincial governments and work following plan regulations and approved master plans. They have the responsibility to monitor plan implementation and prohibit illegal construction. At the same time, using a dynamic information censoring system, the Ministry of Housing and Urban-Rural Development can monitor the implementation of master plans. Second, the Ministry of Housing and Urban-Rural Development and the Ministry of Supervision monitor the effectiveness of urban plans to identify illegal construction, as well as adjustments and updating of urban plans made without reporting to upper administrative departments.

The Urban and Rural Planning Act came into effect on 1 January 2008. It contains a whole section about monitoring. According to Sections 51 and 52 in this Act, the monitoring system for planning is formed by three levels of monitoring, executed by local administrative departments, by the local people's congresses or their standing committees, and by the public. Monitoring should be carried out for the whole process of plan preparation, approval, implementation, and amendment. These regulations strongly support and guide monitoring in practice.

4. The Chinese Urban Planning Act was in effect between 1 April 1990 and 31 December 2007. It was replaced by the Chinese Urban and Rural Planning Act on 1 January 2008.

The Chinese Urban and Rural Planning Act also contains policies and regulations on plan evaluation. The following are the parts of the regulations that are relevant to this discussion. Sections 16, 26, 27, 46, and 47 require that urban system plans and master plans must be evaluated in two circumstances: 1) before they are submitted to the above government (e.g. a master plan of a municipality needs to be submitted to the provincial government, a provincial urban system plan needs to be submitted to the State Council), and 2) when they need to be amended. In these processes, the organizer of a plan (normally local governments or planning administrative department) should perform evaluations by holding consulting meetings and public meetings. Local people's congresses, experts in relevant departments, and the public are involved in the evaluation at different stages. The result of evaluation and strategies dealing with it need to be open to the public.

The appearance of the above regulations and policies about evaluation and monitoring reflects progress in Chinese urban planning. They highlight the importance of monitoring and evaluation in the planning process and provide policy support in planning practice.

The Case of Xuzhou

Xuzhou is an important Chinese national transportation hub and a regional centre, as well as a historic city (see Figure 1). This case study of Xuzhou examines how monitoring and evaluation of Xuzhou's Master Plan has been carried out. Lessons are learned in this process, and policy recommendations for improving the monitoring and evaluation of Chinese urban plans are made.

The city of Xuzhou was chosen as a case study for several main reasons. First, it is facing problems common to China's cities that are undergoing rapid urbanization, such as the loss of community character, breaching of its development boundary, deterioration of the environment, conflict between city development and farmland protection, etc. Those challenges need to be reflected and solved in the city's master plan, a statutory tool to control urban development. Second, Xuzhou is one of the cities to adopt the Planning Regulations Guidelines (No.146) that reflects contemporary planning trends in monitoring and evaluation. Third, the evaluation and monitoring elements in Xuzhou's Master Plan are typical of those for most big Chinese cities.

Figure 3. The location of Xuzhou City in China (left) and in Jiangsu Province (right)



Xuzhou's geographic and historic context

Located in the east of China and in the northwest of Jiangsu Province, Xuzhou is the largest city of northern Jiangsu as well as its most ancient city. As the intersection of Jiangsu, Henan, and Shandong Provinces, the city boasts a most important geographic location that all the states of ancient China envied. Xuzhou has a 2500-year old city building history and was one of the first cities in Jiangsu Province. Thousands of years' history has blessed the city with profound culture and splendid historic treasures. These ancient cultural relics, together with the beautiful natural mountains and lakes in and around the city, comprise a large picture of Xuzhou's attractions.

After the People's Republic of China was founded, the city has come under the direct control of Jiangsu Province since 1953. The city nowadays has jurisdiction (Xuzhou Region) over four towns, Fengxian, Peixian, Tongshan, Suining, two cities, Pizhou and Xinyi, and five districts in Xuzhou city. By 2006, it covered an area of 11,258 km² (120 km² as Xuzhou City's urbanized area), with a total population of more than 9.0 million (1.4 million as Xuzhou City's residents).

Xuzhou is located in a transportation hub connecting five adjacent provinces. It is known for a modern network of highways, railways, waterways, and civil aviation. The economy of Xuzhou has developed rapidly since economic reform in 1978. Now, Xuzhou is one of the nation's most important agricultural product bases; has rich mineral resources with more than 30 kinds of high-grade mineral resources; has machinery, foodstuffs, chemicals, electronics, and pharmacology industries; and has a vigorous service sector.

Xuzhou's master plans

Xuzhou's government organized to prepare a master plan in the 1950s after the People's Republic of China was founded. However, in 1960, the National Economic Planning Meeting announced the abandonment of urban planning. From 1966 to 1976, China entered the disastrous period of the Culture Revolution (Yeh and Wu, 1998). Urban planning was totally abandoned, planning institutions and organizations ceased to exist, and planning documents were discarded (Xie and Costa, 1993). Since the reform in 1978, three editions of Xuzhou's Master plan have been promulgated (see Table 3).

In Xuzhou's Master plan (1980 to 2000), the city's function was defined as a transportation hub, a commercial centre, and a regional city with coal and electric industries. The population of the city was 0.45 million in 1979 and was projected at 0.65 million in 2000. The scale of land use of the city was projected to increase to 35 km² in 1985 and 49 km² in 2000. The main development direction of the city was west and south. The spatial structure was formed with one city, two towns, and other villages. Construction was focused on the central city and two satellite towns. In this master plan, five industrial zones, five warehouse zones, seven residential areas, and two cultural and educational areas were planned.

In Xuzhou's Master plan (1995 to 2010), the city's function was defined as an important national transportation hub and a regional centre with many functions, such as commerce, transportation, energy resources, finance, and tourism. As for city scale, the population in the city was 0.96 million in 1994; with an estimated growth to 1.5 million in 2010; urbanized use was 83 km² in 1994, with an estimated increase to 150 km² in 2010. The land use per capita in 1994 was 86.21 m², with an estimated increase to 95 m² in 2000 and 100 m² in 2010. The city

Table 3. The evolution of Xuzhou's Master Plans

	The city's function	Population projections		Land use		Main development direction
		Year	Million	Total	Per capita	
		1950	0.06	12	–	
Master Plan (1980 to 2000)	A transportation hub, and a commercial centre, and a regional city with coal and electric industries.	1979	0.45	–	–	To west and south
		1985	0.54	35	64.81	
		2000	0.65	49	75.38	
Master Plan (1995 to 2010)	An important national transportation hub and a regional centre with many functions,	1994	0.96	83	86.21	To east and southeast
		2000	1.2	114	95	
		2010	1.5	150	100	
Master Plan (2007 to 2020)	An important national transportation hub, a regional centre city, a national historic, cultural and tourist city.	2005	1.4	120	85.7	To east and southeast
		2010	1.56	151	97.1	
		2020	2	180	90	

Source: Xuzhou's Master Plan (1980 to 2000), (1995 to 2010), and (2007 to 2020).

boundary included the city area, nine adjacent towns and countries, the airport and its airspace, and the water supply area. The main direction for development is east and south-east.

In Xuzhou's Master plan (2007–2020), the city vision is to be promoted as an important national transportation hub, a regional centre city, a national historic, cultural, and tourist city. The population of Xuzhou City is projected at 1.56 million in 2010 and 2 million in 2020. In 2010, the urbanized area of Xuzhou City is projected to be 151.40 km², 97.10 m² per capita; in 2020, 180 km², 90 m² per capita. The main direction for future development is still to the east and south-east.

Evaluation in Xuzhou's master plan (2007 to 2020)

According to the Planning Act, several evaluations should be done (See Figure 4) in preparing a big city's master plans. In the process of preparing Xuzhou's Master Plan (2007 to 2020), only two, which were evaluation of Xuzhou's Master Plan (1995 to 2010) and evaluation of alternative plans, of the seven evaluations were performed using clear indicators. Other evaluation processes were not so clearly structured. The public normally could not attend evaluation meetings except during the 30 day official public evaluation process.

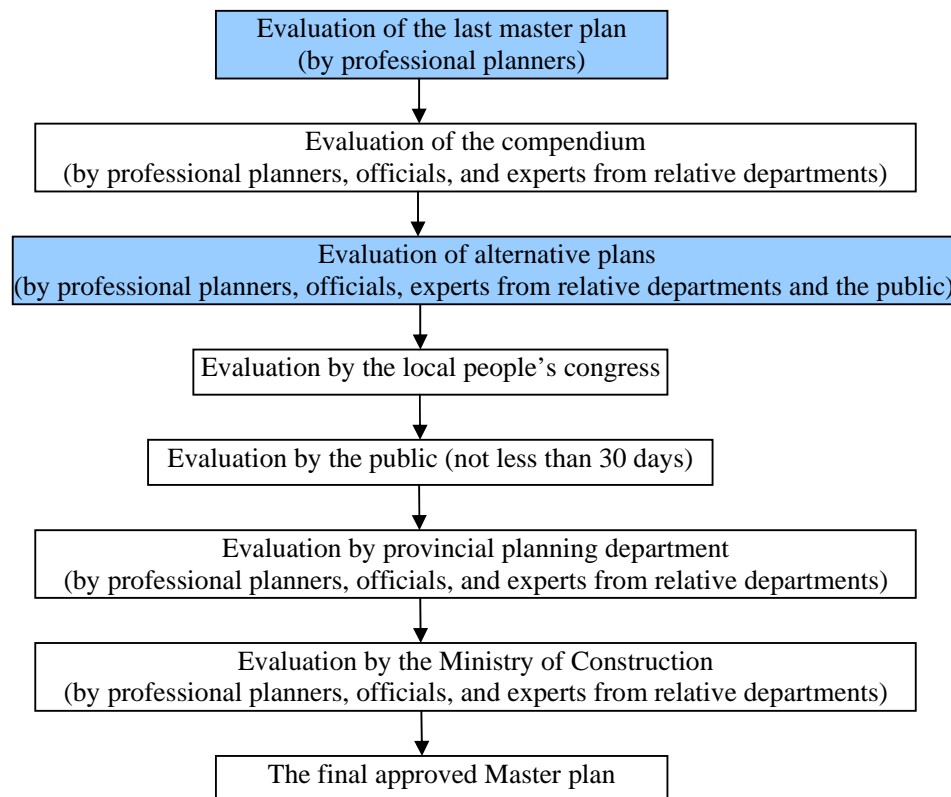
Evaluation of Xuzhou's Master Plan (1995 to 2010)

As Hoernig and Seasons (2004) summarised, there are three categories of indicator conceptual frameworks, which include conventional (economic, social, and environmental), integrative (sustainability, quality of life, and healthy sites), and performance approach to indicator use (performance indicators and performance measurement). In evaluation of the last Xuzhou Master plan (1995 to 2010), indicators (see Table 4), not belonging to conventional, integrative, or performance indicator conceptual frameworks, are designed according to the

content of the master plan. The conclusion of this evaluation is as follows and the summary of the evaluation is described in Table 4:

“The plan has done well in controlling development standards and regulations, protecting the city’s potential developing land. The plan has followed the principle of sustainability and embodied the balance of economy, society, and ecology through environmental protection, historic preservation, and landscape preservation. The plan has had positive effect in guiding the city’s construction, optimizing the city’s functions, and improving its economic and social development. The city’s image has improved due to the plan’s strict control of the green space and scenic reserves. At the same time, the green system and green space possession rate per capita have been enhanced. However, Xuzhou faces new challenges and new problems under the rapid urbanization that comes with the improvement of its market economy system. Some features of the plan (shown in Table 4) have not adapted to the development of society and need to be adjusted.” (Xuzhou’s Master Plan (2007 to 2020)).

Figure 4. The process of evaluation of Xuzhou’s Master Plan (1995 to 2010)



Note: Shaded evaluation were performed using clear indicators in preparing Xuzhou’s Master Plan (2007 to 2020)

Table 4. Summary of the evaluation of planning objectives of Xuzhou’s Master Plan (1995 to 2010)

Indicators	Evaluated elements	Summary of evaluation comments
Objectives of city construction	City’s vision	Efforts need to be made to supplement and adjust the city’s functions, and to clarify the city’s key position as a centre in response to provincial policies.
	Population	The plan was made under the policy of the Chinese Urban Planning Act to “ <i>strictly control the scale of big cities and logically develop middle-size cities and small-size cities.</i> ” [*] The policy was later adjusted to “harmonious development of all cities.” by the State Council in 2000. Thus, the scale of the city also needs to correspond to the updated policy.
	Urbanized areas	The distribution of population in a city area changes a lot with rapid urbanization and the improvement of transportation. The urban planning area needs to be adjusted.
Objectives of social development	Proportion of tertiary industries	The city’s downtown should accumulate the service sector to meet the regional development standards. However, as a historic city, the downtown’s underground has many historic relics, which need to be preserved according to the National Historic Act. Those historic relics restrict the possibilities of downtown revitalization.
	Transportation	The emphasis on public transit is insufficient.
	Eco-system	The emphasis on ecological development is insufficient.
	Urban development direction	The last plan brought forward a sound development policy, which was to develop to the east and south-east. However, the implementation is not detailed enough. The planned western industrial zones contrast to the city’s main direction. Those developing conflicts need to be resolved.
	Urban form	The plan did not have enough land set aside for public facilities. As a result, the arrangement of mega-projects is inefficient; some projects go against the environmental protection polities; some are poorly situated, being remote from each other. Hence, there is a need to adjust inefficiencies in selecting sites for mega-projects.
Land use	Public facilities	The emphasis on public transit is insufficient.
	Historic areas	There is a conflict between historic preservation and development in the inner city.

* Big cities are those with a population over 0.5 million; middle-size cities have populations between 0.2 million and 0.5 million; while small-size cities have a population of less than 0.2 million.

Source: Data was summarized by the author based on Xuzhou’s Master Plan (2007 to 2020)

Evaluation of alternative plans

There were three alternative plans prepared in the consideration of Xuzhou’s social-economic development and land use situation. The indicators of evaluation included areas of the district, geographic situation, accessibility, exterior communication, connection to its original city, effectiveness boundary, environment, and the usage of Jinghu’s highway. Finally plan-1 was chosen.

Figure 5. Alternative plans (from left to right plan-1, plan-2, and plan-3)



Source: Xuzhou's Master Plan (2007 to 2020)

Analysis of the evaluation of Xuzhou's Master Plan shows that there was no evaluation framework to follow, the process of evaluation and its conclusion are vague, the selection of indicators was not sufficiently precise, and the involvement of the public was limited.

Monitoring in Xuzhou's master plan (2007 to 2020)

Monitoring of Xuzhou's Master Plan was also vague. The planners who prepared this master plan realized this situation and created regulations to improve the situation so as to encourage public participation in planning. Monitoring should be performed by administrative officials and the public; all compulsory contents⁵ of the master plan must be monitored. Although public participation is encouraged, the channels through which the public can get to know planning information are limited: the public has the right to know and read planning documents and maps, but they need to go to planning departments personally and apply first. This problematic situation impedes public participation.

Key Lessons Learned

There are a number of important lessons to be learned from the analysis of evaluation and monitoring in Xuzhou's Master Plan.

Building up an evaluation framework

One of the main obstructions to planning evaluation is the difficulty in building up an evaluation framework, especially for an approved plan. Indicators might be different in different evaluation cases. Table 5 proposes an evaluation framework that needs to exist in different planning stages (Lu and Wu, 2007): plan preparation, planning assessment progress, plan implementation, and plan amendment. With setting of evaluation indicators together with planning goals and objectives, evaluation can be performed more easily. Those indicators can also be selected for use in monitoring.

5. According to the Chinese Urban and Rural Planning Act, compulsory contents in a city's master plan include urban planning boundaries, the boundaries of controlled development areas (prime farm land, scenic reserves, wetlands, water reserves, underground mine areas, and other eco-sensitive areas) in its regional area, the city's development land (the city's scale, population and land use density, green land, and underground areas), infrastructure and public facilities, historic preservation, environmental protection, disaster protection.

Table 5. An evaluation framework of planning implementation

Different planning stages	Procedure	Participants
Plan preparation	Defining goals, objectives, and indicators	Planning administrative officials and planners
	Defining evaluation and monitoring framework: defining elements need to be evaluated and monitored, how often to evaluate, who to evaluate and monitor	Planning administrative officials and planners
Planning assessment progress	Evaluating conformance with other policies and regulation	Planning administrative officials and related experts
	Evaluating conformance with other relative plans	Planning administrative officials and related experts
	Evaluating the feasibility of goals, objectives, and indicators	Planning administrative officials and related experts
	Evaluating by the public	A people's congress and the public
Plan implementation	Evaluating implementation in the defined period according to those defined indicators and elements and creating reports	Planning administrative officials and planners
	Monitoring and preparing reports	Monitors sent by provincial governments, the public, and the people's congress
Plan amendment	Evaluating plan implementation and drawing lessons from the last plan	Planning administrative officials and planners
	Adjusting evaluation objectives and indicators	Planning administrative officials and planners
Plan implementation	Evaluating plan implementation according to the adjusted indicators and elements and have reports	Planning administrative officials and planners
	Monitoring plan implementation	Monitors sent by provincial governments, the public, and the people's congress
...
Plan finished	Reviewing evaluation and monitoring in each stage and keeping these reports in the archives	Planning administrative officials

Emphasizing the evaluation and monitoring of short-term plans (jin qi gui hua)

A regulation, "A circular concerning improving the monitoring in urban and rural planning by the State Council" (promulgated on August 29, 2002), first introduced the term "a short-term plan," one whose range is five years, in a master plan. As an important component of a city's master plan, the function of a short-term plan is to demonstrate what development and construction emphases should be for the coming five years in a master plan, to define the development direction, scale, and spatial form, historic preservation in this period of time, to propose arrangements of the city's important infrastructure, public facilities, and eco-environment.

Compared with the whole scope of a master plan, which is 20 years, the scope of a short-term plan is five years. Hence, it is easier to evaluate and monitor it using its detailed contents. The compulsory contents of a short-term plan provide evaluating and monitoring indicators, which are relevant and timely and can be a defined set of prioritized purposes that relate directly to practice. This evaluation and monitoring of a short-term plan allows planning administrative officials to demonstrate accountability, effectiveness, and progress towards master plan policy goals.

Detailing monitoring procedure

Detailed monitoring procedures, which provide detailed instructions to monitoring institutions, can help to strengthen monitoring procedures. According to the Chinese Urban and Rural Planning Act, there is a three-level monitoring system by an administrative department, a people's congress, and the public. It is needed to make this monitoring procedure substantive, for example, who monitors and how in a people's congress, what plan content should be monitored in practice, how often monitoring reports should be prepared. If all the above details are set in the planning document, they will help to improve the efficiency of monitoring.

Opening planning information to the public

Opening planning information to the public can help to improve the quality of monitoring. In China, most information in master plans and detailed plans can be obtained from a planning administrative department, as there is a procedure for the application. It has been observed that if a city's planning information is more open, its planning efficiency is higher, as for example, was the case in Shenzhen City. To encourage public participation in evaluation and monitoring, on the one hand, planning information can be uploaded to planning administrative websites, making it easier for the public to get relevant information; on the other hand, the public should be encouraged to attend all levels of evaluation meetings.

The Chinese cities vary as do the scale and progress of their development and redevelopment, including the performance of monitoring and evaluation. Just as the situation in western countries, the literature on application of program evaluation techniques and monitoring indicators for regional and local urban planning is limited (Seasons, 2002; Hoernig and Seasons, 2004) China needs more innovation in evaluation and monitoring in order to improve the quality of its urban planning.

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