

**Implementing the Conservation of Suzhou's Waterscape:  
An Evaluation of the Tools Available to Government**

by

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in Partial Fulfillment of the Requirements for the Degree of  
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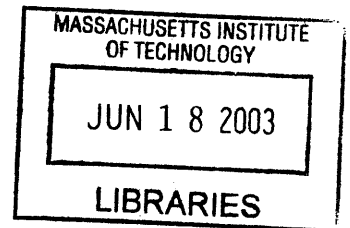
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### ABSTRACT

Suzhou's waterscape, noted for its "small bridges over flowing streams, residences on canal banks," is a historic relic that the Suzhou government has decided to conserve. In implementing the conservation of Suzhou's waterscape, the government needs to place priority on three goals: conservation of the physical environment, improvement of the water quality in the canals, and maintenance of the quality of life for its residents. The Suzhou government has instituted different strategies to carry out its conservation projects and the results have been mixed. The conservation approach traditionally practiced in China's central-planned economy does not take into account market forces which have surfaced in China's transitional economy. This thesis proposes that adopting and modifying government tools generally used in western economies to Suzhou is necessary to ensure successful conservation of Suzhou's waterscape. In addition, a formal assessment of government tools should be carried out. Furthermore, constraints that inhibit the availability of government tools should be relaxed. Finally, this thesis recommends four conservation approaches specifically targeted to Suzhou's waterscape and puts forward a new government paradigm in which more non-governmental actors such as non-profit organizations and private individuals would participate in a democratic manner and in which social equity would be a core consideration.

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# Chapter One: Introduction

## 1.1 Introduction

Over the last 20 years China's economic reform<sup>1</sup> has transformed its central-planning economy into a transitional economy which has resulted in many changes in urban conservation. On the one hand, these economic, political and legislative changes have contributed significantly to the fast pace of urban redevelopment in historical cities. On the other hand, these changes have added great complexity to the conservation issues with which governments must deal in the transitional economy.

Historic canal cities in Jiangsu and Zhejiang provinces are a case in point. The old city of Suzhou<sup>2</sup> is a typical example of a historic canal city. In the city the government's approach to conserving its waterscape has proven to be inadequate in the context of the transitional economy. The traditional waterscape scene noted for its "small bridges over flowing streams, residences on canal banks"<sup>3</sup> is in danger. In Suzhou's culturally sensitive historic neighborhoods<sup>4</sup> the government does not have an adequate way of assembling the proper combination of authority, organizations, resources and personnel to conserve and rehabilitate its waterscape. These inadequacies have led to decay in the waterscape of the neighborhoods. Traditional residences, bridges, piers, banks, gates, steps and pavements need maintenance. The water quality in the canals needs to be improved. Living

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<sup>1</sup> China's economic reform began in 1979 and is characterized by a reduction of central control over the economy and introduction of market forces.

<sup>2</sup> The city of Suzhou consists of three parts: the old city of Suzhou in the middle, the Singapore Industrial Park in the east and the High Technology Industry District in the west. This structure is referred to as "one body and two wings". In this thesis I use Suzhou to refer to the old city of Suzhou.

<sup>3</sup> This is the translation of the famous and common Chinese saying to describe Suzhou's waterscape.

<sup>4</sup> Culturally sensitive historic neighborhoods are valuable historic neighborhoods in which there are many historic relics or structures exhibiting local culture. Any small improper changes could harm these cultural features of the neighborhoods.

conditions in the neighborhoods have become poor. For example, courtyard houses which were originally designed for extended families now house too many individual households. Infrastructure enhancements are also necessary. For instance, the current sewer system drains waste directly into the canals. In less culturally sensitive areas, luxurious high-density commercial and residential developments have replaced the old neighborhoods. The majority of older residences have been demolished and low-income local residents have been relocated to the suburbs. This has incurred great social costs. These demolished neighborhoods lost their sense of place and identity. Large-scale transportation projects, realized as a result of the political will of the governors, have further damaged these neighborhoods.

Although Suzhou's government has carried out some waterscape conservation work, it has been neither economically feasible nor socially equitable. So far conservation efforts have focused solely on physical planning. The government has relied on a traditional command and control hierarchical administration which is dominant in the centrally planning economy. This approach is now being challenged by the market forces of China's transitional economy. The concepts of privatization, property rights and equity have been a puzzle for the government. Considering such circumstances Suzhou's government has not developed an efficient conservation program.

This thesis will recommend models adopted from market-oriented conservation programs and put forward a new government paradigm that embraces collaboration between municipal governments and private institutions. The paradigm will suggest that China should consider a host of alternative government tools through which governments and

private organizations — both for-profit and nonprofit — can join forces to conserve the waterscape. The paradigm will be applied to waterscape conservation issues in Suzhou and in other historic canal cities of Jiangsu and Zhejiang provinces.

## **1.2 Research and questions**

This thesis I take three points as given:

- The physical “shell<sup>5</sup>” of Suzhou’s waterscape should be conserved.
- The cultural life attached to the physical “shell” should be conserved.
- The water quality of canals should be improved and maintained.

If all of these goals are achieved, Suzhou’s waterscape will be sustainable and effectively conserved. Suzhou’s government has identified the first and third point as essential to the conservation of the waterscape. However, Suzhou’s government places little emphasis on the second. This is a problem because without a healthy and sustainable living culture contained in an aesthetic physical shell, the waterscape is meaningless.

The general research question is how can the government conserve Suzhou’s waterscape?

This question is divided into three sub-questions:

- How can the physical “shell” of Suzhou’s waterscape be conserved?
- How can the cultural and equitable life attached to the physical “shell” be conserved?

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<sup>5</sup> The physical “shell” refers to the physical environment into which life is breathed.

- How can the water quality of canals be improved and maintained?

In western countries there is a political science literature that might be called the “tools of government action” literature. This literature pays careful attention to the tools of government in the context of an advanced and systematic market. How to adapt and apply this approach in the context of China’s transitional economy is the core of this thesis. I will focus on the residential waterscape because it is the majority of Suzhou’s waterscape. It is also the most difficult piece of the puzzle for the government and it affects citizens’ interests more deeply than the other types of waterscape.

### **1.3 Organization of thesis**

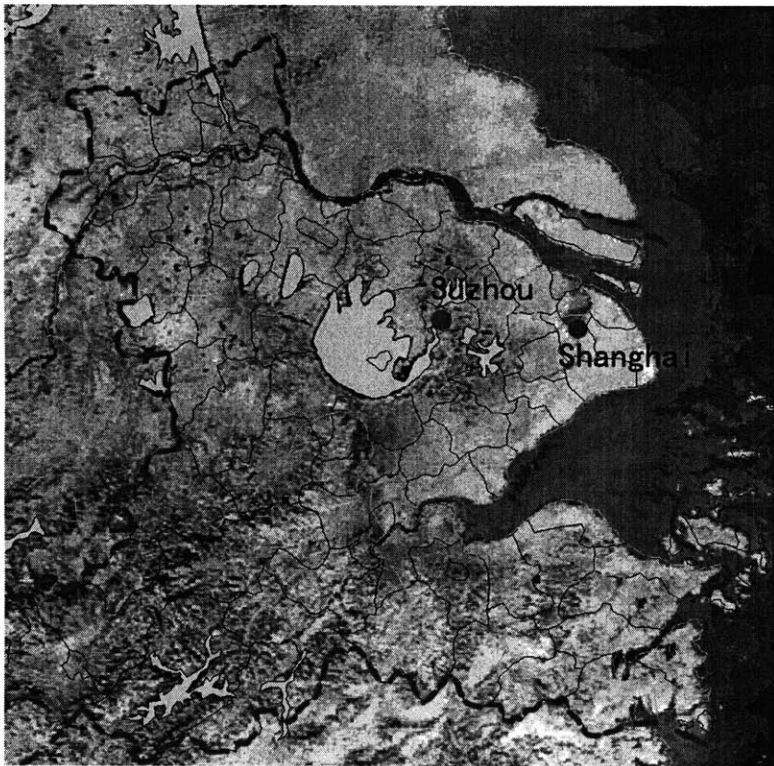
This thesis consists of six parts. Part one is a brief introduction to Suzhou’s conditions, the research questions and goals. Part two introduces the history, physical features, and problems of Suzhou’s waterscape as well as a series of economic, social and political issues in urban conservation and redevelopment. Part three presents the current waterscape conservation work carried out in Suzhou. Four programs have been utilized by the government. Part four is the identification and evaluation of the government tools currently applied in the four models. Part five analyzes the economic, political, structural, and professional capacity constraints of waterscape conservation. By relaxing these constraints four programs are put forward. Some of these programs would necessitate partnerships involving the government, non-government organizations, non-profit organizations, private developers and individuals. Part six is the conclusion in which a new government paradigm is proposed.

## Chapter Two: Suzhou's Waterscape and its Conservation

In this chapter the historic context of Suzhou's waterscape will be introduced and the elements of the waterscape will be presented. The physical problems of Suzhou's canal neighborhoods will be analyzed. Economic, social and political forces contributing to shaping Suzhou's waterscape will be identified.

### 2.1 A brief history of Suzhou's waterscape

Suzhou is a canal city in the Yangtze Basin of China (Figure 1). It dates back about 2,500 years. Through booms and declines, the city has been famous for its orderly checkerboard "tartan" grid pattern of canals alternating with streets, and its unique waterscape of "small bridges over flowing streams with residences on canal banks." Suzhou is also renowned



for its garden villas, silks, and handcrafted products.<sup>6</sup>

Figure 1: Location of Suzhou and the region of rivers and lakes in Jiangsu and Zhejiang Provinces (Tinghai Wu. Study on Urban Culture. Beijing: PhD. Thesis. Tsinghua University, 1999)

<sup>6</sup> *Suzhou Chronicle*. Jiangsu People's Press. 1995

The waterscape in Suzhou has experienced development, success, and decline. Suzhou can be traced back to as early as "the three-mountain civilization" of the Paleolithic Age, 10,000 years ago. Judging from the composition of stone instruments, at the time the Suzhou people lived on fishing and hunting. Canals were constructed rather primitively. During the "Liangzhu civilization" in the Neolithic Age, productivity improved greatly, and traces of water conservancy and irrigation from the period can be found in the canal region<sup>7</sup>.

In 514 B.C, Zixu Wu built a "canal city," which later became the old city of Suzhou. The city was surrounded by walls and moats, with city gates on both canals and land. Broad canals intersected throughout Suzhou for convenient transport.<sup>8</sup> Buildings were constructed on the banks of canals. Suzhou gradually became an important city as the economy of Southern China grew rapidly<sup>9</sup>.



Figure 2: Traditional waterscape: "small bridges over flowing streams with residences on canal banks" (*Art of Water Color*. the People's Art Press, 1989)

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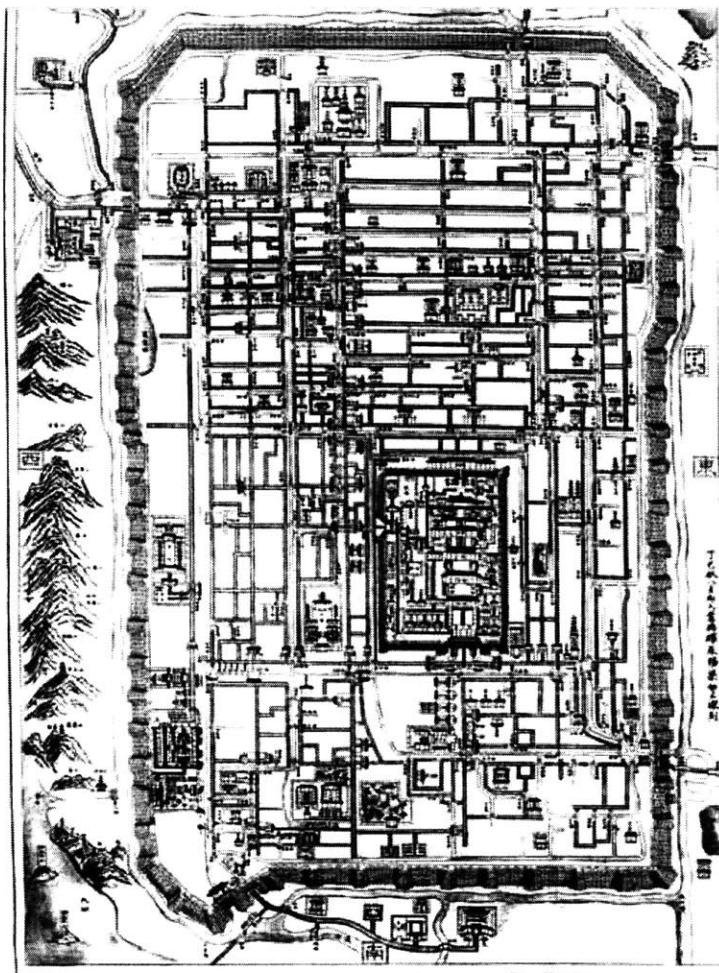
<sup>7</sup> Songshan Wei. *Exploration of Lake Tai Basin*. Nanchang: Jiangxi Education Press, 1993

<sup>8</sup> *Suzhou Chronicle*. Jiangsu People's Press. 1995

<sup>9</sup> Xuemeng Zheng. *Study on the Southward Shift of Economic Focus in Ancient Time and Jiangnan Economy in Tang and Song Dynasty*. Changsha: Yuelu Publishing House, 1996



During the Song Dynasty, Suzhou's waterscape was further enhanced with canals and structures. The Pingjiang Plan, a map of Suzhou, described the traditional image of Suzhou's waterscape (Figure 2). The checkerboard pattern of canals and streets had been firmly established.<sup>10</sup> In the northern residential area, the canal network was dense. Residences were situated on canal banks and many small bridges were installed. On the south side of the city mansions of feudal government officials were located (Figure 3).



During the Ming (1368 to 1644) and Qing Dynasties (1644 to 1911), economic prosperity brought a commercial character to the waterscape. In the painting "Shengshi zisheng tu", the blooming commercial waterscape of the Qing Dynasty was elaborately portrayed. This period was the climax of waterscape development in Suzhou (Figure 4).

Figure 3: Pingjiang Plan displaying Suzhou's waterscape in the Song Dynasty (960-1279 AD) (Xu, Yinong. *The Chinese City in Space and Time*. Honolulu: University of Hawai'i Press, 2000)

<sup>10</sup> Qiming Wu. *Poetry about Suzhou*. Suzhou: Suzhou University press. 1999

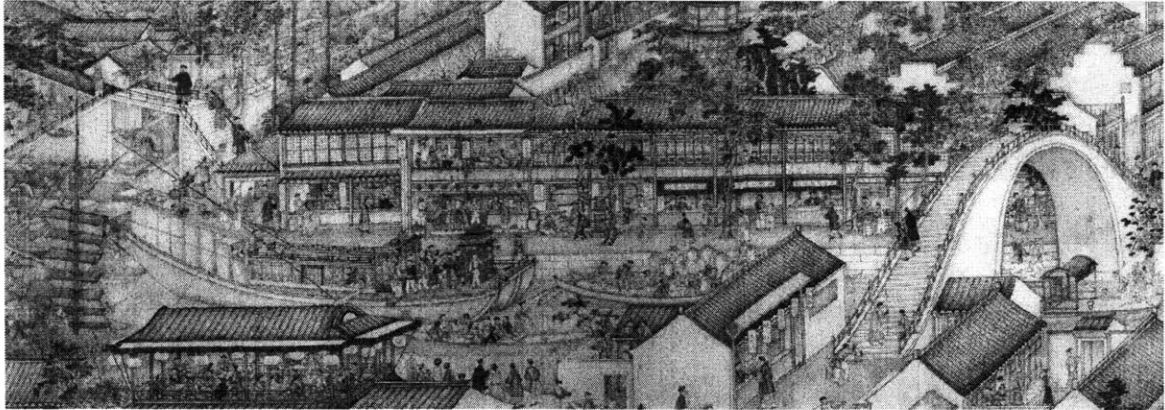


Figure 4: the painting of “Shengshi zisheng tu” portraying blooming commercial waterscape of the Qing Dynasty (Shengshi Zisheng Painting)

After the Qing Dynasty the waterscape declined. After 1949, governors embraced industrialization and modernization. As a result, the waterscapes were largely ruined.<sup>11</sup> Some canals were filled in to build wide roads. Fortunately, portions of Suzhou’s waterscape have survived and serve as a reminder of Suzhou’s resplendent past.

## **2.2 Elements of Suzhou’s waterscape to be conserved**

Suzhou’s waterscape can be broken down into individual elements of study. Three elements of Suzhou’s waterscape should be conserved.

### **2.2.1 The canal network system and water quality**

Suzhou’s canal network system is the backbone of its waterscape. Without the backbone, the physical elements such as bridges and piers attached to canals would disappear. The canal system inside the city can be divided into two categories. One category is the arterial canal system, which consists of "3 horizontal stroke and 3 vertical stroke" canals

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<sup>11</sup> Yongjian Zhang. "The Demolishment and Conservation of City Wall in Suzhou". Suzhou Journal. 1999, 63 (2): 45-48

(Figure 5). The other is the branch canal system, which links the arterial canals. Huge numbers of households are located along the branch canal system. The spatial layout of the city follows the canal system.<sup>12</sup>



Figure 5: Canal system in inner Suzhou (Chang, Pinghung. A Strategy of Memory: Suzhou, China. Master Thesis at MIT, 1995)

The water quality in the canals is another consideration in conserving elements of Suzhou's waterscape. Good water quality can stimulate the revitalization of Suzhou for a number of reasons. One reason is that people by nature prefer to live near clean water and therefore property value surrounding the canals would increase. Another factor is that clean water will attract more investment from the private sector. Furthermore, improving and maintaining the water quality will enhance living conditions in the historic neighborhoods of Suzhou.

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<sup>12</sup> Suzhou Urban and Rural Construction Bureau: Canal Changes in Suzhou and its Impact on Urban Environment. 1985

### 2.2.2 The built elements of Suzhou's waterscape

The built elements of canals include buildings, bridges, pagodas, archways, wells, banks, piers (Figures 6, 7, 8). Traditional dwellings, tranquil hutongs with black tiles above

white walls are components of traditional waterscape that should be conserved.<sup>13</sup>

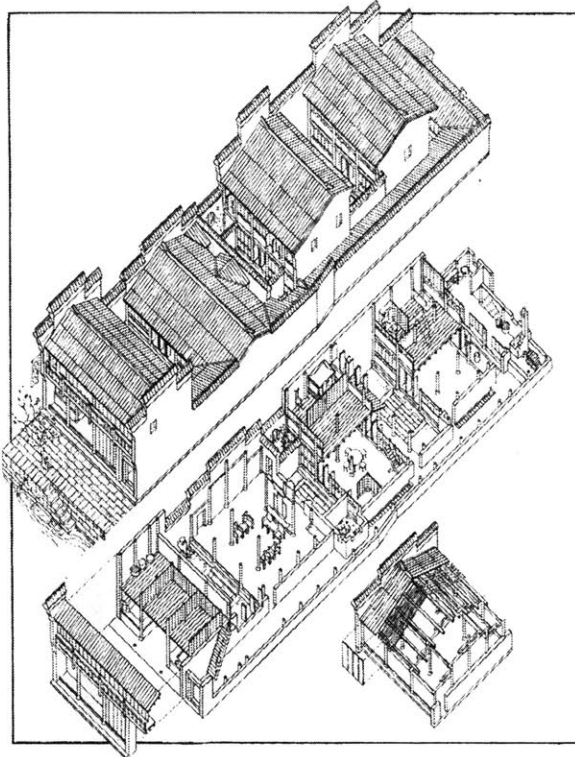


Figure 6: A historic courtyard residence (Chang, Pinghung. A Strategy of Memory: Suzhou, China. Master Thesis at MIT, 1995)



Figure 7: Bridges over flowing canals. (Ruan, Yisan. Old Towns in Jiangnan. Shanghai: Shanghai Pictorial Press, 1988)

<sup>13</sup> Yisan Ruan: Jiangnan Waterfront Cities in China. Shanghai: Tongji University Press, 1995

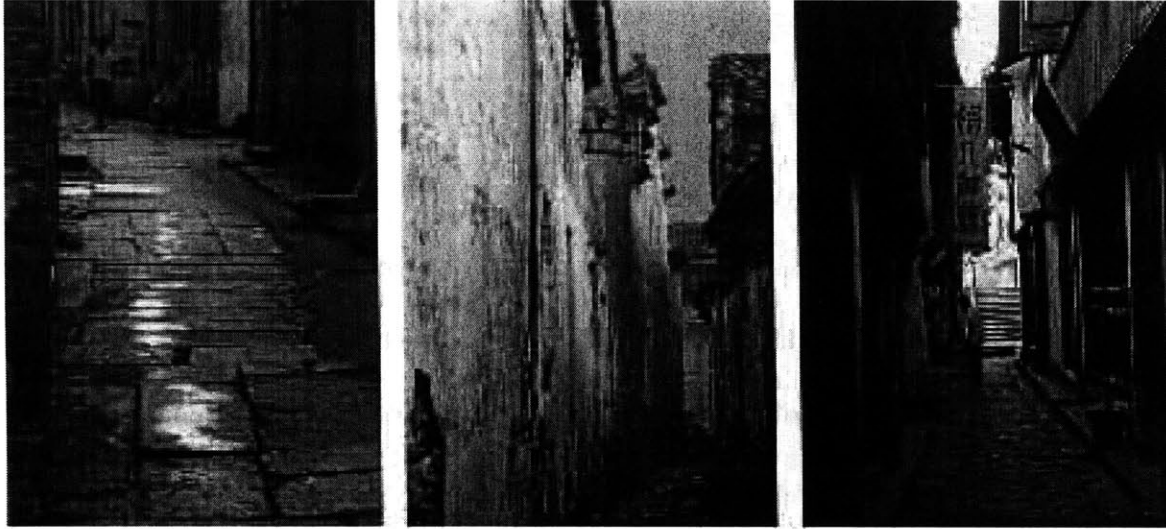


Figure 8: Hutongs (Ruan, Yisan. *Old Towns in Jiangnan*. Shanghai: Shanghai Pictorial Press, 1988)

### **2.2.3 Civic life in the canal neighborhoods**

The canals have served as active public space for local residents. The hub of intersecting canals usually becomes a “living room” in which people chat with neighbors while appreciating the scenery. Others exercise along the canal with companions or have a sip of hot tea in teahouse while enjoying traditional folk music performed by a local group. Housewives do laundry along the canals, which is also an occasion for conversations with neighbors. Children play around stone bridges and piers. All of these activities create a strong social network which is important in establishing a sustainable neighborhood and promoting a quality of life.

### **2.3 Problems confronting the conservation of Suzhou’s waterscape**

Suzhou’s waterscape has had a splendid past. In the last 20 years Suzhou’s government has undertaken considerable effort to conserve the waterscape. Compared to conservation work in the other historic canal cities, Suzhou’s waterscape may be the better conserved

in China. However, many problems have emerged in the conservation of Suzhou's waterscape.

### **2.3.1 The decaying built environment**

In some culturally sensitive historic neighborhoods, the built environment is decaying. Although some landmark structures such as temples have been preserved well, most residences are in a poor condition and need to be renovated. These traditional residences form the backdrop of the waterscape. To conserve these residences is the main task at hand.

Living conditions in such neighborhoods are very poor. Too many households are crowded into a courtyard residence. Basic infrastructure is lacking. There are no toilets in traditional dwellings. People have to use chamber pots or public toilets. The old drainage system, which discharges sewage directly into the canals, is still being used. The government still has not arrived at a solution to these problems.

### **2.3.2 Polluted water quality of the canals**

Although the government has made a considerable effort to improve water quality, the result has not been good. Water in the canals remains polluted. This is the result of the residents' habits. It is assumed by everyone that the canals and its water are public goods. Therefore, everyone has a right to access them. In Suzhou it is an accepted practice for residents to pour human waste into the canals. These habits counteract the government's efforts to improve the water quality.

### 2.3.3 The lost community

In the redevelopment of less culturally sensitive neighborhoods, land use has been changed from low-income to high-income residences or commercial use (Figure 9). Low-income residents have been relocated to the suburbs. In these suburbs public transportation is inconvenient. People must spend at least three hours a day commuting from home to work. Trips to a food market or bank or post-offices are far away and difficult to access. The educational standard of suburban schools is markedly lower than



Figure 9: Demolished residences photographed by the author in 1999 in Suzhou.

Suzhou's schools. This creates a disparate distribution of education based on socio-economic lines.

This relocation policy has occurred at a great

social cost and has increased inequality of

public services among people of different incomes. City centers have become a paradise for the rich. Projects targeted to stimulate tourism have compromised the interests of local residents. In the Fengqiao area, for example, an entire neighborhood was erased to build a row of antique shops for tourists. All residences on that street were demolished and the once thriving community disappeared.

## **2.4 Why the waterscape should be conserved**

The overall objective in the conservation of Suzhou's waterscape is not only to ensure that this historical relic be passed on to future generations but also to maintain social equity and enhance the quality of life.

Suzhou's local culture is tied to its waterscape. Conserving the waterscape would conserve the local cultural tradition. Suzhou's waterscape has become a distinct physical icon of the city. In addition, conserving the waterscape would enhance aesthetics of the city and improve the quality of life for Suzhou's residents. Lastly, conserving the waterscape would stimulate tourism in the city which would bring significant social and economic benefits to the city. The conservation of Suzhou's waterscape would make the city unique and a desirable place to live.

## **2.5 Economic, social and political transformations in China influencing Suzhou's waterscape.**

China's economic reform has triggered economic, social and political transformations which have affected the conservation of Suzhou's waterscape. An examination of these transformations is necessary to understand the Suzhou's government actions.

### **2.5.1 Urban governance in China**

China's transitional economy is characterized by a shift from a planned to a market-oriented economy. The current economy involves the coexistence of planned and market elements. This is the condition under which urban policies are being formulated and it has dramatically changed the process of urban development. Whereas the central government originally planned everything and commanded municipal governments to



fulfill planned goals, now the central government has relinquished its role in the development process and has placed the responsibility onto municipal governments. Legislation in 1988 essentially accorded municipal governments a new level of autonomy by legally allowing municipal governments to lease or transfer land use rights for the first time. At the core of these policies was the intent to stimulate local economic growth. It was hoped that through economic incentives more efficient use of urban land would occur. On the flip side, the central government would no longer distribute a set budget to each municipality. Instead, it would be incumbent upon each municipal government to generate its own budget. The premium from land leasing has become an important source of revenue.<sup>14</sup> While this shift to a transition economy has been a welcome change, some problems are appearing in the conservation of Suzhou's waterscape.

One problem is that government policies focus more on short-term economic growth than long-term growth. In the case of land use, the lease of land use rights has been greatly encouraged by the government so that a clear revenue stream can be established. However, the focus on short-term gains has caused conservation in dilapidated historic areas to lag behind. This is because by undertaking conservation projects the government cannot realize short-term economic gains. In fact, most conservation work has resulted in a government deficit.

Another problem is that municipal governors abuse their power. These governors are appointed by upper-level governors and not elected by the citizens. As a result, municipal governors prefer large-scale projects because such projects are recognizable

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<sup>14</sup> Fulong Wu. China's Changing Urban Governance in the Transition Towards a More Market-oriented Economy. *Urban Studies*, Vol. 39, No. 7, 1071–1093, 2002

achievements that upper-level governors can acknowledge. Unfortunately this prevents funding from being spent on improving the living standard of the poor in historic neighborhoods.

A further problem is corruption in China's government. Giving decision-making power to municipalities absent effective supervision has led to corruption. The lack of effective supervision has allowed prospective investors to use personal contacts to negotiate and influence developments.

Despite the fact that governors have decision-making power, an expert consulting committee has been established in Suzhou. The members consist of the most prestigious professionals and experts in China and they serve as a task force for the municipal planning bureau on important conservation issues. The group can examine the important projects going on in Suzhou and make suggestions. But the group can only consult. It cannot overrule the decision of the municipal government.

### **2.5.2 Urban land reform in China**

Land use policies have affected the Suzhou government's attitude toward conservation programs. The history of land ownership in China is quite complicated. Prior to 1949 private ownership of land existed in China. After 1949, private ownership of land was gradually abolished and replaced with public ownership of land. Specifically, all urban land became the property of the state, and all rural land became the property of socialist rural collectives. Then in the mid 1980s urban land reform occurred and triggered by the economic reform. This urban land reform led to the emergence of an urban land market in which land-use rights in urban areas could be transferred. However, the public is still the

owner of urban land.<sup>15</sup> Thus, the land in Suzhou's historic neighborhoods is currently owned by Suzhou's government but it is very much influenced by the local land market.

In the case of conservation, the Suzhou government's attitudes towards the land in historic neighborhoods will determine the fate of its historic neighborhoods. If the government were to sell the land-use right of a historic neighborhood to a for-profit developer without any conservation requirements, the historic neighborhood might be destroyed. In contrast, prior to the reform the government did not have the right to lease the land. As a result, historic neighborhoods were not threatened by investors.

### **2.5.3 Urban housing reform in China**

Housing policies are also an important factor that affects the conservation of Suzhou's waterscape. Suzhou's waterscape is largely residential and China's housing policies will particularly impact low-income residents in historic neighborhoods. Urban housing policies have changed significantly since 1949. Under China's socialist system employers built and distributed housing to their employees as part of their social welfare program. Then, in the mid 1980s, the central government carried out various experiments that attempted to shift housing provision from employers to the market. Employees could buy commercial housing at market prices. To address the needs of the low-income population governments built affordable housing. However, these affordable housing units were built in suburbs where land cost was extremely low because the suburbs were on rural land. The government was entitled to purchase rural land from a collective by paying a price equal to its agricultural loss. The high-income population in urban areas was encouraged

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<sup>15</sup> Qingshu Xie, A. R. Ghanbari Parsa and Barry Redding. The Emergence of the Urban Land Market in China: Evolution, Structure, Constraints and Perspectives. *Urban Studies*, Vol. 39, No. 8, 1375–1398, 2002

to obtain commercial housing through the market. However, this policy geographically segregated the rich from the poor. The poor were being moved to suburbs while the rich moved into urban centers including redeveloped historic neighborhoods.

#### **2.5.4 Urban planning law in China**

Present urban planning law relating to conservation was enacted in 1989. This law was drafted at a time when there was no legal land market. In addition, the law placed heavy emphasis on the technical and scientific aspects of planning. However, it failed to consider the legitimacy of public action. This omission of public participation has adversely affected the conservation of Suzhou's waterscape.

#### **2.5.5 The urban planning profession in China**

Urban planning professionals in China have found it difficult to deal with the new situation caused by China's transitional economy because their training has concentrated on physical planning and design rather than the underlying operation of a city. Aesthetic formalism is the dominant philosophy in urban studies. Planning professionals generally lack an understanding of the market. Urban economics, finance, and planning processes are rarely taught in the universities.<sup>16</sup> As a result, these professionals fail to apply such concepts to conservation issues in the context of a market. Some have studied such concepts, and the demands for professionals with this knowledge remain high, but until China incorporates these concepts into their urban planning curriculum more broadly, the conservation of historic neighborhoods cannot advance.

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<sup>16</sup> Interview with Wei Deng, associate professor of school of architecture, Tsinghua University, March, 2003.

## **Chapter Three: Conservation of Suzhou's Waterscape by the Government**

Suzhou's government has carried out conservation of its waterscape since the mid 1980s when it recognized the value of its waterscape and the need for conservation. The conservation of Suzhou's waterscape consists of two parts. One part is the conservation of historic neighborhoods, which were targeted by the four programs. The other part is the conservation of the canals.

### **3.1 Program 1: Conservation and rehabilitation of the single traditional residence.**

The first program instituted in the 1980s focused only on the conservation and renovation of single traditional residences. 50 Shizi Street residence was selected as the first pilot project and was completed in 1989. The residence was constructed at the end of the Qing Dynasty and occupies an area of 816 square meters. The residence consists of three courtyards; 17 families and 55 people lived in the residence before renovation. The rent was low and appeared to be only a formality. 50 Shizi Street was owned by the state and rented out to employees of Surgeon Medical School.<sup>17</sup>

The project was to be co-financed by appropriations from the government and the working unit (Surgeon Medical School) so no profit was realized. After the work was completed, the façade and the courtyard space were returned to the traditional style of the

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<sup>17</sup> Weizu Qu, Jiajun Jin and Yisan Fang. Renovation Project of No.50 Shi Zi Jie Street in Suzhou, China's City Planning Review, 1991.

Qing Dynasty. Inside the residence, each unit had its own bathroom and kitchen.

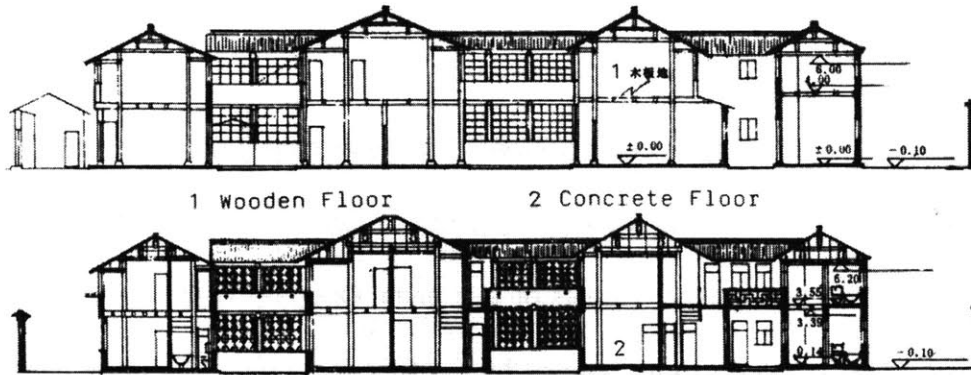


Figure 10: Section of residence before and after renovation. (Weizu Qu, jiajun Jin and Yisan Fang. Renovation Project of No.50 Shi ZiJie Street in Suzhou, Beijing: China's City Planning Review, 1991.)

The water and drainage systems were reconfigured and all the electrical facilities were upgraded. In addition, none of the original residents were relocated. In this situation, the

physical “shell” of 50 Shizi Street Residence was successfully conserved while significantly improving the living condition of all its residents (Figures 10, 11, and 12)

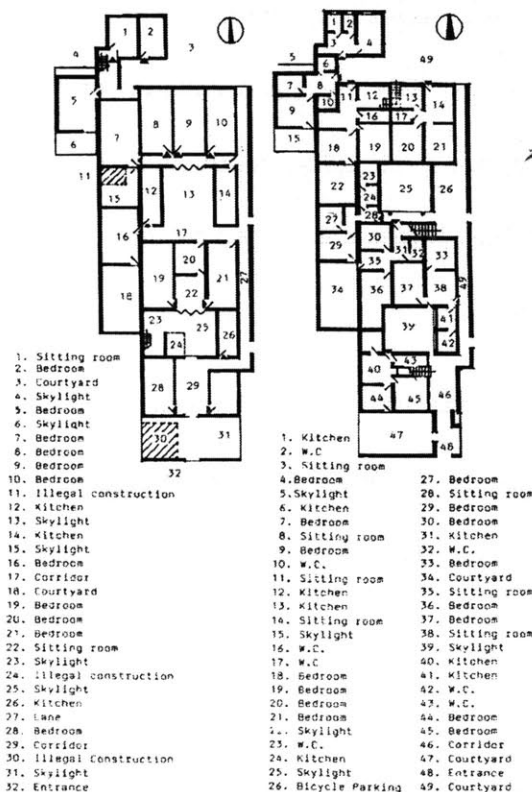


Figure 11: Plan before and after renovation (Weizu Qu, jiajun Jin and Yisan Fang. Renovation Project of No.50 Shi ZiJie Street in Suzhou, Beijing:China's City Planning Review, 1991.)

The practice has since been applied to 275 Shiquan Street Residence, 144 Ganjiang Street Residence and 480 Shantang Street

Residence. However, Suzhou's government discontinued the program because the level of conservation and rehabilitation necessary for such traditional residences proved to be too time-consuming. The main shortcoming of this policy was that for the large amount of time spent on conservation, only a relatively small proportion of residents experienced an improvement in their living conditions.

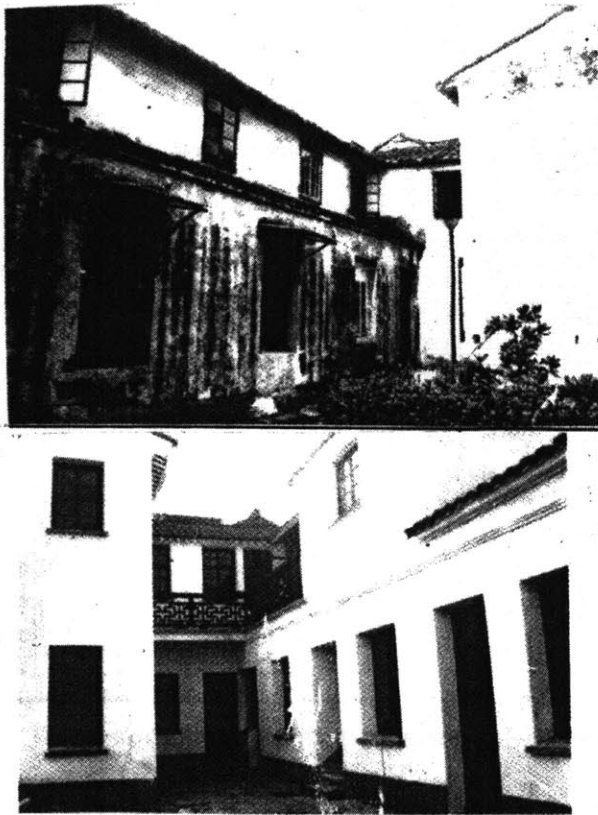


Figure 12: Courtyard before and after renovation (Weizu Qu, jiajun Jin and Yisan Fang. Renovation Project of No.50 Shi ZiJie Street in Suzhou, Beijing: China's City Planning Review, 1991.)

### **3.2 Program 2: Conservation and redevelopment of Tongfang Neighborhood**

After discontinuation of the above conservation program, the Suzhou government implemented a new program that applied conservation and rehabilitation to an entire

historic neighborhood rather than specific residences. The Tongfang Neighborhood was the representative project in this program<sup>18</sup>.

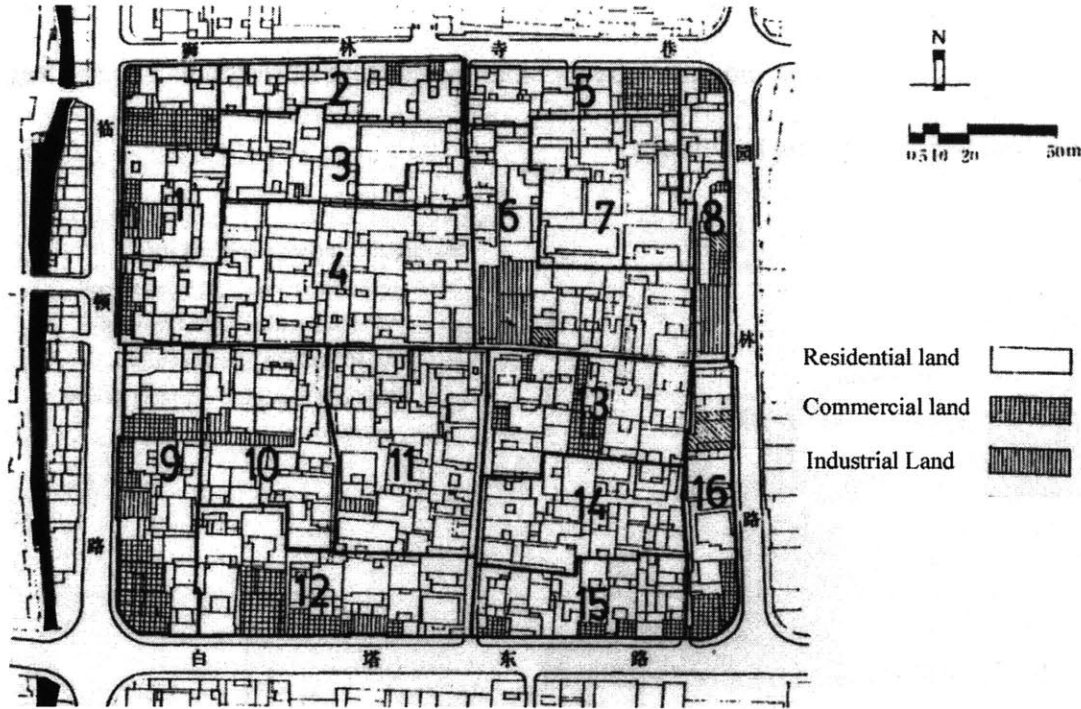


Figure 13: Existing Conditions of Tongfang Neighborhood (Yesheng Sun, Qiuxia Gong and Chi Luo. Renovation of Tongfang Neighborhood, Beijing:China's City Planning Review, 1997)

The Tongfang Neighborhood covers an area of 3.8 hectares with a population of 1,811 in 600 households. The neighborhood is situated in the northeast corner of Suzhou and in the vicinity of two famous gardens.<sup>19</sup>

Suzhou's government carried out the conservation and redevelopment of the Tongfang neighborhood as a non-profit project in which historic residences were largely conserved and rehabbed. The project was initiated in 1992 and completed in 1996. New housing

<sup>18</sup> <http://www.szjs.net>

<sup>19</sup> Yesheng Sun, Qiuxia Gong and Chi Luo. Renovation of Tongfang Neighborhood, Beijing: China's City Planning Review, 1997.



was inserted into the traditional architecture of the neighborhood. The ratio of floor area redeveloped to that conserved and rehabilitated was 6 to 4. During this time, land and housing reform policies were introduced which enabled the Suzhou government to lease land use rights for some parcels and construct new commercial housing on other parcels. Often the new housing involved complete demolition of dilapidated residences (Figure 13, 14, and 15).

The money received from leasing land use rights and new commercial housing became an important revenue stream for the government. The government applied a portion of the revenue to build and relocate residents to low-income housing in suburbs outside Suzhou. The government targeted the low-income population to move to these suburbs because the relocation cost was substantially lower. The revenue received from land use leasing

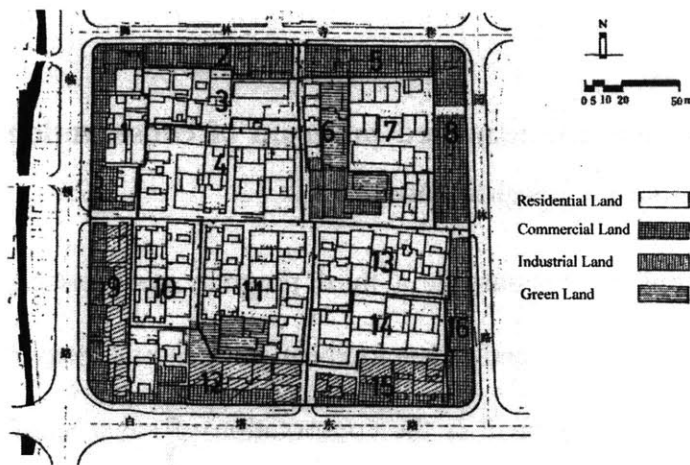


Figure 14: Proposed land use of Tongfang Neighborhood (Yesheng Sun, Qiuxia Gong and Chi Luo. *Renovation of Tongfang Neighborhood*, Beijing: China's City Planning Review, 1997)

and new commercial housing was also used to cover the cost of conservation, rehabilitation, and infrastructure upgrades in Suzhou's historic neighborhoods.

In the end the net cost of new construction, relocation, rehabilitation, and conservation was zero. It may be argued that the Suzhou government was able

to entirely bypass the financial cost of conservation and rehabilitation of the Tongfang neighborhood. However, the social cost was huge. Only one third of the original residents

in the historic neighborhood could afford to move back because prices for the new commercial residences were at market prices.

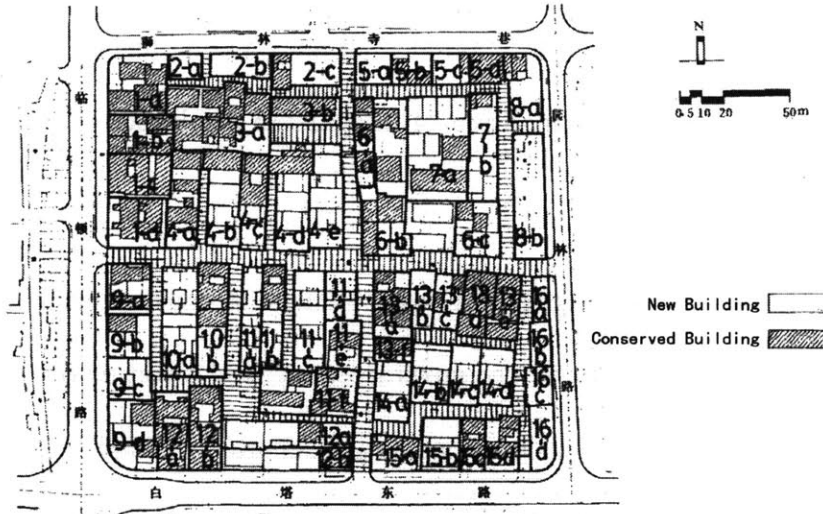


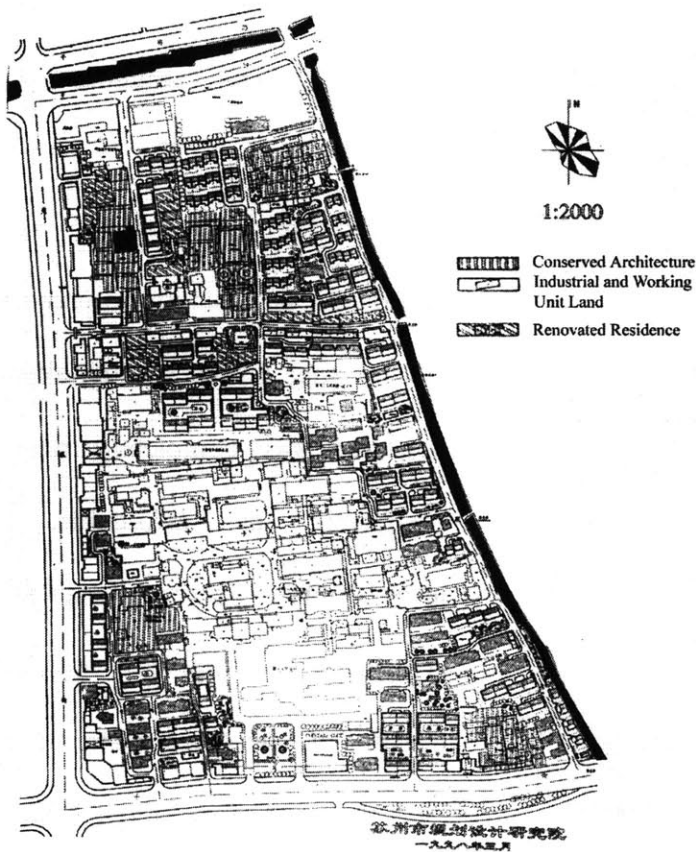
Figure 15: Conservation Plan of Tongfang Neighborhood (Yesheng Sun, Qixia Gong and Chi Luo. Renovation of Tongfang Neighborhood, Beijing: China's City Planning Review, 1997)

### 3.3 Program 3: A typical and widely implemented program of conservation and redevelopment in Suzhou's historic neighborhoods

Based on the experiences and lessons of Program 2, a third program was created. Program 3 is a typical example of conservation and redevelopment of Suzhou's historic neighborhoods. One distinct element of Program 3 is the conservation of canal space which was not addressed in Programs 1 and 2. Another important distinction is that on-site relocation occurred during implementation. This was instituted based on the lessons learned from Program 2.

In 1995 the first 3 neighborhoods were selected for Program 3 - Neighborhoods 10, 16 and 37<sup>20</sup>.<sup>21</sup> Officials from various departments of the municipal government were

Figure 16: Conservation Plan of Neighborhood 37 (Zukang Lu, Bingjun Xiang. Exploration in conservation of Suzhou's historic neighborhoods. Urban Planning Forum, volume 120,1999)



grouped into a team. The team included officials from

the urban construction bureau, the economic planning bureau, the urban planning bureau, the land

bureau and the historic and relic bureau. The mayor served as the team leader and managed the entire process. The project was

implemented by the Urban Construction and Investment Company (UCIC), a non-profit

government corporation. UCIC was owned by Suzhou's government and controlled by the team. The projects were co-financed by banks and Suzhou's government. The government facilitated the bank loan process for UCIC. Government funding typically

<sup>20</sup> In Suzhou, historic neighborhoods are identified and numbered from 1 to 54.

<sup>21</sup> Zukang Lu, Bingjun Xiang. Exploration in conservation of Suzhou's historic neighborhoods. Urban Planning Forum, volume 120,1999.

came from Suzhou's water conservancy bureau, urban construction bureau, historic and relic bureau, culture bureau and gardening bureau. Additionally, the revenue received from leasing land use rights and selling commercial housing<sup>22</sup> was applied to UCIC projects (Figures 16 and 17)

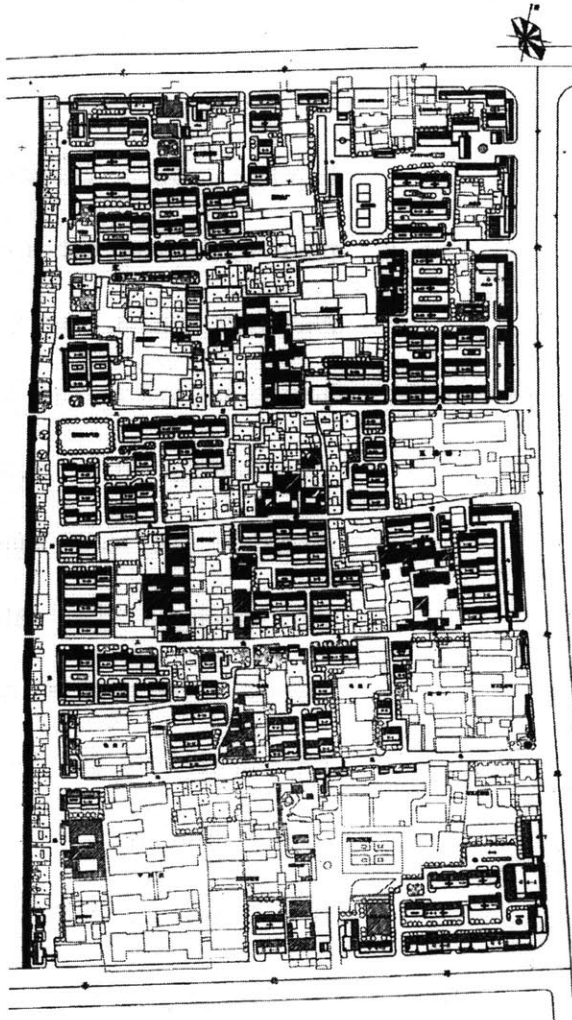


Figure 17: Conservation Plan of Neighborhood 10 (Zukang Lu, Bingjun Xiang. Exploration in conservation of Suzhou's historic neighborhoods. Urban Planning Forum, volume 120,1999)

Conservation took priority over rehabilitation in the UCIC projects. The focus was on conserving the overall physical structure of the neighborhoods. The structures included the canal systems, specific landmarks, and historic residences. Of the housing projects undertaken, the majority was completely new and designated as affordable. This affordability factor enabled a significantly higher proportion, 83.3%, of local residents to move back to their historic neighborhood. In addition, the average residential unit size per occupant rose from 15.4 square meters to 25.1 square meters across all three neighborhoods. Quality

<sup>22</sup> Interview with Jianbin Zhou, Suzhou Urban Planning Bureau, 2003.

of life for the residents improved further with the construction of new elementary schools, kindergartens, and senior clubs.

### **3.4 Program 4: Current program**

In recent years more investors have become interested in Suzhou's conservation and redevelopment projects. As a result, Suzhou's government would like to pass along its conservation projects to interested investors by leasing its land use rights in historic neighborhoods to them. The government would then regulate the investors' performance according to formalized conservation standards.

Currently the Suzhou government is developing a program that would link private investors to conservation projects in its historic neighborhoods. The program would begin with the government formally designating specific historic neighborhoods that require conservation work. Then the government would commission a design firm to produce an urban design plan that would fulfill the conservation requirements set by the government. The government would prepare the site according to the urban design plan. Preparation would include site engineering such as site grading and infrastructure upgrades. Land use adjustments such as the relocation of factories would also take place. In the case of relocation, the government would directly compensate the relocated party for moving costs. After site preparation is completed, the government would then begin a bidding process in which private investors would make offers for the leasing of the land use rights of the site. It is likely that the developer with the highest offer get to develop on the site<sup>23</sup>. The developer would have to agree to abide by the regulations attached to the site. Regulations would include FAR and height limits, design guidelines, and a maximum

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<sup>23</sup> From personal communication with a Suzhou official working on the policy.

percentage of tenants who could be relocated. In addition, the developer is financially responsible for the whole of the project. If resident relocation were necessary, the developer would be required to compensate the relocated party. The Suzhou government could also offer incentives to the developer. One incentive might be supplementary land provisions. The government would be willing to provide, at virtually no cost, the raw land needed for developers to build affordable housing. Another incentive would involve land use rights whereby commercial use would be permitted in portions of a developer's design plan. Presumably, this would enable a developer to realize higher profits in the long-term.

### **3.5 Canal environment improvements**

Suzhou's government established the Canal Environment Department (CED) in 1995 to improve the canal environment since canal issues are also essential part of conservation and rehabilitation of historic neighborhoods. The task of CED is to improve the water quality in the canals, to maintain the canal system, and to conserve and rehabilitate the physical canal elements such as bridges and piers.

Improving water quality is the most difficult job for CED. Township enterprises in villages or small towns have polluted surrounding lakes and rivers that flow into Suzhou's canals. CED tried to mitigate the situation by building dikes to separate the inner canals from the outer canals. In addition pumps have been used to circulate water so as to prevent water stagnation and sewage farms have been built to purify canal water. Furthermore, water from unpolluted rivers is being pumped into Suzhou's canals. Lastly, pollution-producing factories have been relocated to the suburbs. Moreover, each year CED uncovers canals that had been filled in and builds and repairs physical canal

elements. CED is funded by Suzhou's government and banks. In 1999, CED received grants from the World Bank.<sup>24</sup>

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<sup>24</sup> Interview with Yongsan Ruan, director of Canal Environment Department, 1999.





## **Chapter Four: An Evaluation of Government Tools in the Conservation of Suzhou's Waterscape**

Conservation in western market-based economies has been carried out more successfully than in China. Generally market-based economies have had a longer history of conservation in their cities and therefore have had more time to learn from their lessons and build a formal framework for conservation. This difference in experience may account for the level of success in conservation between western market-based economies and China's transitional economy. Presumably each experience helps inform the government of what elements of a program do and do not work in conservation. Over time, government tools may be formed and formalized to more effectively carry out the conservation projects. This fundamental difference in approach and tools may account for level of success between the two economies. Whereas western market-based economies have instituted formal frameworks and government tools to address the myriad issues that may surface from any given conservation projects, China's efforts have been piecemeal and lack an altogether formal approach. With this in mind, it is reasonable to assert that the adoption of formal government tools may help China better carry out its conservation projects.

A literature search of the conservation of Suzhou's waterscape indicates that formal government tools are being applied unsystematically. In fact, the Suzhou government appears to be unaware that such tools exist and, therefore, lacks a formal assessment of the tools' effects. This situation has led to inconsistent outcomes and hinders the progress of future projects. Systematic application of tools and scientific assessment of results are

integral to developing an effective and efficient program of conservation of Suzhou's waterscape.

#### **4.1 Defining government tools**

A government tools approach to the conservation of Suzhou's waterscape is important and necessary in the current economic climate. Such an approach can help Suzhou's government accommodate the wide variety of actors and interests emerging in its transitional economy, particularly the growing private sector. This new approach could also provide a framework on which the government could draw when new obstacles arise from its transitional economy. This could better prepare the Suzhou government for the future than if it were to rely solely on a traditional approach to government. A government tools approach can help officials understand the complexities of a new system of government and subsequently better match future policies with the appropriate tools for further conservation work in Suzhou.

A literature review of government tools for conservation reveals that Schuster and De Monchaux's "five tools approach" provides one systematic framework that may fit Suzhou's situation. The approach is based on the assumption that each state holds a set of five generic tools that can illuminate new ways to approach conservation and strengthen government policies and actions.<sup>25</sup> This thesis applies the "five tools approach" to the Suzhou context. The five tools are ordered below from the highest to the lowest degree of government intervention:

- **Ownership and Operation**

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<sup>25</sup> J. Mark Schuster with John de Monchaux and Charles A. Riley II, ed, *Preserving the Built Heritage*. Hanover and London: University Press of New England, 1997.

- **Regulation**
- **Incentives**
- **Establishment, allocation and enforcement of property rights**
- **Information**

In **Ownership and operation** the government chooses to implement policies through direct provision of heritage resources. These resources are owned and operated by the government. **Regulation** allows the government to regulate the actions of private individuals or institutions that own and occupy heritage resources. In the case of **incentives** (and disincentives) the government provides incentives or disincentives to draw nongovernmental actors into utilizing heritage resources in accordance with a desired policy. **Establishment, allocation, and enforcement of property rights** involves a government directive to establish, allocate, and enforce property rights of individual parties as these affect the conservation and use of heritage resources. **Information** is the collection and distribution of information carried out by the government and with the intention of influencing the actions of those who may be engaged in the conservation or use of the built heritage.

Each tool would send a particular message if governments adopted it as part of any program of action. Paying attention to the implicit message being sent by governments through each of the generic tools seems particularly important to understand the tools.

These fundamental messages might be characterized as follows:

**Ownership and Operation:** “The state will do X.”

**Regulation:** “You must (or must not) do X.”

<b>Incentives:</b>	“If you do X, the state will do Y.”
<b>Property rights:</b>	“You have a right to do X, and the state will enforce that right”
<b>Information:</b>	“You should do X, “ or “You need to know Y in order to do X”

Typically these five tools are used in combination to achieve the best results for particular circumstances. These five tools are the fundamental building blocks with which the government implements any policy<sup>26</sup>.

#### **4.2 Evaluation criteria**

Salamon’s five criteria for the evaluation of government tools<sup>27</sup> can be applied to the “five tools” and appear to be the most comprehensive and appropriate to the Suzhou context. The five criteria are effectiveness, efficiency, equity, implementability, legitimacy of public action.

##### ***Effectiveness:***

Effectiveness is the most basic criterion for gauging the success of implementation. It essentially measures the extent to which a conservation project achieves its intended objectives. Although cost is a consideration that can enter into one’s judgment, effectiveness judgments are typically made independent of costs.

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<sup>26</sup> J. Mark Schuster with John de Monchaux and Charles A. Riley II, ed, *Preserving the Built Heritage*. Hanover and London: University Press of New England, 1997.

<sup>27</sup> Lester Salamon, ed. *The Tools of Government: A Guide to the New Governance*. Oxford: Oxford University Press, 2002.

### ***Efficiency:***

Whereas effectiveness focuses exclusively on results, efficiency balances results against costs. In this case, the most efficient government tool may not be the most effective one and vice versa. Rather, an efficient tool achieves the optimum balance between benefits and costs. The costs should include both the conservation cost in reaching an objective and the social cost incurred by its implementation. Although some projects cost little for a government, the cost to other involved parties or the social cost might be huge.

### ***Equity***

A third crucial criterion in terms of which consequences of tools can be judged is equity. Equity involves basic fairness—the distribution of benefits and costs more or less evenly across all those eligible. In the implementation process, the degree to which benefits and costs are distributed is a measure of equity and fairness.

### ***Implementability***

Implementability refers to the level of ease or difficulty involved in the implementation process. If the tool is more complex and convoluted, the project may be more difficult to implement. The more actors that are involved, the more difficult a project is to implement. Some tools are more cumbersome to operate than others. While a combination of tools may promise great efficiency and effectiveness in theory, it may not deliver in practice because of unforeseen administrative challenges. To implement a project well, it is important to establish a proper institutional and legal structure wherein tools are implementable.

### *Legitimacy of public action*

The choice of tools can affect the public's perception that there is legitimacy in the public action. The extent of citizen participation is an indicator of the degree of legitimacy of public action.

### **4.3 Identification of government tools applied in Suzhou**

Suzhou's four conservation programs have utilized two main government tools: ownership and operation and regulation. In some cases a government corporation was created to exercise ownership and operation.

#### **4.3.1 Government tools used in Program 1 (50 Shizi Street)**

In the case of 50 Shizi Street, ownership and operation was the only tool utilized. The Suzhou government carried out the implementation work directly rather than through a third party. Since the government owned the historic residences, there were no acquisition costs. In this situation, the government was a responsible custodian of the property and all of the residents were treated equally.

#### **4.3.2 Government tools used in Program 2 (Tongfang Neighborhood Project)**

Ownership and operation was also the only tool in the implementation of Program 2. The government owned the built heritage. The process mainly consisted of "command" and "control" approaches. The government commanded the local residents to move out and controlled the process and resources. The government officials bypassed the bureaucracy in mobilizing the resources, making the decisions, obtaining the necessary permits, determining the terms of the projects, and employing a team of professionals.

### 4.3.3 Government tools used in Program 3 (Neighborhoods 10, 16, 37)

In addition to ownership and operation the Suzhou government created its own corporation in Program 3. A government corporation occupied an organizational space between the municipal government and the private market. This allowed the government to exercise the tool of ownership and operation more fully. Suzhou’s government corporation organized the subcontracts for the projects. In this manner, the Suzhou government owns and controls its corporation which was chartered to serve a public purpose.

### 4.3.4 Government tools used in Program 4 (Current Program Design)

Suzhou’s current conservation program is still being fashioned by the government. It appears to incorporate ownership and operation, regulation, and incentives in the “five tools approach”. Though, regulation is the main tool applied.

	Ownership and Operation	Regulation	Incentives	property rights	Information
<b>Program 1</b> 50 Shizi Street	☺				
<b>Program 2</b> Tongfang Neighborhood Project	☺				
<b>Program 3</b> Neighborhoods 10, 16, 37	☺				
<b>Program 4</b> Current Program Design	✦	☺	✦		
<b>canal improvements</b>	☺				

Table 1: Government tools identified in Suzhou’s conservation programs

☺: The main tool applied

✦: The auxiliary tool applied

In this program, the Suzhou government applies ownership and operation on a much smaller scale than before. The government’s jurisdiction is limited to ownership of the land and leasing land use rights to developers. Unlike previous programs, the government will not operate the process directly nor does it plan to intervene in the market in the

same manner as in the past. Instead, the government will focus its role on regulation. The government intends to regulate conservation process and enforcement of standards through hefty penalties.

The government will provide select incentives such as allocation of low-cost land to developers to encourage conservation projects by the private sector. The use of this tool is still in their infant stages.

#### **4.3.5 Government tools used in canal improvements**

Suzhou's canal improvement program was similar to Program 1 in that only ownership and operation was utilized. Suzhou's Canal Environment Department (CED) directly implemented the projects (figure 18).

#### **4.4 Evaluation of programs from tool perspective**

This section evaluates how Suzhou's four conservation programs have affected the conservation and redevelopment of the city's historic neighborhoods. The programs will be assessed according to Salomon's criteria of *effectiveness, efficiency, equity, implementability, and legitimacy of public action*. The outcome of each program will be qualitatively evaluated according to the aforementioned criteria and comparisons will be drawn to determine the success of one program relative to the others. A quantitative assessment cannot be calculated using the above criteria because there is no quantitative data available. It is possible to determine, for example, that Program 1 has been more effective than Program 2 but it is impossible to assign a value to ascertain how much exactly Program 1 is more effective than Program 2.



### *Effectiveness*

Programs 1, 2 and 3 were more effective than Program 4 because the Suzhou government owned and operated the first three projects. In addition, China's past socialist society created a solid institutional and cultural foundation for direct control of resources. The ownership and operation is effectively applied in the hierarchic government structure formed in the socialist society. Furthermore, the governor of Suzhou had significantly impacted projects in the first three programs by freely exercising his decision-making authority. In contrast, the conservation projects in Program 4 have been implemented by private investors who are bound by strict government regulations. This conservation program has relied on regulation and the involvement of non-governmental forces such as the private sector. While the government has had a role in the process, it is only indirectly through the formulation and enforcement of the regulations. Possible corruption in the Suzhou government might adversely affect the effectiveness of regulation and diminish the government's capacity to ensure compliance. In this respect, corruption might affect Program 4 much more than the other three programs. After all, it has only been in Program 4 that the private sector has been allowed in the world of conservation and it is the private sector that more likely has the resources to bribe government officials. Therefore, Program 4 has proven to be less effective than the other three programs.

### *Efficiency*

Evaluating the program efficiency is complicated because it is difficult to calculate total cost which is the sum of the direct costs plus the social costs resulting from a project. With respect to direct costs, Program 4 was more efficient than the other programs for a number of reasons. One explanation is that the implementation of new regulations in

Program 4 appears to incur small to almost no additional cost over the existing operating budget of the Suzhou government. In regulation, the administrative cost of formulating, monitoring, and enforcing standards is internalized in the salaries of already employed government officials. No additional employees need to be hired and the average salaries of government employees are fairly low.

In contrast, the government incurred sizable costs in Programs 1, 2 and 3 because it owned and operated the historic neighborhoods. The opportunity costs have been fairly high. Between Programs 1, 2 and 3, the direct costs in Programs 2 and 3 were lower than Program 1 because the government received revenue from leasing land use rights and allowing construction of market-rate housing and commercial space. The direct costs of Program 2 were lower than Program 3 because the government did not build any on-site affordable housing in Program 2 which increased government net revenue. In sum, the level of efficiency with respect to direct costs was highest in Program 4 and then decreased from Programs 2 to 3 to 1.

The social costs for each program paint a different picture of efficiency. Undoubtedly the social costs were highest in Program 2 because the social network of the neighborhoods was completely broken by relocation. The social costs in Program 1 were lowest because no one was relocated. Program 4 has had a higher social cost than Program 3 because the interests of low-income residents are being addressed and the social network will be intact after conservation is completed in Program 3. In contrast, the interests of private investors have been given higher consideration than the interests of low-income residents in Program 4. With respect to social costs and efficiency, Program 1 was the most efficient, followed by Programs 3 then 4 to 2.

In combining both direct and social costs to determine the efficiency of total costs for each program, it appears that Programs 3 and 4 are the most efficient while Program 2 seems to be the least efficient.

### ***Equity***

Social equity was most successfully realized in Program 1 because all the residents were treated equally and no one was required to relocate. Each household was provided a bathroom and kitchen. Program 3 ranked second in the equity criterion because a fairly high portion, 85%, of residents remained in the neighborhood. The government provided affordable housing to low-income residents by applying a percentage of the profit gained from leasing land use rights and selling commercial space and market-rate housing to affordable housing. Program 2 considered equity the least in that the government appeared to have profit-driven leanings shortly after realizing that land could be a potential profit-bearing asset. This leaves Program 4 as the third most socially equitable conservation program in Suzhou. Program 4 was largely carried out through regulation which balanced the interests of private investors and the residents. Overall Program 1 realized the highest level of equity followed by, in order, Programs 3, 4, 2.

### ***Implementability***

Program 1 was the most easily implementable because at the time China's land and housing reforms had not yet occurred. The market was not a force with which the government needed to consider. Program 2 was less easily implementable than Program 1 because many government agencies were involved and the government needed to balance emerging market forces with a command-oriented public finance structure. Program 3 was more difficult than Program 2 because a semi-public government corporation was

created and the government was one step removed from the conservation process. Yet the government was ultimately responsible for its corporation and oversaw all of its programs and projects. This increased the number of transactions and costs associated with it. With increased transactions there is also an increased chance of confusion and/or error in any given project.

Program 4 was less easily implementable than Program 3 because the government needed to formulate regulations for private investors as well as enforce compliance of the regulations. Conservation in Program 4 is mainly in the hands of private developers and knowledge of the market is limited but growing across all sectors in China. Corruption is pervasive and can complicate the conservation process and compromise the

	effectiveness	efficiency	equity	implementability	legitimacy of public action
Program 1	★★★★	★★	★★★★	★★★★	★★
Program 2	★★★★	★	★	★★★★	★★
Program 3	★★★★	★★★★	★★★★	★★★★	★★
Program 4	★★★	★★★★	★★	★★★★	★

Table 2: Evaluation of four programs applied in Suzhou  
 Note: More stars mean more successful. Five Stars means the most successful. One star means the least successful.

legitimacy of government regulation which in turn decreases the implementability of a project. In sum, Program 1 is the most easily implementable, followed by Programs 2 then 3 then 4.

***Legitimacy of public action***

In all four programs, the legitimacy of public action has been low. This is largely because the Suzhou government has never placed priority nor explicitly stated public action to be a goal of the government. In Programs 1, 2 and 3, the government has conducted expert consulting group meetings to get a sense of the public’s interests with partial public

consulting group meetings to get a sense of the public's interests with partial public participation. However, the citizens of Suzhou have not viewed the meetings as a form of public action because the experts represent only a small portion of the population. This disconnection between the interests of the people and what the government believes their interests to be creates a level of distrust between the people and government. In sum Programs 1, 2 and 3 score low on the legitimacy of public action criterion. Program 4 scores even lower because in addition to the shortcomings mentioned in Programs 1, 2, and 3, the law and rules specific to the Program 4 are shaped by developers' interest and do not involve public input. When the public is not aware of its right to participate in the formulation of laws and the conservation process there is no basis for the legitimacy of public action.

After an examination of government tools and criteria in the context of Suzhou, it is clear that the legitimacy of public action rates low among all four programs. This reiterates that the government does not yet recognize the value of public participation. This could be a major obstacle in developing a sustainable conservation program in Suzhou. In addition, equity has been inconsistent across the four programs. It appears that equity is a function of market forces being imposed on the government and at times the government has lost sight of its goal to ensure equity. Meanwhile, efficiency has consistently ranked low across the programs because of the government's failure to factor social costs in the total cost of each program. It is important to bear these three criteria in mind in building more successful conservation programs for Suzhou.



## **Chapter Five: Evaluation of Possible Future Government Tools in the Conservation of Suzhou's Waterscape**

The analysis conducted in Chapter Four points to ownership and operation as the overwhelming government tool used in the conservation of Suzhou's waterscape. Only recently has regulation been utilized. Other than these two tools, the combination of government tools in China is limited compared to the combination of tools used in modern western economies. The goal of this chapter is twofold. First, the issues that have prevented other government tools such as incentives and property rights from being applied in Suzhou will be examined. Second, new programs consisting of different combinations of government tools will be recommended for the conservation of Suzhou's waterscape.

### **5.1 Constraints on availability of government tools in Suzhou's waterscape**

There are powerful factors affecting the availability of various tools. Schuster puts forward three main factors: *economic constraints, political constraints and structural constraints*.<sup>28</sup> Given China's urban planning curriculum a fourth constraint, *professional personnel constraints*, may be added.

#### **5.1.1 Economic constraints**

The application of government tools can be costly. Even a strategy that relies primarily on information has costs associated with it. The scarcity of funds limits the outcome of the government tools and hinders the availability of some government tools.

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<sup>28</sup> J. Mark Schuster with John de Monchaux and Charles A. Riley II, ed, *Preserving the Built Heritage*. Hanover and London: University Press of New England, 1997.

Economic constraints exert pressure on ownership and operation in Suzhou for several reasons. One reason is that the government does not have enough funding to conserve and renovate the historic heritage. Another reason is that the government has opportunity costs associated with its ownership of the built heritage. In Suzhou, economic constraints also affect incentives. The government cannot provide direct incentives such as grants to investors if it is operating under a very strict budget. In addition, insufficient conservation funding hinders the involvement of non-government organizations and non-profit organizations such as a national trust or a conservation society. Such bodies are essential elements of successful conservation projects in western economies because they would be committed to addressing ancillary issues associated with conservation.

Regulation would not face much economic constraints because it appears to be cost-free and simply requires someone to do something. Property rights would not be affected much by economic constraints as well because the government owns the property and assigning property rights to private individuals does not require additional funding. The tool of information may not be affected much because it is the cheapest for government.

Why are there economic constraints in Suzhou? Why does the Suzhou government have insufficient funds to implement conservation projects? One reason is that the Suzhou government does not receive enough funds from the central government. The total available conservation funding for the whole country per year is only 3.8 million dollars. This amount is allocated to only ten different historical neighborhoods per annum. Another reason is that China's municipal governments cannot rely on a tax system riddled with corruption. In particular, members of the private sector commonly establish informal arrangements with specific government officials. These arrangements enable



private entities to establish a duplicate account that reports only a portion of their profits to the government. Government officials may conveniently overlook this situation as a personal favor for a relatively minimal price. Although there is no documentation that confirms this phenomenon, it is so widespread that members of the private sector believe it is more cost-effective to play the odds of incurring heavy penalties than reporting actual profits. Because the government cannot identify all such cases, they do not collect the appropriate taxes from private enterprises. This may be the case in Suzhou. A third reason for the lack of conservation resources is that conservation falls outside development and infrastructure<sup>29</sup> designation to which the majority of development funding is directed.

However, these economic constraints may be overcome in several ways. One suggestion is to apply a fixed percentage of the money collected from leasing land use rights to conservation projects. A second suggestion is to direct resources towards eliminating corruption in the government so that an effective tax system can be established. Then the government could institute additional taxes on conservation-related industries. For example, new taxes could be levied on tourism and hotels in historic areas because their success largely depends on conservation of the area. A third suggestion is to direct funding towards conservation projects from area developments that receive political recognition and enhance the city's image.

### **5.1.2 Structural constraints**

Structural constraints can play an important role in the choice of government tools. A hierarchic government is a core feature of China's urban governance. China's long

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<sup>29</sup> Telephone interview with Jianbin Zhou, Suzhou Urban Planning Bureau, March 2003.

history of feudalism society developed the hierarchic government structure to a mature level. The hierarchic government structure is effective for governments to control and command their sub-governments. However, this vertical structure has hindered horizontal coordination between different government agencies. In addition, a strong hierarchic structure has prevented the participation of non-governmental organizations, non-profit organizations, and the private sector by not allowing their participation in the conservation process. As a result, this structural constraint hinders the application of incentives, property rights and information which requires cooperation and negotiation instead of command and control.

Another structural constraint comes from within the government's own structure. Different departments share responsibilities and have overlapping jurisdictions in carrying out their work. In Suzhou, historic buildings are under the jurisdiction of both the urban planning bureau and the historic relic bureau. Each bureau has the right to own and regulate property and is responsible for funding the built heritage. This overlap of power has resulted in conflicts between the two agencies both of which claim rights to the built heritage. The overlap has also resulted in negligence when both agencies evade their responsibility of the built heritage. To deal with this structural constraint, the government has to rely on ownership and operation and regulation more than the other tools. Under this arrangement, governors can reduce overlapping jurisdiction between agencies and clarify each agency's responsibilities by exercising his/her authority. With the other tools, the governors cannot influence the conservation process directly.

A final structural constraint on the free use of tools is the lack of clearly defined property rights, which are necessary for most of the tools to operate well. In Suzhou, the

government must define, parcel out, and enforce property rights to establish a clear foundation for the other tools of conservation.

### **5.1.3 Professional capacity constraints**

A lack of human resources can constrain the choice of tools as well. As mentioned in Chapter Two urban planning professionals in China have had difficulty dealing with changing conditions arising from China's transitional economy. The professional capacity constraints prevent the availability of complex tools such as incentives and property rights from being utilized.

In order to relax this constraint, academic urban planning programs should be reformed so that professional planners have the capacity to manage complex government tools. Research and the development of an academic planning curriculum around indirect government tools should be carried out. Urban planning administration should also be expanded to train government officials about the application and effects of indirect government tools. In addition, professionals should be familiar with the process of facilitating collaborations between the government, non-governmental organizations, and private investors so that conservation projects are carried out.

### **5.1.4 Political constraints:**

Government tools may also be constrained by political forces and limit the choice of tools used. For example, if municipal governors were to place emphasis on conservation as a means of achieving political recognition and promoting a favorable public image rather than protecting a valuable asset, ownership and operation and/or regulation are likely to be the preferred tools. This is because the application of ownership and operation and/or

regulation can directly fulfill a governor's goals. The governor would have difficulties enlisting the public to help build his/her political image.

When a government uses tools such as incentives, property rights and/or information, citizens may not respond because they do not trust the government. This in turn limits the effectiveness of government action. Persistent government corruption often accounts for citizens' distrust of the government. In such cases direct government tools such as ownership and operation and regulation would be more effective than the other tools because the government can carry out conservation projects by its own directive or impose and enforce regulations on private investors to do conservation.

Political ideology has had a profound impact on the choice of the tools used in China. Ten years ago privatization was still a taboo topic. The state could not promote true privatization of property because it would violate a basic principle that all land is public and belongs to the people. Although the government encouraged the people to invest in private housing, the land attached to the housing was not for sale. The exclusion of land value in the property rights equation was a glaring omission and a barrier for property rights to operate effectively. In China's transitional economy, the government needs to relax some of the basic assumptions underlying its political ideology in order to effect rapid changes in land use and ownership.

## **5.2 The relaxation of constraints**

Relaxing economic, political, structural, and personnel constraints can provide more effective programs for the conservation of Suzhou's waterscape than the current program which limit the choice of government tools.

In the short run, economic and structural constraints are likely to be relaxed because it is a logical next step in building government resources. For example, the enforcement of severe penalties for corruption in the central government can improve the tax system and increase funds for conservation. The central government could also reorganize the government structure at the municipal level so as to eliminate the departmental overlap of rights and liabilities around conservation. However, political and professional capacity constraints cannot be relaxed in the short run. The political structure is a deep-rooted hierarchy in which the people in power maintain a stronghold in decisions affecting their jurisdiction. It would be difficult to change such a dynamic immediately. With respect to professional capacity, relaxing its constraints would be a gradual process that requires an understanding of western planning practices.

While relaxing political constraints would be the most difficult undertaking, it would enable the central government to relax all the other constraints thoroughly. For example, if political reform in China were to transform its governments into a democratic one, the hierarchic structure could not exist for long because it would hinder the coordination between the government and non-government entities. A political reform also could transform the current governor-appointment system into a democratic election system. The political goals of governors would change from focusing on grand short-term accomplishments to maintaining the interests of one's constituency. In turn, this transformation would lead to the relaxation of economic constraints. More funding would be used to do conservation projects and enhance one's quality of life.

Unfortunately, political affairs are still a taboo topic in China. Although economic reform has been carried out for over 20 years, political reform is still on a long waiting list.

Relaxing political constraint means challenging political interests. This would affect current political interests because the new programs would involve democratic practices and accountability for social equity, both of which threaten the present political climate. Can governors willingly sacrifice their privileged authority to bestow democracy to the people? May people express in public a need for democracy in light of China's history of imprisoning political dissidents? China's feudal tradition has taught its people to be reticent in political matters because the government has firmly dictated the people's political ideology for centuries. If current political leaders do not reduce political constraints, it may require the strength of economic forces to break through China's current political hold on the market before political changes could occur.

### **5.3 The programs without constraints**

This section assumes that all the constraints described earlier will be relaxed in the future. It is hoped that the economic, political and structural environment for government tools will be refined in the future so that new combinations of government tools can be utilized. Each program involves a combination of different government tools and was formulated under the belief that a combination of tools can be more successful than a single tool when the program is dealing with a wide variety of actors such as the government, the private sector, and nonprofit organizations. The Suzhou government may draw from the proposed recommendations as it continues to conserve for its built heritage.

In Suzhou, there are two typical kinds of historic neighborhoods. One type is the culturally sensitive historic neighborhoods. Most of the physical structures cannot be demolished because they have long histories and hold great cultural value. For example,

temples, courtyard homes of famous families, pagodas and bridges have survived over many centuries and are vulnerable to daily wear and tear. Therefore these structures need to be carefully conserved and repaired. Any improper, however slight, treatment of a structure would destroy the historic value of the neighborhood. In such neighborhoods it is the conservation and renovation of these structures that would be the main task. Large-scale developments are not permitted and small-scale commercial developments would be limited to further maintain the historic fabric of the neighborhoods. The percentage of low-income population is higher than the standard neighborhood.

The other type of neighborhood is the less culturally sensitive historic neighborhoods. In Suzhou the majority of these physical elements lacks aesthetic and historic value and therefore can be demolished. In such neighborhoods conservation and redevelopment would occur simultaneously. More commercial developments would be accepted in these neighborhoods than the culturally sensitive neighborhoods.

### **5.3.1 Case One: The Pingjiang Neighborhood**

The Pingjiang neighborhood is representative of culturally sensitive neighborhoods in Suzhou. Pingjiang has the longest history among all the neighborhoods in Suzhou. Many valuable historic structures remain. Traditional residences stand between one to three stories. Famous Chinese gardens are located next to factories and working units. Commercial developments are rare and highly restricted (Figure 18).

Pingjiang calls for programs in which ownership and operation and/or regulation are overwhelming tool. The government must have a strong custodial role in Pingjiang's conservation. Otherwise private entities' may inadvertently destroy historic structures and disregard the intent of conservation and destroy the collective value of the historic

neighborhood. In this respect, the historic environment could not be significantly conserved in the absence of strict government oversight which, in turn, is most clearly embodied in ownership and operation, and regulation. In addition, the nature of conservation projects should be non-profit. Therefore non-profit organizations are preferred to participate in the conservation process. According to these situations, two conservation programs are suggested to address the conservation of the Pingjiang



Figure 18: The existing condition of Pingjiang Neighborhood.  
( Provided by Suzhou Urban Planning Bureau, 1999)

neighborhood.

**Program 1: Ownership and operation  
+ incentives**

Program 1 is the combination of ownership and operation, and incentives. Ownership and operation is the overwhelming tool while incentives are the auxiliary tool. Suzhou's government-owned corporation would need to be commissioned to carry out its conservation projects so that direct government bureaucracy is minimized.

Otherwise the human resources available to carry out conservation would be shared between different government agencies. In addition, those assigned to undertake conservation would be required to divide their time between different projects and duties. Under these conditions, government-managed conservation project would not be as well



equipped to implement and address the concerns that accompany conservation projects as well a government corporation.

Another component of this program requires that an expert consulting committee be established. The committee would consist of citizens drawn from a cross-section of residents in the area to be conserved, from area professionals to business representatives to academics and concerned citizens. This committee would agree to assist the municipal government or the government corporation in the task of undertaking conservation projects.

Funding for conservation projects would come from the following resources:

- The government corporation would take out bank loans and make its payments from the returns it receives from its investments. In the case of Suzhou, the government could provide insurance to the government corporation. If the government corporation were to default, the Suzhou government would cover the loss.
- The government corporation would get grants from the Suzhou government to do public works-related and/or conservation projects such as renovation of landmark structures, infrastructure improvements, canal repairs, and affordable housing.
- The government corporation would earn money from land transactions and select commercial development. For example, infrastructure and canal enhancements generally increase the value of surrounding land. In turn, because the price of leasing land use rights is a function of the land value, the government corporation would increase its revenue with increases in the lease rate. In addition the

government corporation could sell or rent out high-income housing, commercial and tourist space to increase its revenue.

In this ownership and operation approach the government-owned corporation is directly engaged in conservation including conserving and renovating residences, bridges, banks, steps, and improving the water quality of canals.

Suzhou's designation of historic architecture includes buildings on-site to be conserved or renovated or demolished. A government-owned corporation could conserve and rehabilitate an architectural structure by itself. Or the government could provide incentives to residents to do some conservation work. In the latter scenario, the government would provide funding, technical, and design assistance to a resident so that he/she can complete the conservation work on his/her own. For example, if residents were to renovate the historic housing they live in to meet required conservation standards set by the government, they would pay less rent or live rent-free.

In addition, new traditional-style housing should be built in the historic neighborhoods that undergo conservation. This approach would enable residents to be relocated to new housing in the neighborhood and alleviate overcrowding. A large portion of the new housing would need to be affordable for relocated low-income residents. High-income people would be allowed only to invest in market-housing units in the neighborhood. The funds received from the high-income residents would be used to subsidize the low-income units. These affordable housing units could be where structures were demolished or on former sites of working units and/or factories that were commanded to move out by the Suzhou government.

## **Program 2: Ownership and operation + regulation + incentives + information**

In the case where regulation is the overwhelming tool applied in Suzhou, ownership and operation, incentives and information serve as supplemental tools. The government would administer the process by formulating conservation goals, creating planning guidelines, and regulating the stakeholders. The stakeholders would include non-governmental organizations, non-profit organizations, and private individuals.

One important element in this program is that the government develops design guidelines that aim to revitalize the waterscape and encourage sustainable development in historic neighborhoods. The guidelines are to be designed by professional planners. The expert consulting committee would participate in the design review so that feedback from local citizens is incorporated in the final guidelines. Consistency in land use and conservation goals must be maintained. Land use changes that put heritage buildings and precincts at risk are to be eliminated. Structures and activities that could prevent conservation of historic structure need to be minimized. A conservation designation that prohibits the demolition of a historic structure needs to be clearly and explicitly stated in the land use plan. Façade standards must be included in the guidelines. Public space along canals would be redesigned. And a minimum distribution of affordable housing in the historic neighborhood is to be enforced.

After the guidelines are developed, the Suzhou government would prepare the site for the implementation of a project. In preparing the site, the government could enhance existing infrastructure and relocate polluting factories. The government could also renovate the physical elements of a canal. For example, the government could repair old bridges and pave a pedestrian path.

Following preparation of the site, the government would commission or lease land use rights of a site to non-profit or non-governmental organization. Private developers would not be encouraged to participate in the program because the nature of the program is not to profit which conflicts with the developers' goals. The organizations sought would demonstrate a commitment to local issues. The commitment to local concerns and focus on rehabilitation of historic structures are essential but unlikely to be achieved by a public agency or private developer. Moreover, a non-profit status assures local residents that the program's administrators are not in it for the money nor are they a part of government bureaucracy. However, the government should still enforce the strict regulations and supervise the entire process. Any violation of the guidelines would lead to the revocation of implementing rights.

Besides regulation, the government would offer incentives to organizations. Incentives could be contingent on public needs. For example, an organization could get a grant from the government if 85 percent or more of low-income residents receive affordable housing located right in the neighborhood. The government could facilitate public participation by incorporating information in the form of seminars, workshops or the media to educate and encourage people to be actively involved.

### **5.3.2 Case Two: Neighborhood 37.**

Neighborhood 37 is representative of less culturally sensitive neighborhoods in Suzhou. This neighborhood mentioned in Chapter Three has already been conserved and redeveloped by the government. Now it is assumed that the conservation project could be redone with all the constraints reduced so that incentives and property rights are also

available for use (figure 19). Operating under the above circumstances, four programs are suggested below.

### **Program 1: Ownership and operation + incentives**

This program is similar to Program 1 in Case 1 in that the combination of tools is the same. However, in the second case of Program 1, more land use rights were leased and more commercial space was permitted for development than Case 1. By carrying out these changes, the government received more funding for conservation and subsidizing the poor.

### **Program 2: Ownership and operation + regulations + incentives**

Program 2 is similar to Program 2 in Case 2. The combination of tools of this program is the same with Program 1 in Case 2. However, after the government completes the guidelines and site preparation, the site

would be put on the market for bid as long as the guidelines mentioned above are strictly adhered. The highest bid would win the project. The government would enforce compliance and supervise the entire process. Any violation of the guidelines would lead to the revocation of development rights. In addition to

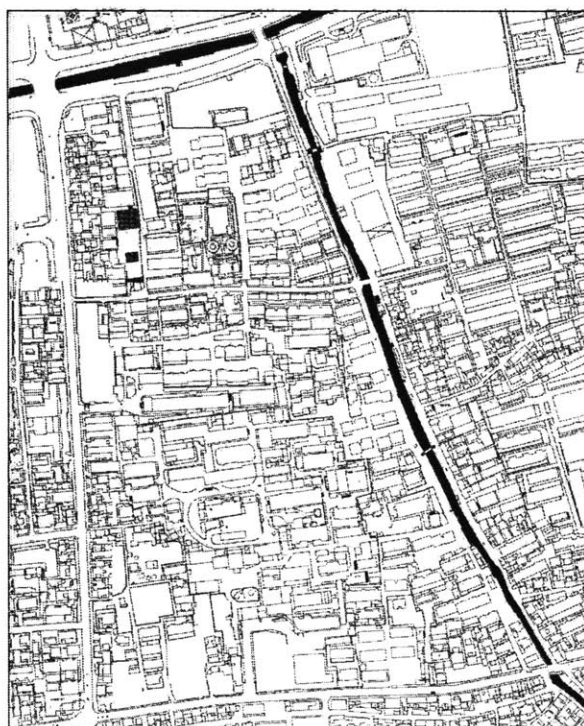


Figure 19: The existing condition of Neighborhood 37.  
( Provided by Suzhou Urban Planning Bureau, 1999)

regulation, the government could offer the developer some incentives. For example, low-cost suburban land could be provided to the developer if he/she can build additional affordable housing in the neighborhood.

### **Program 3: Regulation + incentives + information**

In Program 3 incentives is overwhelmingly used while regulation and information would be auxiliary tools. The expert consulting committee mentioned in Program 1 is needed in this program and an urban design guideline would be created by the government and the committee. The guidelines would be less strict than in Program 2 in Case 1 and would put forth the minimum conservation requirements. The guideline would state exactly which renovations or new construction is allowed in neighborhood 37. These limitations are to be based on the physical fabric of Neighborhood 37 and include though not limited to building height, materials and color. People who wish to alter the buildings or undertake new construction in Neighborhood 37 must go through a design review process to ensure that the proposed change will conform to the standards established for the neighborhood 37. The expert consulting committee participates in the design review process. The above illustrates some applications of regulation.

The government would provide incentives or disincentives to actualize the goal of conservation. For example the government could provide grants, a type of direct incentives, to encourage developers, nonprofit organizations, or owners of historic properties to undertake conservation-related tasks (such as maintenance, restoration). Another example involves private developers who agree to build a percentage affordable housing in the neighborhood in exchange for a grant. For landowners who are willing to

restore their residence under the guidance of government-appointed professional planners appointed by the government, they can get the grant to offset a percentage of costs.

The government could also apply indirect incentives which have a notable financial effect with no direct transfer of money. One popular indirect incentive is called homesteading. The government can sell dilapidated residential property to a person or family for a nominal fee (often only \$1). In return the buyer commits to rehabilitate the structure within a given period of time and live in it for an agreed-upon period thereafter. Homesteading recaptures old, abandoned housing and ensures its continued viability by relying on individuals to carry out the improvements. In return, the individuals have incentives to own and operate historic property. In this situation, both the individual and the neighborhood benefit.

A similar indirect incentive is called shopsteading. The government offers abandoned properties to merchants nearly for free. The merchants, in turn, agree to bring the property up to neighborhood design guideline and operate a shop on the premises for at least two years. Shopsteaders are encouraged to live on upper floors.<sup>30</sup> Meanwhile, the government would assist in design improvements, and access to rehabilitation loans from city funds.

The government also can provide incentives for residents to renovate their own residence. For example, if residents renovate the roof, the government would renovate the façade for the residents for free. Or if residents renovate their house, the residents can be allowed not to pay rents. In addition, the government can offer incentives for private investors to

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<sup>30</sup> Enry, *Lessons from Local Experience*, US Department of Housing and Urban Development and Agriculture. 1983

renovate the physical elements of a canal. For example, if developers repair bridges and piers, the developers can get a tax deduction for their other projects in the city.

The government can offer rehabilitation loans at very low rate to encourage developers to carry out conservation projects. The government can provide mortgage guarantees at lower costs than commercial lenders for conservation projects.

Incentives also have to take into account disincentives. For example, if the relocation rate of local residents does not meet the minimum requirement set by government, the developers or organizations would be heavily fined and the minimum relocation rate would have to be met in the end.

The government could also apply information. In particular, conservation programs initiated by the government or non-profit organizations could provide an excellent opportunity for training in construction skills. These programs could lower conservation costs and provide job opportunities to unemployed low-income residents.

#### **Program 4: Incentives + property rights + information**

In Program 4 incentives and property rights will be overwhelming tools while information would be an auxiliary tool. The application of incentives and information is similar to Program 3 except that property rights will be added.

It is assumed that Suzhou is in the process of privatizing property and needs to create a framework to define, enforce, and protect property rights. Since most physical structures in Suzhou's historic canal neighborhoods belong to the State, the government must be involved in the privatization process. When the government sells or leases public property to a private entity, the property rights for each parcel needs to be defined by



legal documentation whereby title, development rights, conservation and other requirements are outlined. In addition, a complete legal structure relating to property rights should be established and validated so that property rights can be protected. Furthermore, a competitive market needs to exist so that individuals would be willing to exercise their property rights.

Development Rights Transfer Programs merit notice in conservation. A development rights transfer can be severable, bankable, transferable, and attachable. It should be both attractive to its intended participants and compatible with a municipality's conservation requirements and urban design values. Holders of development rights could trade their rights with each other. Developers can get a development rights transfer from a historic neighborhood to a suburban area. This exchange is treated as an incentive. In the transfer of development rights, negotiation replaces command and control as the preferred approach. The stakeholders could then collaborate with each other under the guidance of the government.

Incentives and information are usually bundled with property rights. For instance, water quality issues have puzzled the Suzhou government for many years. The deterioration of the water quality has adversely affected conservation in the city. The Suzhou government has tried a number of methods to improve the water quality in the canals. However, Suzhou's citizens continue to pollute the water. To change people's behaviors and attitude toward the canals property rights could be assigned to those living near the canals. The government could set a standard for water quality. After a period of time, the water quality should be examined. If the result is worse than the water quality standard set by the government, the citizens should compensate. If the result is better than the

standard, citizens would be given cash rewards. These policies are essentially incentives and disincentives for citizens to voluntarily maintain a minimum level of water quality.

In sum, four constraints have prevented the availability of government tools in Suzhou. Relaxing political constraints is the essential step to pave the way for other constraints to be relaxed. Operating under the condition that all four constraints have been relaxed, four programs have been proposed to address two common situations in the conservation of Suzhou's waterscape. Each program consists of different combinations of government tools. An examination of these programs points to a need to include more actors in order to ensure successful conservation of Suzhou's waterscape.



## **Chapter Six: Conclusion**

An important conclusion may be drawn after a review of how the conservation of Suzhou's waterscape might be implemented. A new governance paradigm needs to be created to carry out the conservation of Suzhou's waterscape. The new paradigm needs to involve more stakeholders than before to participate and carry out a government tools approach. The Suzhou government and a host of third-party actors such as non-profit organizations, private investors and individuals need to depend on each other. The current hierarchy of government agencies needs to be transformed into organizational networks such that collaboration would replace competition and negotiation-and-persuasion would replace command-and-control. All of these changes would reflect the government's effort to legitimize government action under a transitional economy.

Moreover, a new governance paradigm needs to focus on a tools approach. According to the circumstances, the government needs to formulate effective programs. Each program has its own combination of tools and constraints. The tools approach requires a new field of knowledge focusing on the operation of different tools and optimal conditions for their use. Efforts to understand the tasks required in the conservation of Suzhou's waterscape must begin not only with a clear understanding of the problem, but also an appreciation of the characteristics of the available tools and how they work.

The new governance paradigm can be applied to historic canal cities in China's Jiangsu and Zhejiang provinces because these cities share features and problems similar to Suzhou. Hopefully more historic canal waterscapes will be conserved and enhanced which will in turn preserve the cultural traditions and life attached to a waterscape.

This thesis was conceived as a starting point to institute a new government paradigm that focuses on conservation in China's historic canal cities. However, it is only a start. Much work lies ahead. It is hoped that the material presented here provides a useful foundation on which to advance a formal and systematic conservation program.

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