Waterfront Development:

A Case Study of Dalian, China

by

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I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Waterfront development has been an issue of wide concern and extensive discussion since the 1970s. This study provides more insight into the phenomenon by applying the existing knowledge to a different political and economic context.

A “phased model” is proposed as a “prototype” of waterfront development. It analyzes waterfront development as a series of five temporal stages, i.e. pre-start-up, start-up, early development, mega projects and maturity. Each of the phases is characterized by the involvement of specific stakeholders, issues and events, and outcomes. A trend in the input of stakeholders is discerned: Trends in the inputs of three stakeholders, the municipal government, the special purpose agencies and the private sector, are discerned whereby initial government investments are complemented and eventually exceeded by investments from the private sector.

Analyses of three sites in Dalian’s (in Northeast China) waterfront development suggest that all three sites fit appropriately into the phase model. This suggests the applicability of western theory to cases elsewhere in a different political and economic context. The hypothesis on the evolutionary trend of stakeholders’ inputs is tested, rendering generally confirmative results that: (1) the ***municipal government***’s input followed a first increasing and then decreasing trend; (2) **s*pecial purpose agencies***’ input intensity showed a rising pattern, exceeding that of the municipal government in later phases; (3) The ***private sector*** was seldom involved in waterfront development until the mega projects phase but their investments rose sharply after that.

Finally, applying criteria for success gleaned from the literature, the overall evaluation of Dalian’s waterfront development can be viewed as being a success. However, the seasonality of tourism, the lifecycle of tourism products and the insufficient respect paid to local residents’ interests are pointed out as possible deficiencies.

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Chapter 1: Introduction

This chapter depicts the general research background of this study. It also introduces the physical location of the study area. Research goals and objectives are defined and research questions are stated in section 1.2. At the end of this chapter, the overall framework for the thesis is presented.

1. 1 Background

1.1.1 Waterfront Development[1]

Many coastal and riparian human settlements owe their origin and prosperity to water transport and trade. From ancient times until recent decades, such urban settlements and their ports were normally intimately related in both functional and spatial terms (Hoyle and Pinder, 1992b).

Ports are gateways where urban services have been developed to promote maritime trade (Breen & Rigby, 1994). At the same time, the urban waterfront was also the focal point of urban activities. The symbiosis between water-related and urban-based functions, well-established in ancient times, persisted worldwide until the mid-twentieth century (Hoyle, 1997).

Urban waterfront redevelopment is already a well-established phenomenon internationally. Following the decline of old harbour sites and waterfront industrial areas in many cities all over the world in the second half of the 20th century, urban waterfront redevelopment started in North America, most notably with Baltimore's Inner Harbour in the 1970s, and has gradually spread to Europe and elsewhere since the 1980s (Gospodina, 2001). The intensification of the phenomenon in the last decade or so and its widespread importance,

[1] The term "waterfront development" in this thesis is in a broad sense, which incorporates both development and redevelopment. This is in order to maintain consistency and concise in the whole thesis. An in-depth discussion concerning the definition can be seen in section 1 of chapter 2.

have led to an increasing academic interest reflected in a series of international conferences and major publications focusing on different aspects of the phenomenon (e.g. Acosta, 1990; Breen & Rigby, 1994; Bruttonesso, 1989; Fitzgerald, 1986; Forward, 1968; Goldrick & Merrens, 1990; Hoyle & Pinder, 1992; Hoyle & Pinder, 1981; Torre, 1989; Rsukio, 1984; Watson, 1986; Wrenn, 1983).

Many downtown waterfronts have been transformed from working industrial ports into commercial, recreation and tourism magnets. Private developers learned how to turn water into gold by exploiting the waterfront's ambience in the marketing of their projects. As a result of both private initiative and public prodding, cities have gained valuable amenities such as new parks, walkways and other recreational facilities in private developments that line the public waterway (Tunbridge & Ashworth, 1992; Acosta, 1990; Scoffham, 1989; Craig-Smith & Fagence, 1995).

Today, many cities are not in the financial position to acquire land and construct public amenities. Cities have turned to their array of regulatory tools – zoning, design guidelines and development agreements – to secure badly-needed public amenities and recreational facilities. Often, the synergy between private uses, such as retail and entertainment, and public open spaces have reinforced each other and maximized public enjoyment of the waterfront (Vallega, 2001).

With the proper tools, cities can capitalize on private development to achieve the maximum public benefit. Urban design guidelines can protect the public interest by spelling out basic standards for private development. Carefully-crafted guidelines can clearly define a public vision, ensure public access, establish clear design standards and create consistent procedures for private development.

1.1.2 General Situation of Current Research

The separation of port and urban functions during the second half of the twentieth century is well documented. It was largely brought about by the increasing scale and changing technology of maritime transport and consequent transformation and relocation of port facilities, and by the parallel and sometimes closely associated programs of urban renewal,

particularly in larger, older city centres in advanced countries (Breen & Rigby, 1994; Bruttonesso, 1993; Craig-Smith & Fagence, 1995; Hoyle & Pinder, 1992; Torre, 1989). Global trends towards the transformation of maritime transport technology became apparent by the 1950s, but the problem of waterfront decline and the demand for revitalization policies did not achieve widespread recognition until 1960s. Attention was originally centred mostly on North America and Europe, and later spread to Australasia and Japan.

In the late 1990s, research agendas have begun to address interesting questions concerning the extent and character of the spread of the phenomenon of urban waterfront redevelopment to newly industrializing countries (NICs) and less economically developed countries (LDCs). Comparatively little attention has yet been paid to the need for and possibilities of urban waterfront redevelopment in many port cities in NICs/LDCs (Hoyle, B., 2002). Urban waterfront redevelopment phenomena have been largely ignored in the developing world until recently. In the last decade, developing countries have been seeking to revive their historic port cities, in diverse contexts ranging from post-colonialism and globalization to culture revival and tourism development (Hoyle, 1999; Hoyle, 2001a; Hoyle, 2001b). Waterfront redevelopment in China has attracted attention from domestic and overseas researchers only recently. Studies of urban waterfront redevelopment cases in China and the introduction of foreign experiences of successful urban waterfront redevelopment cases emerged in China in the 1990s (Xu & Yan, 2000).

1.1.3 Study Area

The city of Dalian is located on the eastern bank of the Eurasian Continent and the southernmost point of the Liaodong Peninsula in the northeastern part of China (Figure 1-1), with an area of 12,547 km^2 and a population of 5.5793 million[2]. With the Huanghai Sea on the east and the Bohai Sea on the west, Dalian overlooks the Shandong Peninsula across the sea to the south and borders the great span of the Northeast Plain to the north. The city serves as the marine gateway for northeast China and Inner Mongolia providing access to North and East

[2] Source: National Bureau of Statistics of China 2003, available at http://www.stats.gov.cn

China.

Dalian is one of the 14 coastal cities that were designated as special economic zones by Chinese the central government in 1984. After that, it experienced booming development. Not only is the city an important regional transportation hub, but it is also a national tourism destination, famous for its mild climate and unique urban coastal scenery. Endowed with a warm temperate continental monsoon climate with maritime climactic features, Dalian enjoys a warm winter and cool summer. Its beautiful scenery and easy accessibility make it a popular seaside resort and the first choice as a summer vacation destination for people from the three northeast provinces as well as from Inner Mongolia.

Figure 1-1. Location of Dalian in China

Source: http://www.lib.utexas.edu/maps/

Since the 1980's, the local government of Dalian has implemented a series of development and redevelopment programs with the objectives of providing a more enjoyable urban environment for local city life as well as a means of attracting external investment. At the same time, equal attention has been paid to building Dalian as an international tourism

destination, appealing to more and more domestic and international tourists. The development of the urban waterfront serves as an important step toward this objective.

China's unique history of waterfront evolution and its political and economical system make it an interesting area of research as a whole. It is worthwhile to study waterfront development in Dalian as a specific case along the east coast of China, and the reflection of other Chinese cities and towns. It will enable us to introduce new knowledge to a formerly neglected area and assess the application of western theories to a case in different context.

Waterfront development in China as a whole, and in Dalian specifically, differs from that in Europe and North America, which often involved the revitalization of an inner-harbour area that suffered from great deterioration due to technological change and the decreasing importance of the old harbour. Dalian is a relatively young city with an urban history of about one century. On the one hand, Dalian has similar waterfront development problems and possibilities as western waterfront cities; on the other hand, its unique strategic location in China and different political and economic context make the development of its waterfront an interesting case that merits detailed study.

1. 2 Statement of Research Questions

The primary purpose of this study is to apply existing knowledge and frameworks to the policy, strategic, planning and administration of Dalian's waterfront.

The objectives of this study are as follows:

1. To document Dalian's waterfront development as a specific case;
2. To assess the applicability of western experiences to the different political and economic system of China; and
3. To evaluate Dalian's waterfront development.

In order to accomplish those objectives, the following questions are to be answered:

1. When and in what circumstances was Dalian's waterfront development initiated?
2. What are the objectives and strategies of Dalian's waterfront development? Were these objectives and strategies overtly stated and publicized?

3. Did any form of planning exist specifically concerning the waterfront development in Dalian? If yes, in what way has it impacted the development of the waterfront?
4. What is the administrative structure of Dalian's waterfront? How has the structure evolved over time? In what ways has this structure influenced Dalian's waterfront development?
5. How do the current land-use patterns compare with those that existed before development on the waterfront?
6. How have the stakeholders been involved in the process of waterfront development? How have they influenced the decision-making process and shared the benefits of waterfront development?
7. What has been role of tourism and recreation, a factor often believed to be a positive one, in Dalian's waterfront development?
8. How can one evaluate the waterfront development in Dalian to provide an overall assessment of its strengths and weaknesses?

1. 3 Thesis Framework

This thesis is organized as follows:

After the introduction of the research background and statement of research questions in the first chapter, chapter 2 reviews the theoretical context of related research. A model of waterfront development is proposed in chapter 3 based on concepts and theories in the existing literature. In chapter 4, the design and methodology of the research are introduced. After that, chapter 5 first describes the process, outcomes and administration of Dalian's waterfront development in three study sites and then applied the model to analyze Dalian's waterfront development. Finally, conclusions are presented in chapter 6.

Chapter 2: Context Review

In this chapter, literature is reviewed and discussed in order to provide a theoretical context for the research. Definitions, issues, trends and principles of waterfront development are covered. Waterfront development research in China is examined in particular in order to identify research achievements and gaps in knowledge.

2. 1 Waterfront and Waterfront Development

2.1.1 What constitute a waterfront?

The word 'waterfront' has been used in much literature without an evident definition, probably because the authors assume that the meaning of the word itself is clear – that is, the land fronting on the water. At the same time, several other terms are used in place of 'waterfront' to refer to all or part of this particular region. Such terms include cityport (e.g. in Tunbridge & Ashworth, 1992; Hoyle, 2002), harbourfront (e.g. in Vallentin, 1991) and river edge (e.g. in Watson, 1986).

According to the Oxford American Dictionary of Current English in English Dictionaries and Thesauruses, waterfront is "the part of a town or city adjoining a river, lake, harbour, etc." Another "official" definition appears in the US federal Coastal Zone Management Act (OOCR, 1972: Section 306A (a) (2)). The CZMA defines the term *urban waterfront or port* as: "any developed area that is densely populated and is being used for, or has been used for, urban residential, recreational, commercial, shipping, or industrial purposes".

Guo (1998) sees the waterfront as the area in the city where land meets water, spatially, an area including 200m-300m from the interface to the water side and 1km-2km (that is about a 15min-20min walking distance) to the land side. It is an integrated system consisting of multiple features, of which the water forms the centre, and enclosed by substantial objects (Wu and Gao, 2002). In his introductory chapter of the book *Urban Waterfront Development*, Wrenn (1983) defined "urban waterfront" as "the port areas of large metropolitan regions such

as Boston, New Orleans, Baltimore, San Diego, and Seattle. It also refers to small resort towns with active harbors, commercial fishing villages, and many medium-sized industrial cities located along navigable waters."

The extent of waterfront districts may be self-evident because they are contained between reaches of relatively homogeneous land uses, such as housing, large-scale industrial plants or waterfront parks. In other cases, the boundaries may be indistinct, particularly where long reaches of industrial waterfront have been abandoned and only a small part abuts a commercial centre or residential neighbourhood, which might form the nucleus for revitalization planning efforts (Goodwin, 1999).

2.1.2 Waterfront development

There have been different understandings of the meaning of *waterfront development*. The content of waterfront development varies greatly according to the characteristics of sites and cities. In Japan, urban waterfront development is one of the three water-related development concepts that were brought out in the third national development plan in 1977. In addition to the concept of waterfront development, two other water-related development concepts of on different levels were also defined (Table 2-1 and Figure 2-1). The comparison among the three interrelated concepts is very helpful in clarifying the meaning of waterfront development.

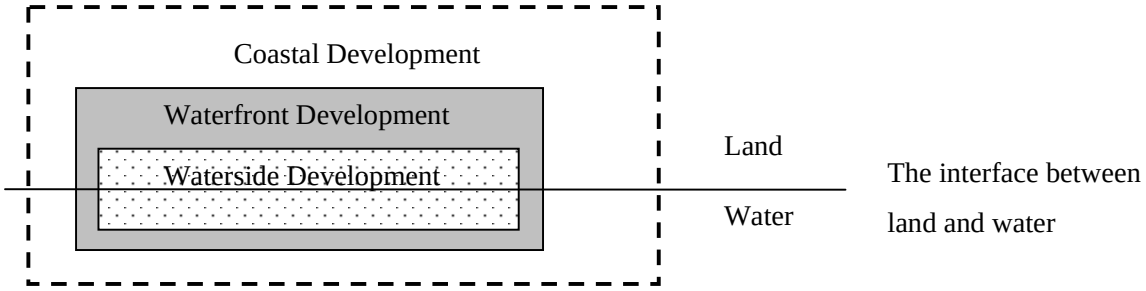
Table 2-1. Three related concepts in Japan's third national development plan

CONCEPTS	FIELD	EXECUTIVE BODY	OBJECTIVE	CONTENT	EMPHASIS
Coastal development	National planning	National/provincial department of planning	To prescribe the character of the city (in the national economy) and development scheme	Balance of urban functions	Development strategy and implementation planning
Waterfront development	Urban planning	Provincial/municipal department of planning	Urban renewal and development	Balance of living, working and	Feasibility study of development

				recreational functions of the waterfront	projects and spatial design
Waterside development	Local planning, environmental facility planning	Local planning body or institution	To create an accessible and enjoyable water environment	Arrangement of water-related entertainment and activities	River-way remedy, water-human relationship design

Source: Aapted from Jin (1994)

Figure 2-1. The territories of waterside, waterfront and coastal development



Source: Adapted from Jin (1994)

As most of the waterfront developments occur in the larger context of urban renewal, a number of other expressions are used similar to this phrase but having an emphasis on the regenerating function. Such expressions include "*waterfront regeneration*" (e.g. in Wood & Handley, 1999), "*waterfront revitalization*" (e.g. in Goodwin, 1999), "*waterfront rehabilitation*" (e.g. in Hoyle & Pinder, 1981: 83), and "*waterfront redevelopment*" (e.g. in Gospodina, 2001).

Goodwin (1999) regards waterfront revitalization as a process that begins with the desires of a community to improve its waterfront. That process proceeds through a series of planning steps and public review to adoption of a waterfront plan. Implementation of the plan involves public and private actions, investment decisions, and developments which occur, ideally, in a coordinated fashion. He also presents a typical scene of what happens in waterfront revitalization:

> *"Dilapidated structures are razed, infrastructure upgraded, and land parcels assembled for private development. Normally, public walkways and viewpoints, and*

waterside improvements such as visiting vessel floats or docks, are installed. Leased space is rented in new or refurbished buildings; townsfolk and visitors discover a new amenity at their backdoor; pedestrian counts rise and new businesses respond to the market opportunities they present."

2.1.3 "Waterfront" and "Waterfront Development" in this Research

It is worthwhile and necessary to define the object of this research in the outset.

Summarizing the previous discussions and the characteristics of well documented waterfront development cases (Tsukio, 1984; Bruttonesso, 1993; Breen & Rigby, 1994), we can find out certain key traits of the waterfront:

- It is an urbanized area, a substantial space;
- Water and land are the two important elements of waterfront;
- It has fuzzy spatial boundaries, which vary from place to place;
- A particular fabric of mixed land uses characterizes this particular area of the city;
- It accommodates the interaction between the city and the water and the human settlement and nature;
- The "water" can be a river, lake or sea.
- The waterfront area can be a historical port area or an urban area for other uses adjacent to water.

In this article, the phrase "waterfront development" is used to encompass such terms as "waterfront revitalization", "waterfront rehabilitation" and so on. As will be stated below, it is associated with a new opportunity for commercial development of an inner city area (especially for urban waterfronts) associated with the trends of post-industrialization and globalization. In such an opportunity, waterfront (re)development has grown into a tool of economic development. The term "waterfront development" is used to emphasize this trend. The word "redevelopment" is only used when it is necessary to differentiate between the redevelopment of previously built-up lands and new development which is occurring on relatively pristine sites. The words "land reclamation" are used to refer to new land reclaimed from the sea by any combination of drainage ort infill.

Waterfront development in this research refers especially to commercial waterfront

development, as opposed to the development of other particular kinds of waterfront, such as naval ports discussed by Pinder and Smith (1999), which are subject to different managerial and market challenges.

2. 2 Waterfront Development: Issues, Trends and Principles

2.2.1 The waterfront story: prosperity, decline, regeneration and new success

The unique location at the interface of water and city makes the waterfront the locus of many stories. The evolution of the waterfront can be seen as a mirror of the evolution of human society. When waterfront development first became an issue in urban renewal and coastal management, this interesting relationship between human society and the waterfront was recognized and extensively discussed in literature (Wrenn, 1983; Tsukio, 1984; Bruttonesso, 1989; Hoyle & Pinder, 1992a).

In the agricultural age, human communities clustered along rivers for necessary irrigation and drinking water. In the early development stages of urban areas, a waterfront seemed still to be a necessity. Cities were established by a river or on the coast, with transportation being the indispensable primary factor influencing their development. As evidence of this trend, all the four main ancient civilizations grew up along the huge river basins of the Yellow River, the Indus, the Euphrates and the Nile and, in more recent times, many of the major world cities, such as Paris, London, New York and Tokyo, have developed along a river or the coast.

The role of the waterfront, to which these cities could be said to owe their existence, has changed with the passage of time. Transitions in three aspects led to the decline of the waterfront, namely the expansion of city size, the reforms in transportation technologies and changes in industry (Tsukio, 1984: 10-11). Many waterfronts which had once been busy with transportation and industrial activities were abandoned because of severe pollution, low accessibility and a poor image, leaving the dilapidated warehouses, factories and port facilities to decay.

Then came the world-wide era of waterfront revitalization. The prominent achievements

accomplished by cities such as Baltimore, Liverpool and Sydney (just to name a few) in their waterfront development drew the attention of the world planners and researchers (Wrenn, 1983; Hoyle & Pinder, 1992a; Bruttonesso, 1993). They have not only been documented as successful cases but they also have been carefully analyzed in order to find the principles behind their achievements (Fitzgerald, 1986; Torre, 1989; Craig-Smith & Fagence, 1995).

2.2.2 Triggers and constraints to waterfront development

Various studies have been conducted looking at the triggering and constraining factors to waterfront development.

Two major factors have been identified by Gordon (1997b) as triggering waterfront development. One is *urban blight*. The other is *economic development*. These two rationales also serve as appealing points that are stressed by the city or development agency to win public support, especially in a so called *start-up stage* (Gordon, 1997b). The urban blight rationale was the symbolic 'abandoned doorstep' argument described by Hall (1993). The early planning reports often included stark black and white photographs of abandoned buildings and collapsing piers. The derelict central waterfront property was a high-profile affront to the civic leaders and many waterfront developments are initiated to meet the need to re-use abandoned areas (Vallega, 2001). The economic development argument had broad appeal at the initiation stage, as suggested by Peterson (in Gordon, 1997b). Economic development arguments were effective with local governments, especially when the dramatic closures of the Charlestown Navy Yard and the London Docks created local unemployment and union pressure for action.

The Toronto Harbour Commission was probably the first to bring out the novel proposal of "park and aesthetic" use of the waterfront in its 1912 plan for redeveloping Toronto's waterfront (Goldrick & Merrens, 1990). The provision of public open spaces and enhanced accessibility became another argument for and component of waterfront development projects thereafter.

Although there have been many reasons and often great need for waterfront development, waterfront development projects are faced with different constraints. The discussion of such limitations coves various aspects such as physical, economic, managerial and social.

The historical usage of waterfronts has left them with complex physical problems: inaccessibility caused by crowded warehouses or railways running along the waterfront (Forward, 1968; Gordon, 1997b); unfavourable conditions because of proximity to water, such as unconsolidated soil, limited load-bearing capacity, and the hazard of shoreline erosion and periodic flooding (Wrenn, 1983; Vallega, 2001); and the deteriorated condition of waterfront structures and facilities (Goldrick & Merrens, 1990; Acosta, 1990). These problems not only increased the risk and cost of waterfront projects, they contributed to the great complexity of fragmented ownership of properties and restricted property rights, which have made land acquisition time-consuming and expensive.

The poor image of the sites has often been an even more serious problem. In the midst of the typical scenes of "urban decay" (Gordon, 1997b), it is difficult for potential investors to envision successful projects. The particular constraints induced by a poor image are similar in nature to those in other kinds of urban renewal projects (Adair, Berry, McGreal, Deddis & Hirst, 1999; Hoyle, 2001a; Hoyle, 2002).

Waterfronts generally have a fragmented and complex structure of jurisdictional involvement (Wrenn, 1983; Hoyle & Wright, 1999; Wang & Li, 2000). This is because the presence of the water resource introduces additional and overlapping agencies at each level of government. Moreover, numerous special purpose government groups commonly have authority over specific shoreline resources and activities. As a result, waterfront development is subject to a multitude of governmental regulations and permit requirements. Most regulations and permits are designed to protect the shoreline from misuse, but they tend also to restrict options and impede the development process. Gordon (1997a) studied the political environment of waterfront development specifically, concluding with recommendations to waterfront agencies on how to manage the changing situation.

Furthermore, as most waterfront developments take decades to perform (Craig-Smith, 1995; Gordon, 1997b), it demands immense financial investment. Though the attraction of private funds to finance waterfront development has been a common tactic adopted by many cities, the above barriers, as perceived by private investors, render it an extremely hard task (Adair et al, 1999).

2.2.3 Concepts of waterfront development

In a trend of transforming their once-industrial waterfronts into vibrant zones of leisure, commerce and housing by waterfront development (Bruttomesso, 1993; Breen & Rigby, 1994, 1996; Craig-Smith & Fagence, 1995; Malone, 1996; Buttenwieser, 1999; Meyer, 1999), projects have followed a number of conventional approaches:

- Waterfront as tourist destination (Baltimore's Inner Harbour, Sydney's Darling Harbour and Barcelona's Port Vell);
- Waterfront as extension of the financial district (New York's Battery Park City and London's Canary Wharf);
- Waterfront as a new residential district (Battery Park City and Rotterdam's Kop Van Zuid); and, more recently,
- Waterfront as a platform for ecologically sensitive and sustainable development (plan for the entire Toronto waterfront under the Waterfront Regeneration Trust).

Tsukio (1984) classified the plan of the waterfront into three categories:

The first is "conservation". Whether by chance or design, this type of plan aims at using the site of an old waterfront, which still exists even today, and restores it for the people by making as many radical improvements as possible on the one hand and withdrawing any disused facilities where necessary on the other. Venice is a very good example. The second category is "redevelopment", which is characterized by an attempt to resurrect harbours as important areas for urban life, converting the neighbouring facilities for use in a different capacity. London's St. Katharine's Dock provides an example for this category. The third type is "development", which tries from the outset to create a waterfront which will meet the present needs of the city by reclaiming land in such places where there has been no waterfront up till now. Foster City, which has materialized at the southern end of San Francisco, falls into this category.

These well-documented developments, and others that have followed, have reassured city governments around the world that the urban waterfront can once again play a significant role in the economic and social health of urban centres. They were even claimed by Breen and Rigby (1994) to be a "worldwide urban success story".

However, such developments have also been criticized as being expensive, time-consuming, often difficult to implement, sometimes controversial and not always in keeping with the needs or desires of local residents (Brownhill, 1993; Gordon, 1997a, 1997b; Malone, 1996; Foster, 1999; Meyer, 1999). Campo (2002) proposed another alternative to the common paradigms by analyzing vernacular uses of Brooklyn's waterfront, including simple recreation, fish or bird watching and community gathering. The vernacular use of its rugged industrial shoreline was fertilized by the dense working-class waterfront neighbourhoods and relative lack of conventional public spaces.

Several common issues in waterfront development have been touch on in the literature from time to time:

Issue 1: Waterfront planning

As noted in previous discussion, waterfront revitalization proceeds through a series of planning steps and public review to adoption of a waterfront plan (Goodwin, 1999). Waterfront plans are of vital importance to waterfront developments. Waterfront planning has become the focus of a number of researchers.

Acosta (1990) indicated three major elements of waterfront planning: public access, walkways and open space; urban design and landscaping; and land uses along the river's edge.

Urban regeneration projects and locations are generally perceived by private investors as involving more risk than green-field sites. The attraction of an increased flow of investment into inner city localities is seen to require the use of a combination of mechanisms such as financial pump-priming, flexible administrative procedures, disposal of sites and use of site license agreements. The incorporation of urban design and landscaping is seen to be extremely important to capitalize on private development to generate the maximum public benefit (Acosta, 1990). Adair et al. (2000) maintained that a master plan approach is essential so that investors can realize the long-term commitment to a particular scheme, whereas an incremental approach is unlikely to stimulate private sector investment in urban regeneration locations to the same degree.

Urban design guidelines can protect the public interest by spelling out basic standards for

private development. Carefully crafted guidelines can clearly define a public vision, ensure public access, establish clear design standards and create consistent procedures for private development (Acosta, 1990). In addition, criteria that are given out for urban design guidelines should be simple and clearly stated; fully illustrated; remain consistent over time; with exceptions that are spelled out clearly; consistent with zoning and other regulation; and state undesirable conditions.

A massive reshaping of land use patterns generally occurs in waterfront developments. An examination of relevant literature reveals a variety of approaches to the interpretation and classification of waterside land uses (Lynch, Spence & Pearson, 1976; Acosta, 1990; Sykora, 1998; Goodwin, 1999; Vallega, 2001; Campo, 2002). Among existing research, the work of Vallega (2001) is probably the most comprehensive (Table 2-2).

Table 2-2. The waterfront use framework

Categories of waterfront uses	Relevance to sustainable development				Location			
	Ecosystem conservation	Economic efficiency	Cultural heritage conservation	City's long-term strategy	On land	At sea attached to land	At sea independent from land	Sea mobile
1. Ecosystem enjoyment								
1.1. Land parks	❖			❖	❖			
1.2. Marine parks	❖			❖		❖		
1.3. Aquariums		❖		❖				
1.4. Marine museums		❖		❖	❖			
1.5. Submarine exploration	❖	❖						❖
1.6. Submarine settlements and plants		❖					❖	
2. Fishing								
2.1. Fishing harbour		❖		❖	❖	❖		
2.2. Fishing terminals		❖		❖	❖			
2.3. Technical assistance facilities		❖			❖			
2.4. Shops		❖			❖			
2.5. Fishing clubs		❖			❖			
3. Tourism								
3.1. Hotels		❖		❖	❖	❖		
3.2. Restaurants		❖		❖	❖	❖		
3.3. Luxury housing		❖		❖	❖			
3.4. Shopping centres		❖		❖	❖	❖		
3.5. Shopping streets		❖		❖	❖			
3.6. Tourist agencies		❖			❖			
4. Recreation								
4.1. Sunbathing		❖			❖	❖		
4.2. Swimming, diving		❖				❖	❖	

4.3. Snorkeling	❖			❖	❖	
4.4 Wind surfing	❖				❖	
4.5. Sailing	❖					❖
4.6. Yachting	❖					❖
5. Entertainment						
5.1. Concert hall	❖	❖	❖	❖		
5.2. Theatres	❖	❖	❖	❖		
5.3. Discotheques	❖		❖	❖		
5.4. Pubs	❖		❖	❖		
5.5. Night spots	❖		❖	❖		
5.6. Clubs	❖		❖			
6. Congresses						
6.1. Congress centres and facilities	❖	❖	❖	❖		❖
6.2. Hotel conference facilities	❖		❖	❖		
6.3. Satellite conference facilities	❖		❖	❖		
7. Media						
7.1. Book publishers	❖		❖			
7.2. Magazine publishers	❖		❖			
7.3. Newspaper publishers	❖		❖			
7.4. TV stations	❖		❖			
7.5. TV production centres	❖	❖	❖			
7.6. Media services	❖		❖			
8. Transport and navigation						
8.1. Naval terminals	❖	❖	❖	❖		
8.2. Ro–ro terminals	❖	❖	❖	❖		
8.3. Cruise terminals	❖	❖	❖	❖		
8.4. Heliports	❖	❖	❖	❖		
8.5. Airports facilities	❖	❖	❖	❖		
8.6. Yachting facilities	❖		❖	❖		
8.7. Sailing facilities	❖		❖	❖		

9. Trade and finance								
9.1. Business district		❖		❖	❖			
9.2. World trade centre		❖		❖	❖			
9.3. Banks		❖		❖	❖	❖		
9.4. Insurance		❖		❖	❖	❖		
10. Research areas								
10.1. Oceanography	❖			❖	❖	❖	❖	❖
10.2. Climatology	❖			❖	❖	❖	❖	❖
10.3. Coastal ecology	❖			❖	❖			
10.4. Marine ecology	❖			❖		❖	❖	❖
10.5. Coastal archaeology			❖	❖	❖	❖	❖	
10.6. Submarine archaeology			❖	❖		❖	❖	
10.7. Coastal management		❖		❖	❖	❖		
10.8. Urban and waterfront planning		❖		❖	❖	❖		
11. Education and training								
11.1. University facilities	❖	❖	❖	❖	❖			
11.2. Extra-university facilities	❖	❖	❖	❖	❖			
11.3. NGOs			❖		❖			
12. Cultural heritage								
12.1. Naval museums			❖		❖	❖		
12.2. Indigenous culture museums			❖	❖	❖			
12.3. Seaport and navigation			❖		❖			
12.4. Science parks			❖	❖	❖	❖		
12.5. Planetariums			❖		❖	❖		
12.6. Historical buildings			❖	❖	❖			
12.7. Archaeological remains			❖	❖	❖	❖	❖	

Source: from Vallega (2001)

In addition to the specific use categories such as transportation, industry, commercial utilities, and recreation, some studies have gone further in identifying a more "sensitive" classification (Lynch, Spence & Pearson, 1976). These categories have been interpreted according to their "degree of integration" with the water, as seen in Table 2-3.

Table 2-3. Degree of integration of land uses with the water

DEGREE OF INTEGRATION WITH WATER	LIVING AREAS	WORKING AREAS	LEISURE AREAS	SPECIAL AREAS
High	Properties developed with a high regard for waterfront location, either by enhancing the riverscape or utilizing the river access	Industries primarily dependent on water for transport; Activities where water is essential to the operation	Areas in a natural state; Developed recreation areas that are physically related to the water with jetties, steps, boat clubs, ramps, and marinas	Areas in a natural state
Medium	Development oriented for the scenic qualities of the location but not physically using the river's potential	Industries that incidentally use water transport but could operate elsewhere	Reserves or parks that are visually orientated toward the river but make no attempt to link the two recreation resources	Development that recognizes the visual advantages of riverside location
Low	Areas developed with little concern for their riverine location	Activities that have no functional relationship with the water	Recreation areas that mitigate against water access through fencing or boundary walls	

Source: Adapted from Lynch, Spence, and Pearson (1976: pp.45)

Issue 2: Public access

It is generally believed that a municipality should be committed to improving public access to the waterfront, either by adopting basic policies or zoning regulations aimed at protecting and enhancing the waterfront accessibility (Breen & Rigby, 1994, Krausse, 1995, Craig-Smith, 1995). Publicly-owned lands at the river's edge should be accessible to the public except where public access must be controlled for safety concerns or to protect sensitive natural features.

Various cases of successful waterfront development and redevelopment around the world show that public access to the waterfront can be improved through the following measures (Tsukio, 1984; Bruttonesso, 1993; Breen & Rigby, 1994):

- The acquisition of abandoned or underused waterfront lands and converting them to public open spaces, which provide social, recreational and tourism opportunities.
- The creation of 'nodes' occurring at reasonable intervals along the waterfront, where opportunities for various forms of public access are provided. They can vary from such things an open-air tea bar, where people can have a drink while enjoying a pleasant view, to simply providing a corridor between buildings to the water's edge.
- The creation of waterfront pedestrian linkages between public access nodes.
- The establishment of a continuous recreational trail along the waterfront. Some successful cases of urban waterfront trail design showed the following common characteristics: (i) they are located as close to the water's edge as feasible or in a location which provides frequent water views; (ii) they connect with other local and regional trail systems; (iii) they have support systems such as washrooms, seating facilities, and bicycle and car parking; and (iv) they should be compatible with the natural environment.
- The creation of public transit routes that provide easy transit to the waterfront from all over the city.

Issue 3: Cultural relics and heritage

Many waterfronts are rich in resources of historical and cultural significance. The types and importance of these resources vary depending on the age and location of the city. Some of

the more common ones include: military installations, industrial buildings, markets and trade centres, shipping terminals, warehouses, fishing facilities, and municipal buildings (Wrenn, 1983). There has been increasing public, academic and administrative concern for the protection of natural as well as cultural heritage during urban waterfront development.

Cultural heritage resources are significant human-made features which are indicative of past human activities, events or achievements. Such resources include, but are not restricted to, archaeological sites, buildings, structures and artifacts of architectural or historical significance (Vallega, 2001). Plans and proposals for the use and development of the waterfront should recognize, respect and reflect elements of heritage and local character. Natural areas and sites of historic and archaeological importance should be considered for protection and enhancement. Both the favourable contributions and difficulties induced by the symbiosis of heritage-based and mixed-use revitalization have been identified by Gordon (1999).

During waterfront development, the spatial organization should be positively evaluated when it is consistent with the cultural heritage, that is, where old settlements and relics are conserved and, in addition, the new facilities reflect the historical heritage of the city (Law, 1988). Craig-Smith (1995) recognized the conflict between redevelopment and conservation, and stated that the dispute between the redevelopment forces and the historic preservationists has helped to forge an understanding that has served as a benchmark for subsequent redevelopment along the waterfront. It has helped to ensure that the scale, architectural design, and quality of new developments, as well as restoration projects, are compatible with and further enhance old towns' overall image and historical themes.

Issue 4: Environment and ecosystem

New opportunities have been discovered to establish a new relationship between human use and natural environments in waterfront redevelopment and planning processes (Kim, Fabos & Gross, 1991).

After reviewing and comparing major approaches to ecological design, Baschak and Brown (1995) applied naturalistic, ecosystem science, and landscape ecology approaches to

the development of an ecological framework for the planning, design and management of urban river greenways. In their research, they maintained that the diversity and productivity of ecological system should be protected and restored through measures to (1) preserve the genetic diversity of indigenous plants and animals; (2) restore healthy natural habitats and communities; and (3) maintain natural ecological processes.

Issue 5: Tourism and recreation

The use of waterfronts as a leisure resource is a major component of much waterfront revitalization. It is a long-standing and widely-recognized fact that people find water an innately attractive medium, both aesthetically and as the location for a variety of recreational activities (Wood & Handley, 1999). Restaurants, pubs, aquariums, museums, leisure retailing, festival markets, historic ships, hotels and many related facilities have become inseparably associated with the revitalized waterfront in cities. Recreational land uses form an important component along waterfront boulevards. Leisure activities, ranging from informal strolling and watching to pageants and happenings, have become a dominant part of the waterfront scene (Tunbridge & Ashworth, 1992).

Fagence (1991) summarized two sets of typical tourism and recreation uses on the waterfront. Land side uses include riverside parks, picnic and barbecue sites, walkways, bikeways, drives, specialized accommodation and vacation units, restaurants, open-air entertainment, leisure attractions, cultural attractions, commercial (retail) development and pedestrian piazzas, open-air markets, and ferry terminals. Water side uses include river cruises, water sports (with some restrictions on location, noise levels, frequency, and duration), ferry services, and floating restaurants

Tourism is a suitable economic use for many redundant riverside areas (Fagence, 1995). However, it should be remembered that tourism is only a part of the answer. International experience and literature point out that mixed uses are key factors in the success of urban waterfront redevelopment schemes (Gospodina, 2001). The greater the variety of uses for the developed sites, the better. Tourism should not be seen as the only legitimate use. A wide use mix ensures less economic vulnerability to the vicissitudes of visitor preferences or downturns

in discretionary spending.

2.2.4 Stakeholders in waterfront development

There are a variety of stakeholders involved in the waterfront development process, playing different roles. They include provincial, regional, and local governments, as well as local residents, recreationists, and environmentalists (Yarnell, 1999). A variety of studies exist shedding light on different stakeholders' roles.

Governments, institutions and agencies

Waterfront revitalization has been considered largely to be the business of cities (Goodwin, 1999) and it is subject to a multitude of governmental regulations and permit requirements (Wrenn, 1983). Higher level government may be involved through coastal zone management programs and enactment of marine/coastal management acts (e.g. Canada Marine Act, see Yarnell, 1999; American Coastal Zone Management Act, see Goodwin, 1999). During the planning and design process, the role of government is critical for success (Craig-Smith, 1995). This role includes establishing the preconditions necessary to attract private investment. Public investment to replace or upgrade infrastructure serving the waterfront and to develop public spaces will re-establish investors' confidence in these high-risk areas. Government, through its planning and adoption of regulations and inducements, can establish a development theme for the waterfront; set the scale, quality, and sequence of projects; and assure that the long-range perspective prevails over the course of sequential and independent development decisions.

There is approaching consensus on the use of special-purpose agencies as reflected cross-national trends in urban development politics and as described by several observers (Keating, 1991, 1993; Savitch, 1988; Peterson, 1981). More often than not, municipal governments team up with ports and public development corporations and private sector interests to take on large city waterfront projects (Goodwin, 1999). Port authorities in North America and around the world are feeling the effects of an overall trend toward sustainable development and corporate environmental responsibility. They were originally assigned a mandate to administer harbour developments to ensure the movement of goods and to

maximize economic benefits, but are facing additional demands of non-trade objectives, such as maintaining public access to port lands, waters, and views, and preserving the health of the natural environment (Yarnell, 1999). Though such special-purpose agencies have played indispensable roles in waterfront developments, a number of disadvantages have also been discerned. Pressman and Wildavsky (1984) observed that implementation becomes more time-consuming as the number of participants and critical decisions increases. Wrenn (1983) also recognized the fragmented and complex structure of jurisdictional involvement as waterfront development obstacles.

Waterfront redevelopment projects often take decades to complete and may span several electoral cycles. Gordon (1997b) adopted the perspective of the redevelopment agency when considering techniques for managing the changing political environment over the decades that it takes to implement waterfront redevelopment projects. The specific issues which are addressed include start-up politics, managing changes in political leadership, allocation of benefits and managing relations with residents and local government. It is maintained that effective waterfront redevelopment agencies take a long-term approach towards management of their political environment. On the other hand, if the public sector wishes to remain engaged in implementation, rather than retreating to a purely regulatory role, it must increase the effectiveness and accountability of the agencies it entrusts with the task of rebuilding the city.

Private investors

Although governments are expected to continue to play important leadership, policy-setting and regulatory roles, it is clear from numerous examples that more and more important initiatives are coming from non-governmental organizations and that partnerships between public and private sectors, and between private and non-governmental sectors have significant potential to clarify issues, to establish common ground and to galvanize constructive action (Patton & Witzling, 1989).

An integral part of the urban regeneration process is the role performed by the private sector in terms of stimulating property development and investment. Adair et al. (1999) based their research on focus group discussions with private actors involved in the regeneration

process. Qualitative investigations were undertaken on four main themes, namely the rationale for private sector investment in urban regeneration; policy mechanisms to lever private sector investment; the financing of urban regeneration; and the alleviation of risk. A number of new financing arrangements for public and private partnerships were also suggested. All of these new financing vehicles were based on the central premise that the most effective use of public money in urban regeneration is to access greater investment from the private sector.

The use of capital within regeneration raises the question of access to and availability of finance; indeed the more extensive the scale of the development, the greater the dependence on private investment. However, from the private sector perspective, there is a perception that urban regeneration projects are risky. Lack of information about the value of the assets often enhances the need for financial prudence and can lead to the by-passing of potential opportunities (Adair et al., 1999). The attraction of significant private-sector financing for urban regeneration is a major challenge for government given the barriers perceived by institutional and other non-investors in urban regeneration. Urban Task Force Report (in Yarnell, 1999) highlighted the market's failure to provide medium and long-term risk capital for complex area-renewal projects. It also considered the importance of public finance in facilitating the private sector to spread their property investment risk more effectively.

Communities, tourists and recreationists

Communities, tourists and recreationists are three not necessarily mutually exclusive kinds of users of the waterfront.

There is a world-wide trend in democratic societies for a great degree of neighbourhood control over decision making (Yamashita, Motonaga & Hirano, 1989; Hoyle, 2000; Campo, 2002). The relationship between community groups and government agencies clearly involves a multi-directional process of interaction and understanding. Sometimes this appears to work well, and to be generally positive, while at other times there is an air of uncertainty and perhaps mistrust. Sometimes there may be confrontation. The Port of Vancouver was criticized in the late 1980s for its insensitivity to local interests (Yarnell, 1999). Since that time, the Vancouver Port Corporation has developed a leading-edge land-use plan. Such plans are now required of

Canadian port authorities under the new Canada Marine Act. In addition to land-use planning, this new legislation restructures the boards of directors of port authorities to reflect regional interests and requires annual public meetings.

A community group has been defined as an unofficial gathering of people with a particular perspective or opinion that is not necessarily represented by their government, either at municipal, provincial or federal levels (Hoyle, 2000). In a waterfront development context where "top-down" approaches are prevalent, Hoyle conducted research into a "member-driven, bottom-up, community-development focus". The primary characteristic of this kind of waterfront development was found to be the common fundamental objective to enhance the quality of life. Thus, community groups are seen as "one of the few ways that we have now of getting local issues and concerns onto a government agenda". The refocusing of urban policy in the 1990s is associated with shift in emphasis from property-led regeneration towards a broader-based partnership agenda with a focus upon community interest as exemplified by City Challenge and the Single Regeneration Budget (SRB) programs (Adair et al., 2000).

Krausse (1995) examined the perceptions of harbour residents on tourism and waterfront developments in Newport, Rhode Island. The results indicate that, by and large, the waterfront community perceived the current traffic conditions, inadequate parking, lack of privacy, and commercial intrusion into neighborhoods to be the consequences of increased tourism. Negative attitudes towards waterfront renewal were associated with perceived difficulties in having access to the water, lack of affordable housing, continued marine pollution, and the proliferation of non-water-dependent uses in the harbour. Conversely, several favorable reactions raised by residents included increased property values, successful historic preservation, and the participation in tourist-related events and amenities. Despite their geographic proximity to the business district, the development activities on the waterfront and the opportunities generated by tourism, few residents felt they have benefited economically from these advantages.

2.2.5 New trends and opportunities of waterfront development

Decades have passed since the early waterfront developments were initiated with a push

coming from the need to revitalize the derelict waterfront. A new round of transition in the external environment again imposes both pressures and opportunities on waterfronts. The three major components in this transition with significant implications for waterfront development are *post-industrialization*, *globalization* and *integrated coastal management and sustainable development.*

In advanced societies, there has been a marked transformation from industrial to post-industrial society (Bell, 1973) that has significantly influenced the restructuring of economic and social life in major urban centres. The backbone for this transformation was supplied by the shift of emphasis in the economy from production of goods to provision of services. The post-industrial city (Ley, 1980) has been characterized by de-industrialisation and consequent changes in the structure of economic production, the labour market and occupational structures. The changes of the economy during the transition from industrial to post-industrial society have also brought changes in urban morphology and functions, among which the change in demand for real estate may be the most prominent impact on waterfront development. This is characterized by an increasing use of office, retail, hotel and other types of commercial accommodation, light industrial and warehousing uses. Given the level of congestion in the city, the abandoned waterfront often presented the nearest site with large-scale development possibilities (Sykora, 1998).

Another progressive change in large urban centres of advanced societies is associated with the growth of corporate activities, i.e. the institution of head offices and advanced producer (business and financial) services (Han & Yan, 1999; Hoyle, 2001b; Vallega, 2001). The nature of globalization lies in the organization of production linkages all over the globe. As the waterfront has evolved functionally, it has become self-evident that it could also gain roles to help the city to establish extra-regional relationships, e.g. by participating in inter-regional and international networks of research centres. As a consequence, potential new gateway functions of the waterfront have been put on the agenda of policy makers and planners. Many coastal cities with good harbours have grown into world metropolises, such as Singapore, Bangkok, Shanghai, Manila and Osaka. The expansion of financial services, legal and consulting firms, media and advertising, computer and telecommunication firms is part of the

process of globalization. This has had and is having an influence on the development styles on the waterfront.

Vallega (1999, 2001) regards the waterfront as the central subsystem of the coastal system, with its organization including high-ranking functions of the coastal area. A framework of options was developed and presented to discuss how the waterfront may be designed to be consistent with sustainable development and how the waterfront could act as a leading spatial system to carry out integrated management of the coastal area within which it is located. He also maintains that the more the waterfront plans have been integrated with strategic plans of the region within which the coastal city is located, the more the waterfront has shifted from the role of a central place to that of a gateway, thus acquiring functions related to globalization. The same viewpoint was echoed by Philo and Kearns (1993) that, in order to be successful in world markets, a modern city must learn how to position and promote itself on the competitive world stage. In a wider sense, a fundamental question arising from waterfront redevelopment is whether external – regional, national, international – markets can be identified and exploited to sustain cityport growth and change in the longer term (Hoyle, 2002).

2.2.6 Principles of success

All the research efforts in waterfront development lead to the same question in the end, i.e. what are the fundamental principles of successful waterfront development?

To answer this question, two questions have to be answered first. One is what does success look like. And the other is how to evaluate waterfront development or, in other words, how to judge the success of waterfront development?

For the first question, answers seem to be consistent across the literature. The popular sign of success of many waterfront developments is bringing citizens and visitors back to the water's edge, and providing tangible evidence of the continuing vitality of the cities (Hoyle, 2001). Key elements of success include the promotion of the waterfront as a positive element in urban tourism; the development and modernization of infrastructure including, particularly, transport and telecommunications; the development of new flourishing economic activities

such as new-technology industries, services, educational functions, arts, crafts and cultural activities; and the careful development of mixed patterns of land and water uses, including leisure activities; and so on.

Fundamental as the second question is to waterfront development, there has been limited systematic work undertaken to answer this question. Evaluations have varied widely in scope, focus, and methods employed. Most have relied on descriptions of processes, case studies, expert opinions, and public perceptions to judge success (e.g. Swanson, 1975; Kinsey, 1985). There have been limited comprehensive studies of program effectiveness based on a systematic study of program policies and the outcomes of policy implementation. Several exceptional works include those done by Hoyle and Wright (1999), Hershman et al. (1999) and Goodwin (1999).

In fact, almost every author has an implicit set of criteria in their mind when studying a waterfront development issue or discussing a waterfront development case. Hoyle (2001) reckons the success of revitalization is in the bringing back of citizens and visitors to the water's edge and the provision of a tangible sign of the continuing vitality of cities. Other signs of success widely recognized are image improvement, infrastructure upgrades, environmental rehabilitation, tourism opportunity, economic revenue generation and so forth (Wrenn, 1983; Craig-Smith, 1995; Norcliffe, 1996; Goodwin, 1999). Though emphasis and criteria vary from case to case, there seem to be a common ground that success is judged by so-called "on-the-ground" (Hoyle, 2001b) outcomes.

Hoyle and Wright (1999) employed critical analysis of issues and outcomes to propose an evaluative framework for heritage-based revitalization in naval cityports. Heritage assets were discussed in a special context, particularly in relation to tourism potential, but the perspectives adopted were much broader. Rather than adopting an individual case study approach, the research was aimed to develop a broader and, therefore, more representative overview of decline and revitalization on large-scale naval waterfronts, investigating the three leading British naval dockyards: Chatham, Portsmouth and Plymouth.

Goodwin (1999) made a notable attempt to employ quantitative methods in his research. He followed the overall study approach discussed in Hershman et al. (1999) and designed a set

of “on-the-ground” outcome indicators to score three dimensions of revitalization: the *extent* of the revitalization; the *stage* of revitalization achieved in each waterfront district; and the *scope* of waterfront improvements, programs, and activities realized. A model of elements of an “ideal” coastal management program (CMP) was described (Figure 2-2). But it was also found that no single state CMP studied had all of those elements, nor should they necessarily be expected to. This model is rather comprehensive and informative, broadly covering a set of issues in coastal management programs. But since the model was developed to assess the contributions coastal management programs had made to realizing the Coastal Zone Management Act’s goal of revitalizing deteriorated urban waterfronts, it has a national scope. However, the overwhelming majority of waterfront development research has a city scope.

Figure 2-2. Coastal Management Program Model

1. Issues of Waterfront Revitalization

2. Authority

The state Coastal Management Program (CMP) would have the statutory authority to provide financial, technical, and other assistance to local communities specifically for the purpose of revitalizing their deteriorated urban ports and waterfronts. State oversight would ensure statutory goals are being achieved by local governments that receive waterfront revitalization funds from (or through) the state Costal Zone Management (CZM) agency.

3. Policies

CMP policies would ensure that plans and projects undertaken in urban waterfronts embody other core CZM objectives for public access, protection of coastal-dependent industry and ports, conservation, restoration and interpretation of historic and culturally significant structures and sites; restoration of degraded coastal environments; and other goals of particular local significance.

4. Tools

CMPs would have a broad palette of tools and processes to engage with and support local cities that undertake waterfront revitalization, including:

Inventory and Designation

An inventory of urban waterfronts in the state's coastal zone, undertaken in partnership with local governments, can identify the scale and scope of deterioration affecting waterfront districts and designate those with the highest priority needs.

Financial Assistance

A competitive urban waterfront grants program with guidelines and criteria for planning and construction grants can be used to steer state and federal CZM funding to designated communities.

Technical Assistance

CMPs with trained staff, knowledgeable about urban waterfront planning and development, can provide assistance to local governments during all phases of the waterfront revitalization process.

Guidance Documents

Guidance documents can provide general information about waterfront problems, issues, planning, and development, as well as specific guidance to achieve compliance with the state's waterfront revitalization program guidelines.

Education & Training

State staff can undertake statewide training programs complemented by community-specific workshops to promote an urban waterfront grant program and familiarize local partners with the information and assistance available to them.

Partnering

State CMPs can create partnerships to help local cities design waterfront revitalization plans and projects that meet state and national CZM objectives. Convening interagency panels to address such issues as contamination of soils or wetlands restoration or joining with universities to conduct educational programs

(Figure to be continued on next page)

Special area management plans (SAMPs)

Decisions concerning largely irreversible changes in urban shoreline land use can be made with far more confidence when regional needs are understood. SAMPs can identify urban shorelands where demand for shorelands by important marine sectors is increasing, as well as areas where revitalization for "people uses" can safely occur because shorelands have become surplus to the needs of ports and marine-related industries.

Local Coastal Program (LCP) Review

State review of amendments to LCPs designed to implement waterfront redevelopment ensures compliance with other state CMP goals, such as enhancing public access, protecting water dependent industry.

Project Review

Those CMPs with direct permitting or permit review authority will have leverage to ensure successful implementation of waterfront revitalization plans. Those that do not may still be able to use federal consistency procedures to ensure that state program policies are addressed in projects requiring action by federal agencies.

Environmental Review

Using the federal consistency provisions of the Coastal Zone Management Act (CZMA), or the state's own environmental review statute, the CMP would scrutinize waterfront plans and projects to ensure they avoided or mitigated adverse environmental impacts.

Sponsoring Waterfront Festivals and Maritime Events

Supporting and hosting maritime celebrations and events focused on the urban waterfront is an excellent way to bring the public "back" to the waterfront. COASTWEEKS, a month-long national celebration held during September and early October each year, is a perfect opportunity for CMPs to sponsor music festivals, boat-building shows and exhibits, arts and crafts fairs, tall ship tours, harbor cruises, marina clean-ups, etc.

5. Monitoring and Evaluation

Through a computer-based information system, states would track program inputs (expenditures, staff effort), program outputs (grants awarded, education and training events undertaken, guidance documents and publications produced, etc.), and program results (waterfront plans produced, waterfront projects completed, waterfront events that took place). Periodically, program staff or consultants would undertake case studies of representative waterfront districts to assess program impacts (community economic benefits realized, improvements to visual appearance of waterfronts achieved, new public access gained, and other CZM objectives met).

Source: From Goodwin, 1999

2. 3 Waterfront Development Research in China

Urban waterfront redevelopment phenomena have been largely ignored in the developing world until recently. In the late 1990s, the research agenda began to address an interesting question concerning the extent and character of the spread of urban waterfront redevelopment

to newly industrializing countries (NICs) and less economically developed countries (LDCs) (Hoyle, 2002). Since the last decade, developing countries have been seeking to revive their historic port cities in diverse contexts ranging from postcolonialism and globalization to culture revival and tourism development (Hoyle, 1999; Hoyle, 2001a; Hoyle, 2001b).

There is a relatively small amount of literature on waterfront development in China. There are some work like Bruttonesso's (1993) and Breen and Rigby's (1994) which document several waterfront cases in China (CAUP, 2000; GUPD, 2001). But most of waterfront cases are documented as individual ones at a descriptive level and from a perspective of urban design or landscape architecture (Liu and Liu, 2000; Wang and Sun, 2000, Wu and Gao, 2002). There are also literatures which review the study of waterfront in developed countries (Jin, 1994; Xu and Yan, 2000). There are even fewer studies on Chinese cases in English literature, probably because of language barriers and the difficulties in getting up-to-date data.

There has been some literature talking about Characteristics and categories of China's waterfront development (Zhang and Wang, 2002; Wang and Li, 2000; Xu, 2002; Wu and Jia, 2002). Criteria have been raised to divide China's waterfront development projects into two different categories (Wang and Li, 2000). For the former category, land resource became the main objects of development, and waterfront development projects often involve the redevelopment of land resource, reform of land use redistribution, function adjustment and optimization of infrastructure and environmental landscape. As for the latter category, historical buildings or fabric on the waterfront became the main objects of development. Waterfront development projects in this category often involve the maintenance, restoration, renewal, or removal and reconstruction of buildings in an attempt to preserve a kind of culture or heritage. In fact, the two categories operate at different scales. The former is usually at a larger scale and broader than the latter, and often includes several projects of the latter category.

2. 4 Summary

The literature review and discussion in this chapter address the current knowledge and status of studies on definition, issues, trends and principles of waterfront development.

Literature concerning the Chinese waterfront (both in English and Chinese languages) are particularly examined, indicating a scarcity of theories and lack of a systematic approach, especially when compared with the research done in the developed countries. Given China's specific political and economic system and relatively mature waterfront development theories in the western world, there exists an opportunity to apply what has been learned in other parts of the world to China. The study of Dalian will both document empirically and analyze a specific case in China, and also enhance the overall theoretical understanding of waterfront development by extending the scope of study to a different context and test the applicability of existing theories.

In order to do so, an analytical framework that is mainly bases on western theories will be presented in the following chapter. It will then be used to guide the case study in Dalian.

Chapter 3 : Analytical framework of waterfront development

Drawing upon the previous studies that have been reviewed in the previous chapter, a phase model is presented in section 3.1. A "typical" waterfront development process is divided into five phases by the author, i.e. pre-start-up phase, start-up phase, early development phase, mega projects phase and maturity phase. Each phase is characterized by the involvement of specific stakeholders, events and issues, and outcomes. A trend of changing stakeholders' inputs through phases was discovered and presented in section 3.2.

3. 1 A Model of Waterfront Development: A Phased Approach

3.1.1 What is and Why a "Phased Approach"?

A "phased approach" refers to the analyses of land use forms and function as a series of temporal stages. It is useful to analyze waterfront development with a phased approach for several reasons.

Viewing a waterfront development in a temporal sequence provides a framework to answer questions such as "Who was involved?", "What happened? and "What was achieved" during each particular phase. Such an approach can permit the presentation of change as a sequence of linked events and circumstances. The use of the tabulations makes it feasible to organize the complicated elements and issues in a logical way, so that the case can be documented systematically.

Not only is the phased approach significant for the purpose of research, but also it is innate in the waterfront development process itself. Waterfront developments often last a long time and go through a series of phases. The existence of particular phases or stages has been recognized by several researchers (Gordon, 1997b; Goodwin, 1999). Noting that start-up often takes a long time, Gordon (1997b) defined the start-up phase of waterfront development and examined the political environment in this particular phase from the perspective of development agencies. Goodwin took the "stage" as one of the three dimensions (the other two

dimensions are “extent” and “scope”) of indicators to measure Coastal Zone Management Program’s niche role in specific waterfront districts. Four types of indicators were devised to show different stages of waterfront development: waterfront improvement project underway, one or more projects completed, infrastructure and multiple projects developed; and completely revitalized waterfront.

Furthermore, the author’s previous study of Lujiazui Finance and Trade Zone, a waterfront development in Shanghai, China, revealed that a shift of emphasis during different phases of development was essential to Lujiazui’s success[3].

The phase model developed in this chapter will serve as an analytical framework to organize the documentation the Dalian case. It will also provide a conceptual basis for the guiding hypothesis and the analysis and evaluation of Dalian’s waterfront development later on.

3.1.2 The Phase Model of Waterfront Development

As shown by previous studies, waterfront development usually goes through different phases. Each phase is associated with particular stakeholders, events/issues and outcomes. Based on cases documented in a variety of previous studies, a model of waterfront development is developed and presented in the following tabular format (Table 3-1).

[3] This study can be seen in Appendix II.

Table 3-1. A phase model of waterfront development

PHASE	STAKEHOLDERS	EVENTS & ISSUES	OUTCOMES
Pre-start-up	♦ Municipal government ♦ Local communities	♦ Waterfront facts: dilapidated buildings, under-used port facilities, inaccessible waterfront, and polluted water; ♦ Basic rationales: urban regeneration, economic development, improvement of living standard, and upgrade of city function in the regional or global economy.	♦ Rationale of waterfront revitalization.
Start-up	♦ Municipal government ♦ Higher levels of government ♦ Port agencies ♦ Local communities	♦ Proposal of waterfront development; ♦ Argumentation and public consultancy on program initiation; ♦ Approval of development by different levels of governments; ♦ Seeking sponsor from higher levels of governments; ♦ Feasibility study, SWOT analysis; ♦ (International) Planning consultancy leading to a construction of a plan/ urban design guidelines.	♦ Achievement of political consensus; ♦ Assignment of special purpose agencies; ♦ Approve of a development plan and urban design guidelines; ♦ Basic strategies of waterfront development, goals and objectives of waterfront development.

(To be continued)

PHASE	STAKEHOLDERS	EVENTS & ISSUES	OUTCOMES
Early Development	♦ Municipal government ♦ Special purpose agencies	♦ Publication of the waterfront plan; ♦ Clarification and publicity of visions, goals and objectives; ♦ Relocation of port activities or previous waterfront industries; ♦ Environmental clean-up; ♦ Heritage preservation/renovation; ♦ Flattening/expropriation of land; ♦ Infrastructure upgrading; ♦ Formation of special waterfront legislation or policy ♦ Attraction of private funds.	♦ Waterfront legislation and policy; ♦ Upgraded transportation; ♦ Improved infrastructure; ♦ Public open spaces and green spaces; ♦ Preserved/renovated heritage; ♦ Available land tracts for development.
Mega Projects	♦ Special purpose agencies ♦ Private investors	♦ A number of development projects through public-private partnership; ♦ Landmark(s) according to urban design guidelines; ♦ Tourism and recreation development; ♦ Public open spaces and green spaces provision;	♦ Increased waterfront accessibility; ♦ Increased land value; ♦ A new waterfront image; ♦ Increased waterfront activities; ♦ Successful business on the waterfront; ♦ A reshaped land use pattern and landscape;
Maturity	♦ Special purpose agencies ♦ Private investors ♦ Local communities	♦ Balancing the benefits of interest groups; ♦ Promotion of water-dependent uses; ♦ Supplemental renovation and upgrade of early development projects.	♦ A desired pattern of mixed land uses; ♦ An upgraded function of the waterfront.

Source: by the author.

As shown in the above table, the whole process of waterfront development is divided into five phases: pre-start-up phase, start-up phase, early development phase, mega project phase and maturity phase. Each row of the table presents three elements of a specific phase of waterfront development: stakeholders, events/issues and outcomes.

Several points about the model are explained here:

- ***An ideal model***. This is a model of a "comprehensive" or "ideal" waterfront development, which assumes that it comprises all elements and the whole process of waterfront development. However, this is apparently not always the case in reality, nor should it be expected to be. Some small-scale developments do not go through a distinctively visible start-up phase or early development phase, but only include one or several projects. There can also be incomplete waterfront development which has just entered the early development stage. Such kinds of waterfront development can be seen as a subset of this model.
- ***A connotative perspective***. Though attempting to develop a comprehensive model, it is necessary to adopt a particular perspective, in this case the perspective of the municipal government. Analysis and recommendations that follow are also conducted at a municipal level and from a municipal government's perspective.
- ***Phases***. The division of waterfront development into phases is an arbitrary division to some degree. Each phase is named after its most prominent trait as opposed to the whole process. What differentiates one phase from the others are the different stakeholders involved, different events that happened, different issues arising, different outcomes achieved. The interfaces between the phases are not necessarily clear-cut. Often it is difficult to find a specific event or date to pin-point the ending or beginning of a phase. There can be some exceptions though, such as the political announcement of Toronto and Boston's waterfront development proposals, indicating the beginning of the start-up process (Gordon, 1997b).
- ***Stakeholders.*** A variety of stakeholders has been identified in previous research, including different levels of government, public/semi-public agencies, private investors, local residents, recreationists, tourists, environmentalists, and so on. In

order to make it manageable, this model does not incorporate them all, but only those which are most "universally" involved and are powerful in the development in the sense of involvement in decision making, investment or management. Therefore recreationists, tourists and environmentalists are not incorporated into the model. It is also worth noting again that not all waterfront development involves all the stakeholders pointed out in the model. In fact, stakeholders may come and go in different phases reflecting the issues of concern. Sometimes the already existing port agencies are faced with increasing demands in addition to their previous mandate to manage the movement of goods and to maximize economic benefits (e.g. Vancouver Port Corporation, in Yarnell, 1999), so that the port agencies shift from a pure port management institution to a waterfront development agency; sometimes new special purpose agencies are established and assigned the specific mandate to facilitate waterfront development (e.g. Xinghai Bay Construction and Management Centre, as documented in Dalian case and presented in the following chapters); and at other times there are no such agencies at all.

- ***Events and Issues***. In this column, the major events happening and issues arising during a specific phase are listed.
- ***Outcomes***. In this column, the intermediate results or outcomes achieved in a phase are listed. Such outcomes can be physical such as a building or a road completed, or non-physical such as a decision made or a plan developed. The achievement of certain outcomes can also serve as the indicator of the end of a certain phase. They are the consequences resulting from the events happening in each phase, and they can also serve as the evaluation indicators of waterfront development.

3.1.3 Phases in the Waterfront Development Process

In this section, further explanation of the model is given phase by phase, including meanings of each phase, the stakeholders' roles, events and issues, and outcomes. Examples are provided for the sake of clarification where necessary.

The pre-start-up phase

Strictly saying, this phase is not the principle part of the waterfront development, but a prelude. Rather than achieving any actual improvement, this prelude phase sets a context for the waterfront development. Though perhaps not overtly stated or officially announced, a rationale will be formed inside the municipal government, whether it be the need to regenerate inner city area or the lucre of economic development.

Usually the municipal government is presented with the demand for development from two sides. One is the compelling driving force presented by dilapidated buildings, declining tax revenues, under-used port facilities, inaccessible waterfront and pollute water; the other is the appealing pulling force presented by the opportunities of urban regeneration, economic development, improvement of living standard, and furthermore, the upgrade of city function in the regional or even global economy.

Local communities' role in this phase is often represented in their increasing degree of neighbourhood control over decision-making (Yamashita, Motonaga & Hirano, 1989; Hoyle, 2000; Campo, 2002). This increased power of local communities is a worldwide trend in democratic societies. And in waterfront development cases, this power is often reflected in the keen demand of a revitalized and accessible waterfront.

The start-up phase

As noted by Gordon (1997b), it is sometimes difficult to pin-point when the start-up process began, unless there was a major political announcement, as in Toronto and Boston. The year of the first serious redevelopment proposals was used as a starting benchmark in other cases. On the other hand, the start-up phase could be considered completed after certain outcomes achieved, namely the approval of a comprehensive plan for development of the waterfront and the establishment of a special purpose agency to implement the plan.

The most important factors that have great implication for the whole waterfront development process in this phase are political and technocratic choices. The political consensus is achieved through the argumentation and public consultancy and is indicated by the approval of the development by different levels of government. On the other hand, the consensus on technocratic choices will be achieved through a series of (international) planning

consultancy leading to a master plan or urban design guidelines.

There should be no doubt about the importance of strategies to the success of a waterfront development. To some degree, we can say that the choice of strategy kit sets the keynote for the whole symphony of waterfront development. A whole system of options of waterfront development strategies is described in the table below (Table 3-2.). This might not be a comprehensive system, but it incorporates the basic considerations or decisions in strategic planning.

The acquisition of support from higher levels of government is crucial too, both in terms of political support and financial support. It may take an extraordinarily long time to get the approval from all levels of government with the power (Gordon, 1997b). For example, it took over 10 years for four levels of government to approve the harbourfront plan in Toronto. In Craig-Smith's (1995) study of Baltimore, Liverpool and Sydney cases, he found that to achieve redevelopment on a large scale, central or state governments had to become involved either as financiers or as development agents.

Table 3-2. Basic, strategic options of waterfront development

Central place versus gateway
The waterfront is designed as a structure merely attracting local people, or a structure able to implement the interaction of the region, to which it belongs, with other regions
Duplication versus differentiation
The waterfront includes functions, such as standard restaurants, existing in the urban context, or essentially includes new types of functions, such as seafood-based specialized restaurants
Short term versus long term
The waterfront development is pursued through actions undertaken day-by-day, or is the result of long-term (e.g. 20 year) programs, the efficiency and effectiveness of which are periodically evaluated
Social versus private
The waterfront includes facilities of social interest whose property is public, or wholly or mostly consists of private facilities
Non-profit versus profit
The waterfront mainly consists of non-profit facilities, such as public parks, or is based on profit facilities, such as hotels, restaurants and shopping centres
Conservation, redevelopment or development

	The waterfront is planned with the aim of conserving the old settlements as much as possible, or with the aim of removing these or in other cases develop a new land
Ephemeral versus perennial	
	The waterfront plans are inspired by post-modernist criteria, according to which both the architecture and the scenic endowment should reproduce cultural elements from many parts of the world, or are tailored to the need to present and to bring out the local culture. The latter option is pursuable where rich cultural heritages are available to enjoy

Source: adapted from Vallega (2001)

The early development phase

Following the start-up phase, there comes the early development phase, during which not much visible progress can be produced but major preparations for large scale development, both tangible and intangible, are accomplished.

Physically, a series of procedure is taken so that the land is made ready for development or redevelopment. These consist of the relocation of port activities or previous waterfront industries to other locations; the reclamation of land through infill; the environment clean-up procedures aiming at a cleaner and healthier environment; the flattening/ expropriation of land required for development; and the basic upgrade of infrastructure (e.g. transportation, power, fresh water, etc.).

After the political and technocratic consensus gained in last phase there usually follows a period of public promotion. During this period, vision, goals and objectives of waterfront development are clarified by the government or port agencies to the public by different means. This is seen to be critical in getting support from the local communities as well as in soliciting potential private investors. It is supported by the finding of Adair et al (2000) that a master plan approach is helpful in stimulating private sector investment for investors can realize their commitment to particular scheme. There may also be some favorable policies brought out to promote investment in the waterfront area.

This is an intermediary phase between start-up and mega projects phase, sometimes unnoticeable, but it has great implications to the whole process of waterfront development in that it creates a favorable physical, political and economic environment and a better waterfront image. Early transportation investment has been found important in changing a waterfront's

image of inaccessibility. Urban design initiatives and early infrastructure investments are used as tools to change the symbolic image of the development sites. Often, a well designed open space with splendid waterfront views is created as the centerpiece of the initial development precinct, while the rest of the area is a construction site or worse (Gordon, 1997a). These parks and waterfront walkways can provide immediate amenities and reassurance about the long-range intentions of the development in a manner that glossy plans and brochures cannot match. A remarkable characteristic of this phase is that most investment of this phase comes from the public sector.

The mega projects phase

The mega projects phase is the phase during which the most significant and visible changes take place. Private investors are highly involved and begin to play a more and more important role in this phase. A number of mega development project which will change the landscape of the waterfront are carried out. A number of landmark buildings are constructed. Place promotion and marketing; tourism and recreation development; public open spaces and green spaces provision became major issues of concern in this phase. All these result in the increased waterfront accessibility, increased land value, a new waterfront image and a massive reshaped land use pattern and landscape.

In this phase, the municipal government usually retreats to a less involved role in terms of investment as well as administration, transferring these responsibilities to special purpose agencies that established in previous stages. Private investors, on the other hand, become a more active stakeholder, exerting their influence though public-private partnership or self initiated property development. It has been found that the more extensive the scale of the development, the greater the dependence on private investment (Adair et al, 2000).

The maturity phase

Finally, there comes the enduring maturity phase, which extends afterwards. During this period, the intensity of physical change on the waterfront decreases whereas a functional upgrade takes place.

Literature shows that as the waterfront image, land value and functions improves, the

vacant parcels became immediate targets for different interest groups (Yarnell, 1999; Hoyle, 2000). On most of the times they have incompatible interests. Residents are interested in expanding the parks system and preserving their waterfront views. However, others might be interested by the expected high revenue of commercial development. The power of residents on decision-making in this phase can not and should not be neglected. In Toronto, residents succeeded in changing the plan so that all remaining development parcels adjacent to the harbour were designated as parks. The residents were also leaders in the successful campaign to dismantle the redevelopment agency. So the balancing of the benefits of interest groups becomes an issue of importance in this phase.

Land use pattern are further reshaped to a desired pattern. Research found that in order to establish a sustainable economic base, existing and new land uses along the waterfront need to create a diversity that aggregates and consolidates markets and builds interdependencies among otherwise non-supporting functions and uses (Craig-Smith, 1995; Hall, 1993). A mixed land uses evenly distributed among commercial, retail, industrial, residential and leisure is thus desired. The balance between land uses is achieved by the promotion of previously underrepresented land use(s), for example waterfront green spaces will be promoted if there is a lack of it at the end of last phase.

What is more important in this phase is the upgrade of waterfront functions. In Toronto, for example, waterfront development is understood as a way to promote Toronto as an investment platform, pursue large development projects such as the Olympics, and reinforce the dominant global city industries: finance, producer services, media, information technology, tourism and entertainment (City of Toronto, 2000a; 2000b).

3.1.4 "Indicators" of success

As indicated in chapter 2, the evaluation of waterfront success has become the "ultimate" question of many waterfront studies. The phase model can also provide a framework for evaluation of waterfront success.

The model pictures an "ideal" waterfront development. The outcomes identified in this model could potentially be a comprehensive set of outcomes to be sought in a typical

waterfront development. Thus, the success of a waterfront development can be assessed by comparison between the actual outcomes achieved and the outcomes identified in the model. Thus, the outcomes identified in the model can be used as criteria to "measure" the facts in Dalian. But as the outcomes achieved in the first two phases are "intermediary" and "intangible" outcomes as opposed to the "on-the-ground" outcomes which are used by most previous studies, they are eliminated from the final "indicators of success" set (as shown in Figure 3-1.).

Figure 3-1. The "indicators of success" set

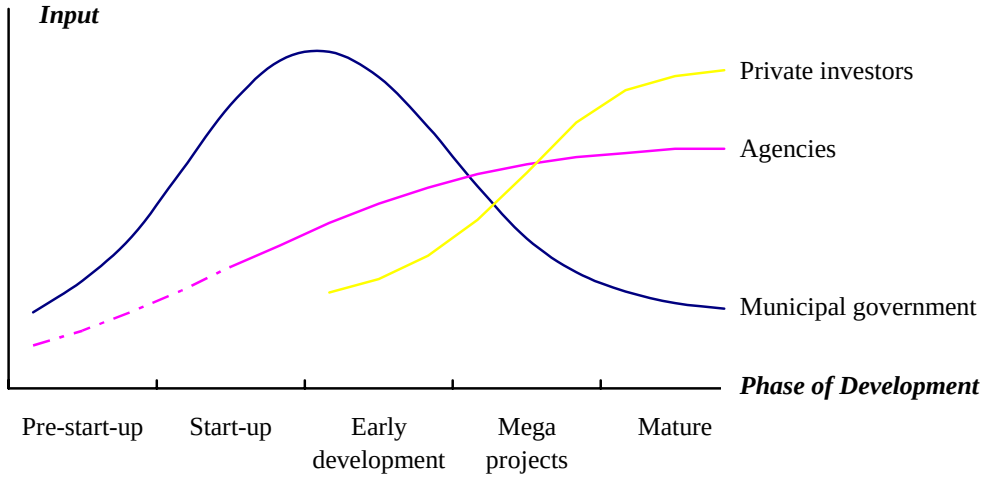
- Waterfront legislation and policy;
- Upgraded transportation;
- Improved infrastructure;
- Rehabilitated environment;
- Public open spaces and green spaces;
- Preserved/renovated heritage;
- Available land tracts for development;
- Increased waterfront accessibility;
- Increased land value;
- A new waterfront image;
- Increased waterfront activities;
- Successful business on the waterfront;
- A reshaped land use pattern and landscape;
- An upgraded function of the waterfront.

Source: by the author.

3. 2 A trend of stakeholders' input

Based on the phase model, a temporal trend can be detected that shows the evolution of different stakeholders' input into waterfront development through the five phases. Figure 3-2 gives a graphic exhibition of the evolution.

Figure 3-2. Stakeholders' input through waterfront development phases



Source: by the author.

Figure 3-2 plots the evolution of input exerted by different stakeholders though a waterfront development process. As the curves of three stakeholders are expressed in the same reference frame, it is also possible to see the contrast among them.

The x-axis (horizontal axis) stands for the time evolution through a whole waterfront development process. From left to right, it is marked by five phases as stated in the model above, namely pre-start-up, start-up, early development, mega projects and maturity phases. The y-axis (vertical axis) stands for the amount of input by different stakeholders during a certain phase.

Several features are worth noting to understand the word "input". "Input" here is a semi-quantitative measure, which means that the value in the reference frame is not a strictly match with a mathematical quantity, but a denotation of an abstract concept. The input can be seen as the measure of involvement and influences of each stakeholder, which are represented by their monetary input, level of power in the decision making process, managerial effort they make and so on.

3. 3 Summary

Based on the review undertaken in the previous chapter, a “phase model” is proposed, which can be seen a “prototype” of waterfront development. Five distinctive phases are identified in the model, i.e. pre-start-up phase, start-up phase, early development phase, mega projects phase and maturity phase. Each phase involves specific stakeholders, events and issues and outcomes that are associated with it. Based on this model, a trend of involvement is discerned in the process of waterfront development, which suggests that stakeholders’ input rises and descends following a consistent pattern.

The conceptual frameworks developed in this chapter will be used as the analytical framework to apply to the Dalian case study. It leads to the guiding hypotheses of the study:

- Dalian’s waterfront development has gone through the phases that have been identified in the model described above; and
- Stakeholders’ inputs in Dalian have followed the same trends as shown in Figure 3-1.

Chapter 4: Methodology

This chapter deals with the methodology used in this research, including the process of research design, methods of data collection and data analysis. Sources of the secondary data are then specified in section 4.3.

4. 1 Research Design

4.1.1 The selection of study area and sites

Dalian was initially selected as the place to carry out the case study basically for two reasons.

The first reason is the importance of Dalian in terms of its physical and strategic location and its political and economic status. Physically, Dalian is located (1) on the east coast of China, in the belt which has been the "frontier" of the China's opening-up policy and has experienced the fastest rate of economic growth; (2) at the southernmost tip of Liaodong Peninsula, which serves as the gateway to the hinterland of Northeast China as well as the Inner Mongolia. Strategically, Dalian is proposed in the newly amended Master Plan for Urban Development 1999-2020 to be the "regional transportation centre, commercial and trade centre, finance centre, tourism centre and information centre for Northeast Asia[4]". In 1984, Dalian was assigned the status of Coastal Special Economic Zone. In 1985, Dalian was listed as one of the cities specifically designated in the state plan, which are assigned the same administrative power as provinces. Since 1991, Dalian has maintained an annual GDP increase of over 10%[5].

The other reason concerns the Ecoplan China Project focusing on the coastal area of China. The University of Waterloo is the lead academic institution and Dalian University of Technology is a local partner.

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[4] Confidential information obtained by interview with Xu, Jinhong. This master plan is currently under an amending process. So the new version was not allowed to be released to outsiders at the time of interview.

[5] Dalian Yearbook 1987 – 2001, and the government website of Dalian, at www.dalian.gov.cn

Dalian Municipality has 3 county-level cities (Wafangdian city, Pulandian city and Zhuanghe city), 1 county (Changhai county) and 6 districts (Zhongshan district, Xigang district, Sha Hekou district, Gan Jingzi district, Lu Shunkou district and Jinzhou district) (Figure 4-1.). In addition, there are 4 state-level leading areas for opening up links with the outside world (the Development Zone, the Free Trade Zone, the Hi-Tech Industrial Zone and the Golden Pebble Beach National Holiday Resort.)[6]

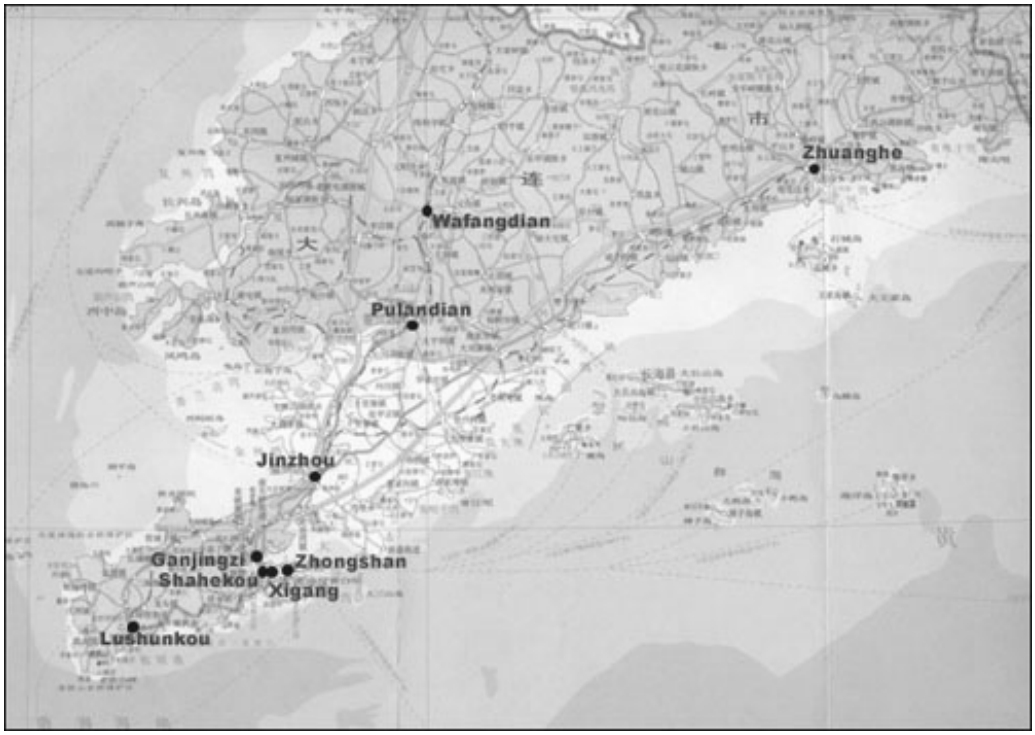


Figure 4-1. Political Map of Dalian Municipality

Source: scanned map edited in Photoshop by the author (scale unavailable)

Dalian municipality has a long coastline of 1906 km, comprising 73% of the coastline of Liaoning Province, of which 1288 km is coastline along the mainland and the other 618 km is along islands. Since, as discussed in chapter 2, the waterfront area is defined to be an urbanized area, the study area is further narrowed down to the "downtown" area of Dalian which is defined in the Master Plan for Urban Development 1990-2010 to refer to "Zhongshan District, Xigang District, Shahekou District and the urbanized area in Ganjingzi District".

[6] Information from the government website of Dalian, at www.dalian.gov.cn

After preliminary background review and field study, three specific sites of waterfront development were selected as the sites of study. They are the Xinghai Bay Area, Binhai Road Area and the Dalian Port Area. They are the focal points where three different types of waterfront development are going on in different phases.

4.1.2 Time frame of the research

The research consists of four stages, namely (1) literature review, (2) research design, (3) fieldwork and data collection, and (4) data analysis.

The review of literature in English was largely done during January to March 2003 at the University of Waterloo, and the Chinese part was carried out later in May to June 2003 in Beijing.

A research proposal was completed in April 2003 as the course requirement of TOUR 602, in which a large part of research design was completed with objectives, methodology and anticipated results briefly stated. The further specification of study sites and interview design (including key informant selection and design of interview questions) was completed after preliminary field work and consultation with local researchers.

Fieldwork and data collection were carried out in Dalian during October to November 2003, including interviews, on-site observations, secondary data searching and collection.

The final stage began after the completion of fieldwork in December 2003. The analytical framework was developed, which was applied to Dalian. Results and conclusions were then presented based on these.

4. 2 Methodology

By and large, this research adopts a qualitative approach. This is determined by the nature and characteristics of the research questions (stated in section 1.2). While qualitative methods have the strengths of being flexible, innovative, exciting and rich in information, it has been criticized that their findings can not be extended to wider populations with the same degree of certainty that quantitative analyses can (Royse, 2004). So some techniques of quantitative approach such as guiding hypothesis are used to compromise the draw backs of

qualitative research. Methods used in this research are introduced in the following sections.

4.2.1 Case Study

The case approach has proven to be particularly fruitful in decision making and planning processes (Cropper, 1986). Yin (1986) sees the case study as a research strategy which can be likened to an experiment, a history, or a simulation. He points out that it does not imply the use of any particular type of evidence or data collection technique. It can draw both on quantitative and on qualitative evidence and make use of fieldwork techniques, verbal reports, and observations, either separately or collectively. It was also indicated that the formulation of an analytical framework and guiding hypothesis through literature review will prevent the case study from being a completely open-ended intellectual excursion.

This research began with a literature review process which led to conceptual framework which has been presented in the previous chapter. A combination of several data collection methods were used in this study. The analytical frameworks were then applied to analyze and interpret the data. The data collection methods used in this study include the following ones:

Interviews

Interviews are one of the four basic types of data collection in qualitative study, the others being focus groups, surveys and observation. They may involve unstructured and generally open-ended questions that are few in number and are intended to elicit views and opinions from the participants (Creswell, 2003). Interviews in this research include key informant interviews, especially of government officials, and casual interviews with researchers, local residents and developers to provide supplemental information.

The objectives of key informant interview are (1) to get first-hand information on the rationales, concerns and process of local government in waterfront development, which might be unavailable in publications; (2) to understand the administrative structure of Dalian's waterfront; (3) to get insiders' views of waterfront development; and (4) as a means to acquire government documents from the interviewees.

It was not decided in advance how many key informant interviews should be conducted nor who exactly should be interviewed. The interview continued until sufficient information

had been gained and responses became repetitive.

Several features were taken into consideration during the design of interview questions. Firstly, many interviewees are not familiar with the term “waterfront”. This might be because of the relatively late emergence of the waterfront development phenomenon in China. So an explanation of the meaning of “waterfront” was introduced at the very beginning of the interview. Secondly, since the interviews were aimed to explore rather than to get some simple answers on a limited number of points, it was not structured as a list of questions. Rather, every question began with a contextual statement, in which the background of the question was described. The interviewees were then asked to give comments concerning the statement. The interview questions were adjusted a little according to the different backgrounds and positions of the interviewees. An interview typically lasted one hour to one-and-a-half hours. An mp3 recorder was used to record the interviews with the permission of the interviewee[7]. In addition, notes were taken with pen and paper. A sample of interview questionnaires is given in Figure 4-2.

Most appointments with interviewees were made through the facilitation of Dr. Wu, a professor at Dalian University of Technology, the local partner institution of the Ecoplan China project. In addition to key informant interviews, casual interviews were also carried out with researchers, local residents, real estate sales person, etc. to get suggestions for research design and supplementary information.

[7] Some interviewees, Yixiao Sun for example, said they were not used to beeing recorded. The recorder was not used under such conditions.

Figure 4-2. A sample of interview questions

INTERVIEW QUESTIONS

Part I Self introduction and introduction of the research topic

Dear Sir, thank you for taking time to do this interview with me. I am a graduate student from the University of Waterloo. Now I am doing my master's thesis on the waterfront development. Waterfront refers to areas on the edge of the downtown area and the sea, such as the Xinghai Bay area and the Dalian Port area. Dalian is chosen as the case of my study. In my study, I will look at the policy, planning and administration of Dalian's waterfront.

Part II Policy, planning and administration of Dalian's waterfront development

1. Relationship between the water and the city

Dalian is a city with a long coastline. It is also a city that grew up with port activities. How do you think of the relationship between the water and the city in the past, now and in the future?

2. Historical status of the waterfront

The Binhai Road area and Xinghai Bay area has gone through years of development. What were the areas like before development? How did they change through time?

3. Vision and plan

There are different rationales for waterfront development, some are for economic revenue and some are for urban regeneration. What are the visions and plans of Dalian's waterfront development? What are the strategies taken?

4. Process and projects

There are usually several phases involved in the whole process of waterfront development. What development phases has the Dalian waterfront gone through? What happened in each of the phases?

5. Policy

Almost all development zones have special policies associated with them. What policies do you consider to be important to the waterfront development of Dalian.

Part III Overall evaluation

Speaking as a whole, would you evaluate Dalian's waterfront development as successful or unsuccessful? Why?

Source: by the author.

Observation

Observation is useful for the researcher to get first-hand information on the participants and to record information as it is revealed (Creswell, 2003). The objective of on-site observation in this research was to get first-hand information on current accessibility, landscape, land use patterns and user activities in three study sites[8]. Informal conversations with site users supplement these observations. Additional information on waterfront activities was gathered through internet sites and from signs and notices posted throughout the study area.

Field notes and photos were taken to record what was observed. Observation in Dalian Port area and Xinghai Bay area was done on foot, while observation in Binhai Road area was done with a taxi.

Other methods

As noted by a number of researchers (De Vaus, 2001; Creswell, 2003; Quadeer, 1986), a combined use of a mixed research method, taking the advantage of their respective strengths often called triangulation, can comprise a better research strategy. Besides key informant interview and observation, this research also draws upon other methods including secondary data and photography.

Summary

As introduced above, a combination of various data collection methods has been used in this research to provide information to answer the research questions stated in section 1.2. Table 4-1 gives an overall demonstration of the relationships between data collection methods and the corresponding research questions they are expect to address.

[8] Fall and winter, the seasons when this field study was conducted, are not the best season to observe user activities, for this is the low season of the year both for activities of tourists and local residents. But user activities in other seasons can be got through the interviewing of local residents as well as from local newspapers and the internet. It was not possible to undertake field studies in summer 2003 because of SARS.

Table 4-1. Data collection and research questions

Methods / *Research Questions*	*Interview*	*Observation*	*Secondary Data*
1. Circumstances of initiation	❖		❖
2. Objectives and strategies	❖		❖
3. Planning	❖		❖
4. Administration	❖		
5. Land uses		❖	
6. Stakeholders	❖		❖
7. Tourism and recreation	❖	❖	❖
8. Evaluation	❖	❖	❖

Source: by the author.

4. 3 Data Sources

In addition to the first-hand data gained through interviews and observations, secondary data comprises a large part of the data on which this research is based. Sources of secondary data are listed below:

- Local newspaper (Dalian Daily), volumes published before 2002 are available in the library of Dalian University of Technology, volumes published after 2002 are available online at www.daliandaily.com.cn.
- Government websites: www.dalian.gov.cn (the official website of Dalian Municipality), www.dalian-jw.gov.cn (the website of Dalian Urban and Rural Construction Committee), www.cjj.dl.gov.cn (the website of Dalian City Construction Management Bureau), www.gtzj.dl.gov.cn (the website of Dalian Planning and Land Resources Bureau), and www.portdalian.com (the website of Port Dalian).
- Government documents obtained from the interviewees.

- Plans: "*Plan for the Redevelopment of Dalian Port*", "*Master Plan for Urban Development 1999-2020*", "*The Land Use Plan for the South Coastline of Dalian*", and "*Master Plan for Tourism Development in Dalian for the Tenth Five-Year-Plan*"[9].
- *Dalian Yearbook (1994-2002)* and *Encyclopedia Dalian*, which are available in Dalian University of Technology's library.
- Brochures and advertisements published for the promotion of Dalian.

4. 4 Summary

In this research, the author adopted a case study approach, drawing upon both first-hand data and secondary data obtained through a number of data collection methods. These data will be analyzed using a framework introduced in chapter 3.

[9] There was a plan for Xinghai Bay area, "The Development Plan for Xinghai Bay New Area", which was completed in 1993. But the author was unable to get the plan because it was dated and lost.

Chapter 5: The Case of Dalian

This chapter first introduces the historical evolution of Dalian's waterfront in section 5.1, both in its physical form and the plans and policies concerning it, which form a context for the later waterfront development. Three waterfront development sites are then studied one by one in section 5.2. Land use patterns, featured projects, administrative structure and policies in each site are reviewed. As a whole, this chapter provides the information on the historical situation, stakeholders, important events and major outcomes in Dalian's waterfront, which will be analyzed in the following chapter using the analytical frameworks developed earlier.

5. 1 An Historical Overview: Plans and Policies Concerning the Waterfront

The city of Dalian was first established as a port city at the end of the 19th century. The city has owed its existence and development to the sea through its history. The waterfront area of this city has also gone through a history of over one hundred years, with the planning and policies changing through years.

In the beginning section of this chapter, a brief history of development of the city and the waterfront will be reviewed. This sets the context for the waterfront development in recent years. Dalian has gone through different historical periods marked by different governance and development traits. The review follows the partition of the periods proposed by Dong (2001). This section draws together information gleaned from a variety of government documents, plans, publications and key informant interviews.

5.1.1 The Period of Russian Governance (1989-1904)

In 1898, a treaty was signed between the Russian and Chinese (Qing Dynasty) governments. The important content of the treaty was the release of two rights to Russia. The first was the leasing of Dalian Bay and the waters nearby, and the second was the right to construct and run the railway. Russia decided to build a port in Dalian. It was planned to be the biggest port in North East Asia and a tax-free port opening to a number of countries.

After the decision, Dongqing Railway, a Russian railway company, purchased the land of twelve villages around Qingniwa. The 3300 hectares of land was to be used for a port and for urban development. Judging from the plan formulated in 1901 (Figure 5-1), the major functions of Dalian were port transportation and trade. A city administrative system was formed on May 30th, 1902. There were then three districts in Dalian, i.e. Downtown District, Laohutan (Tiger Beach) District[10] and Shahekou District. Saharof, the Chief Engineer of the port city, was designated as the mayor.

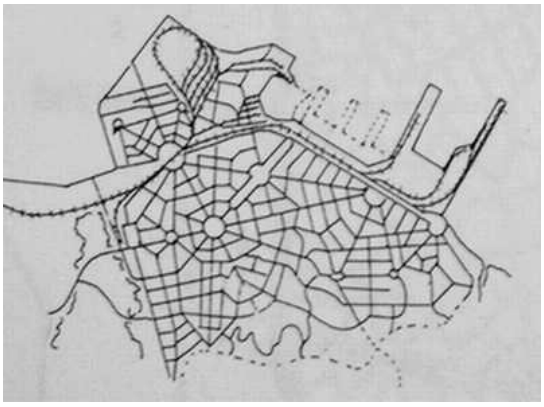


Figure 5-1. A sketch map of the layout plan of Dalian in 1901

Source: government document

Figure 5-2. An historical photograph of Dalian's port area during Russian governance

Source: from www.dalian.gov.cn

In 1903, the Dongqing Railway, a railway which went across the continent linking Russia

[10] In order to maintain consistency, name of places in this thesis are translated directly into English according to their Pinyin. Translations according to the meaning of the names are given in brackets if they provide the readers with a better understanding.

and Dalian via Northeast China, was built and opened to traffic. At the same time, the first phase of construction of downtown Dalian was finished. Thus, a port city with a population over 40,000 and an area of 4.25 km^2 came into being. As in many other port cities, the railway went through the city all the way to the piers, separating the downtown area and the waterfront (Figure 5-2).

5.1.2 The Period of Japanese Governance (1904-1945)

The Japanese army invaded Dalian in January 1905 and occupied the city for the following 40 years.

During the forty years of Japan governance, the urban population and the urban area expanded extremely rapidly. The urban population grew from 18,000 in 1904 to 700,000 in 1945, with an average annual population increase of 17,000. During the same period, the urban area grew from 4.25 km^2 to 45.7 km^2, increasing on average by 1.01 km^2 annually. These figures show that Dalian experienced a long period of fast growth.

Due to the rapid growth, the coastline along Dalian Bay was filled rapidly by port facilities and factories, living no accessible waterfront for residents. It is a reflection of the colonial status of the city that overwhelming emphasis was placed on transportation and industries rather than on public spaces. It resulted in the unfortunate situation that no public space was left along Dalian Bay.

Dalian showed a different pattern of growth from most other cities, which usually spread outwards radially. However, due to the hilly landforms in Dalian, several discrete communities developed at a distance from the city core, forming a so-called “one centre and multiple nuclei” pattern. Those sites that possessed beautiful natural scenery, such as Fujiazhuang, Laohutan and Xinghaipu, developed as resorts and became the satellite towns of downtown Dalian. Villas and parks began to emerge in these areas. For example, Xinghai Park was first constructed in 1909.

New urban plans came out and were reviewed from time to time in order to meet the needs of rapid population growth in this period. Faced with such a situation of rapid growth of satellite towns, a number of site plans were formulated as well as the overall city plans.

A plan for the area around Xinghai Park was proposed in 1932 and approved by the municipal planning committee in 1934. This plan covered an area of 1.3 km^2 to the north and west of Xinghai Park. The area was designed as a high-class residential district. A 27m wide road was planned in this area. Arteries in this area were designed at a variety of scales, i.e. 36m, 27m, 25m, 18m, 15m, 11m, 9m and 7m. It was also designed that all arteries in this area should be parallel. In order to be compatible with the park and to leave more free land for green spaces, road systems were designed to be set back a certain distance from the shoreline.

5.1.3 The Postwar Period (1945-1977)

During the early part of this period, the development of Dalian and its urban planning were deterred by the Second World War, the Civil War between the CCP and the Kuomindang, and the War to Resist US Aggression and Aid Korea.

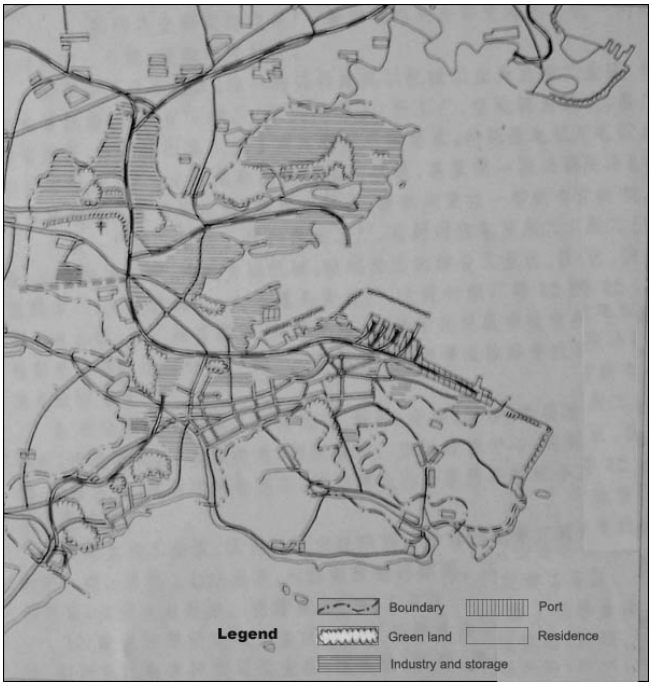


Figure 5-3. A sketch map of the Master Plan of Dalian in 1958
Source: government document, photographed and edited by the author in Photoshop

A planning procedure for urban development was initiated in 1957, leading to the birth of

the “1958 Master Plan” of Dalian. In that plan, Dalian was designed to be an industrial city focusing on mechanical and chemical engineering. A high emphasis was put on the smelting industry. The plan was influenced by a general national trend over-emphasising heavy industry, especially mechanical and chemical engineering. The importance of ports was not sufficiently recognized in the plan. The design of city functions can be clearly seen from the map of the 1958 Master Plan (Figure 5-3).

The entire waterfront in the downtown area and along Dalian Bay was designated to either port use or industrial and storage uses. In contrast, the satellite towns and the waterfront along the southern coast of Dalian were designated as green land, residential or left unused.

It was recognized that, as a coastal city, Dalian benefited from the mild marine climate, which is advantageous for recreation and recuperation. Heishijiao, Laohutan had developed into recreation and recuperative resorts. A few more resorts were planned along the coast elsewhere. Bangchuidao (wooden club island) Hotel was planned and put into use in 1959, which made a great contribution to the reception of foreign guests and government heads at that time and to the development of the tourism industry later.

In order to provide citizens with nicer public open spaces, renovations were made in Xinghai Park. More than ten small parks, including Laohutan Park, were planned. A cultural and recreational park serving the whole municipality was planned on the waterfront between Malan River and Heishijiao. A scenic wood was to be built up in that area. A recreational beach, an aquarium, a marine club and youth summer camping ground were also planned.

5.1.4 The Period of Reform and Opening-up (1978-1990)

In order to enhance the capability to undertake scientific and professional urban planning, a special government institution, Dalian Institution of Urban Planning and Design, was established in 1978. After a few years of data collection and research, the institution brought forward a new master plan for Dalian in 1982.

In the “1982 Master Plan”, it was decided that the city would be, functionally, a “port, industry and tourism city”. It is worth noting that, for the first time, ***tourism*** was regarded as one of the major functions of the city. This should not be separated from the national context of

tourism development triggered by rising incomes.

In this plan, there was a section specifically directed to regulating the land uses along the coast. In recognition of the previous lack of order in coastal development, the plan prescribed that the abuse of waterfront land should be corrected, and the use of waterfront in the future should follow land use zoning regulations. The entire waterfront was designated to five different uses, i.e. port use, residential use, scenery and tourism use, aquaculture use, and industrial use. From then on, those projects that did not fit the designated land uses would not be allowed to be carried out. Those industries incompatible with the prescribed uses had to move out. No-one was allowed to reclaim land by infill.

Besides the planning for the distribution of traditional items such as transportation, industries and agriculture, the plan also dealt with the distribution of “tourism scenery areas” and sanitariums.

Dalian was rich in tourism resources and scenic attractions. The city received 38,000 inbound tourists and 330,000 domestic tourists in 1980. Two areas of sanitaria had been formed in Fujiazhuang and Xiajiahezi. According to the characteristics of the city, the tourist scenic areas were to be arranged as follows: a South Coastal Scenic Area would be developed, which could make good use of the unique geologic structure as well as natural scenery of waters, islands, hills and vegetation. The belt went from Bangchuidao (east end) to Heishijiao (west end). Twelve scenic sites were planned in the waterfront area.

The “1982 Master Plan” was the first master plan in Dalian which was approved by the State Department (on May 4th, 1985). In a reaction by the State Department to the plan, several comments were made concerning the waterfront as follows:

- Dalian is the gateway of Northeast China as well as an important port and a base of industries. At the same time, it is also a tourism city with unique scenery;
- Dalian should be built into a modern port city that is convenient and comfortable for living, as well as a city with a prosperous economy, with an advanced research and education industry, and with beautiful scenery.
- Dalian is among the coastal cities that the central government decided was to be further opened up to the outside world. Therefore, the development of the city should

take into account how best to meet this requirement.

- Industries in urban areas should make great efforts to update their technology in order to meet the needs of both environment and production.
- Dalian should promote the growth of the tertiary sector and serve the needs of local residents and tourists.
- The superior natural environment makes the South Coast area an ideal place for recreation and tourism. More effort should be put into the administration and preservation of the natural environment and vegetation. No constructions that are incompatible with the natural landscape should be permitted. The existing sanitariums must not expand their sizes. New constructions in this area must strictly follow the master plan.

A distinct feature in this period is that equal emphasis was put on economic benefits and social and environmental benefits. The national growth in tourism triggered the tourism development in the South Coast Area.

5.1.5 Period of Fast Growth in Economy (1990-1999)

During the 1980's, Dalian had experienced vibrant economic growth. It was designated as one of the open coastal cities. In the national strategy, it acted as a window to the outside world for Northeast China. In 1989, the Urban Planning Bureau invited provincial officials and planning experts from other cities and held a forum to discuss the amendment of "1982 Master Plan". An outline was produced after the forum. The outline was then sent for review to a variety of government department and institutions, planners and researchers. The final version of a revised master plan was proposed by Dalian Institution of Urban Planning and Design at the end of December, 1990.

The position of city functions in the revised plan remained largely the same as in the previous plan. However, a new goal was advanced to build Dalian into an ***international*** city, which meant that the city began to seek a more active role in the regional and global economy.

In the plan for the layout of the whole municipality, the development of Jinzhou District and a new urban area was conceived. It was also proposed that there should be a functional

division between the old urban area and the new urban areas, which meant that the old urban area should be more inclined to the development of tertiary sector, especially foreign trade, commerce, finance and technology. The achievement of the goal of being an international city was expected to be facilitated by doing so.

As for the port, seeing that the old port had almost reached its throughput capacity, new construction would be shifted to the new port in Dayao Bay. The shipping of corn and grains was shifted to Dayao Bay Port. This measure suited the large bulk transportation characteristic of Dayao Bay Port and relieved the pressure of land transportation in the downtown district.

Planning of the coast prescribed that the coastline should be used mainly for port, aquaculture, tourism and the salt industry. The coastal area of Dalian municipality was zoned into five functional areas. The area from Jinshitan to Yangtoujiao (the urbanized area including Dalian Port, Laohutan, Fujiazhuang, Xinghai Park, Heishijiao, etc) was named “Urban Port and Coastal Scenic Tourism Area”. The concepts of multiple use and integrated development were introduced into the plan. Port, water dependent industries and tourism were the major land uses promoted in this area.

The South Coast Scenic Area began to take shape after its planning in 1982. It began at the east at Laojiangou and ended at the west at the river mouth of Lingshuihe with an area of 30.6 km^2 and a 32.4 km long shoreline. In this plan, the area was divided into eight sub-areas, i.e. Bangchuidao (wooden club island), Shicaocun (stone groove village), Laohutan (tiger beach), Xiuyuefeng (moon apex), Yanwoling (bird’s nest mountain), Fujiazhuang, Baiyunshan (white cloud mountain) and Xinghai Bay. It was aimed to be built as a showplace where visitors could view and admire the beauty of nature. Besides, three more showplaces were planned in Lvshun, Jinshitan and Bingyugou.

Xinghai Bay area was planned to be a centre for information, conferences and exhibitions. A separate plan for the Xinghai Bay area was also devised in 1993. Unfortunately, because of personnel moves, the plan was lost and unavailable in the government offices during the author’s field work.

In order to adapt to the rapid development in Dalian as well as in the outside world, a new master plan of the city was proposed in 1998 and was approved by the People’s Congress of

Dalian and the Construction Department at the provincial and state level. Dalian was positioned as “an important coastal city in North China, an international tourism destination, and an international famous city harmoniously accommodating culture, sports and modern industries”.

In terms of the overall zoning of the municipality, the functional division was further emphasized in the “1998 Master Plan” between old and new urban areas. The old urban area was designed to assume such functions as administration, culture, technology, transportation, finance, information, trade, tourism, sports, education and exhibitions. The development of the tertiary sector and high technology industries was to be expedited. By adjustment of the industrial structure, land in the old urban area was to be freed for construction of new infrastructure and open green spaces, and to create a more favorable urban environment.

By reclaiming land, the old Dalian Port was reconstructed into an integrated port-trade area, with an expectation that it would enhance the development of the eastern old urban area.

5.1.6 Summary and Comments

As narrated above, Dalian owes its existence and development to its coastal location or, in other words, its waterfront. The planning, policies and functional development and even the whole city echo the global trend found in literature (see chapter 2).

The most notable trend leading to the policy shift was globalization which is still going on. Globalization of the world economy has assigned an important role to coastal cities to play in national development. Dalian was passively introduced into the world economy as a concession area by military force, as many other famous coastal cities in China, such as Shanghai and Guangzhou, also were. Later, since the reform and open-door policy introduced in 1978, coastal cities have been called upon to act as ‘engines’ in national economic growth and have been actively opened to the world. The introduction of the notion ‘international city’ in Dalian’s overall goal of urban development in 1990 was a sign of the conscious practice to seek an appropriate strategic position in the regional and even global setting. Then, the vision of building Dalian into “an important coastal city in North China, an international tourism destination, and an international famous city harmoniously accommodating culture, sports and

modern industries" was a further active step taken to update the city's role in the global economy. The waterfront, in this context, became the focal area to accommodate this update – with facilities and policies provided there to promote financial, retailing, tourism and high technology activities (this trend will be further manifested in later sections).

The second trend that is consistent with the global trend is that as ships are getting bigger and require larger berths, bigger terminals and deeper channels, transportation activities have been shifting from the old port in Dalian Bay to the new port in Dayao Bay in the rural area which has more back-up space on land and efficient sea access. This transition brought the demand as well as the opportunity for the redevelopment of the old port area.

The third is the rising attention given to the sustainable use and protection of the coastal environment. The State Department's reply to Dalian's "1982 Master Plan" regulated that "no constructions incompatible with the natural landscape should be permitted in the South Coast Area. The existing sanitariums must not expand their sizes. New constructions in this area must strictly follow the master plan". That regulation issued at the state level has had great implications for the development in that waterfront area.

Besides the global trends discussed above, there are also some characteristics unique to China and Dalian which had influenced the history of Dalian's waterfront. The first is Dalian's history of colonial governance, especially during the period of Japanese governance. The city was treated as a tool to exploit the Chinese market and provide access to natural as well as human resources. As a result, the entire waterfront was given to port facilities, storage places, railroads and factories, leaving no space for residences or recreation. This absence of residential and recreation spaces along Dalian Bay has persisted till today.

The second is China's national policy of opening up which was introduced in 1978. Before that, China's economy was guided by a heavy-industry-led development policy. Heavy industries received priorities in resource allocation at the expense of light industries and the commercial and financial sectors. The heavy-industry-led policy was especially discouraging to the growth of coastal cities, as trade, finance and entertainment were major economic sectors of the latter (Han and Yan, 1999). This led to the neglect of the port function and an over-emphasis of the industrial function in Dalian's "1958 Master Plan". The opening up

policy allowed Dalian to take part in the globalization process and to take advantage of its coastal location to update its city function in regional and even global settings.

The third is China's reform from a planned economy to a market economy. Based on the policies of urban land use reform and housing commercialization, the government introduced a concept known as the two-layer urban land market. The first layer refers to the transition of non-urban land into urban use, which is controlled by the government (different levels of government are involved in different circumstances). The second layer refers to the transaction of urban land (not the ownership but only the right to use), which is regulated by the "invisible hand" – the market (Han, 1998). The market economy has several implications for urban development in general and for waterfront development specifically. The first is the emergence of the private sector in the economy and it has played a more and more important role in urban and waterfront development. The second is the commercialization of urban land. Thus the management of land became one of the most important missions of the municipal government. Meanwhile, the revenue from land transactions and concessions became one of the major sources of municipal revenue, which then could provide the funds for infrastructure and public spaces. In some joint venture cases of public-private partnership, the land can also serve as the capital investment from the public sector. The third implication is the differential land rent that came along with the commercialization of urban land. Since the introduction of market mechanisms to urban management, urban land parcels in different locations have shown different values. This value differentiation has been used as a means to reshape the land use structure. Traditional factories that lacked modern technology and caused environmental pollution could then be relocated to suburban areas. The removal of factories from the central city has also provided opportunities for urban redevelopment. At the same time, housing commercialization stimulated the development of the real estate sector.

5. 2 Land Uses and Current Policies

In this section, the land uses of the waterfront will be presented. Data on land use come mainly from observation. Observations were carried out in three sites (Figure 5-4) on three days during the field study.

In addition to the field notes and photos taken during the observation, supplemental data were colleted during key informant interviews, and from secondary data and web searches that followed.

Besides land uses patterns, this section will also provide information on the current policies for the waterfront and building year, investor and investment for specific projects, in order to depict a picture of the waterfront both in terms of physical pattern and overarching policies.

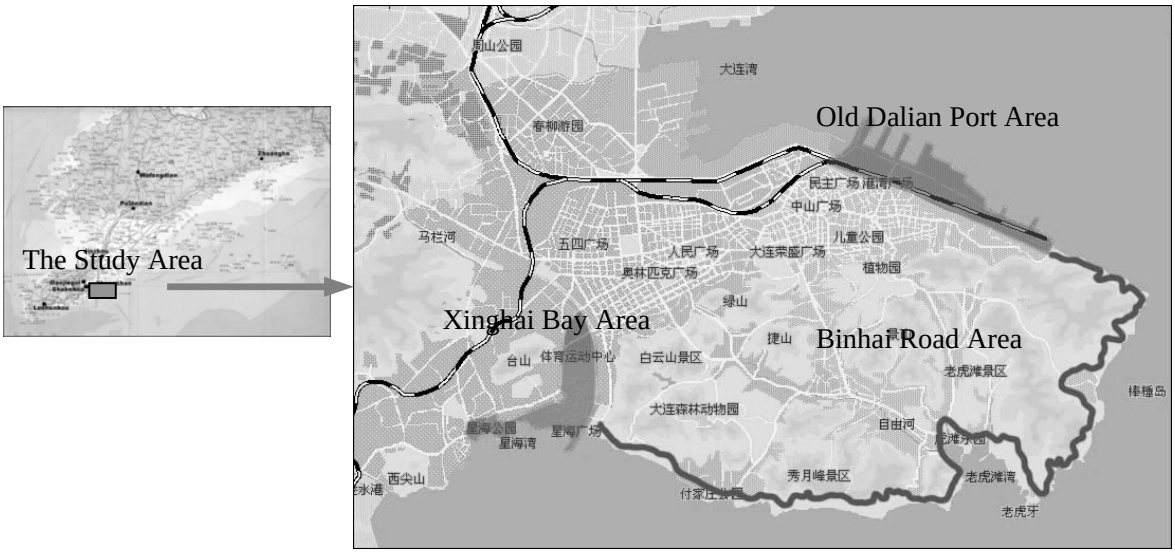


Figure 5-4. Location of the observation sites

Source: retrieved from www.go2map.com, edited in Photoshop (scale unavailable)

5.2.1 Xinghai Bay Area

Overview

Xinghai Bay is located at the southwest tip of Dalian. The boundary of this area is the coast along Xinghai Bay (with Xinghai Park being the west end and the mouth of the Malan River being the east end) and the land area abutting it.

Xinghai Bay area was a refuse dump before development. The waters here were contaminated by both aquaculture on the shoals and the liquid waste carried by the Malan River, making it the most dirty and disordered area in Dalian.

In the year 1993, the municipal government made the decision to launch large-scale development in the Xinghai Bay area. In the same year, 114 hectares of land were reclaimed by filling solid waste produced from urban construction into the sea. Another 62 hectares of land were reclaimed by relocating existing industries and residents. A development plan was formulated in the second year, proposing the vision of building this area into a new CBD of Dalian. Other terms indicating the development vision that were reported in local newspapers included “North Hongkong”, “The living room of the city”, “Blue CBD”, etc., showing the city’s ambition.

Xinghai Bay area has experienced rapid and dramatic change since then. After ten years of development, Xinghai Bay area has become one of the five “forerunner areas” of Dalian[11].

In the early development stage, the development followed the idea of “high quality of construction and high intensity of investment”. Thus came a series of large scale infrastructure constructions. More than 76 kilometers of conduit was laid underground serving for water, power, gas, heat supply and communication. A road system of more than 33 hectares, a dike of more than 4900 meters, a bathing beach along the coastline of 3400 meters and green spaces of more than 100 hectares were constructed.

Along with the infrastructure upgrade, the promotion of Xinghai Bay area as an international commercial centre accommodating conference and exhibition, commerce and trade, tourism and recreation also went on, drawing a good deal of private sector investment both from domestic and foreign capital markets.

With the completion of a number of tourism, entertainment, exhibition and sports facilities, the waterfront area began to host a number of important gatherings and festivals, including *The International Fashion Festiva*l, *The Firework and Firecracker Festival*, *The Chinese Scholar Tree Blossom Festival*, and *The Beer Festival*. These festivals provide the area with good opportunities for promoting itself and attracting investment.

Land use pattern

[11] The other four are Dalian Economic and Technology Development Zone, Dalian High Technology Park, Jinshitan National Tourist Vacation Resort, Dalian Tax Free Zone.

Figure 5-5 shows a bird's eye view of the current landscape in Xinghai Bay area. Observation shows that major land uses in this area include commercial; offices; green spaces and parks; residential; tourism and entertainment facilities; exhibition, conference and sports facilities; and transportation. Details in each category are listed in Table 5-1.

Figure 5-5. A bird's eye view of the landscape in the Xinghai Bay area
Source: http://www.chinam1.com/Templates/kafa/shijijingdian/jieshao.files/lpjs.htm

Table 5-1. Land use details in Xinghai Bay area

Land use Category	***Details***
Commercial	Peace Plaza, tea houses, convenience stores, hair salons, souvenir stores, restaurants
Offices	Dalian Commodity Exchange, Century Classic Mansion, Air China Mansion, Xinghai Garden
Green spaces and parks	Xinghai Square, Waterscape Avenue, Century City Statue, Xinghai Park
Residential	Xinghai Guobao, Xing Gongguan, Xinghai Superior
Tourism and entertainment facilities	Xinghai Bay Artificial Bathing Beach, Tourist Wharf, Marine Club, The Oriana Cruise Ship, SunAsia Ocean World, SunAsia Polar World Hotels (e.g. Xinghai Hotels)
Exhibition, conference and sports facilities	Dalian Gymnasium, Dalian Natatorium, Dalian Citizens Fitness Centre, Dalian International Tennis Centre Xinghai Conference and Exhibition Centre The Modern Museum, The Marine and Seashell Museum
Transportation	Heishijiao Long Haul Transportation Centre; Xinghai Bay Passenger Tourism Harbour

Source: by the author.

Description of projects

In this section, some detailed information about the main projects in Xinghai Bay area will be provided in a chronological sequence. Information includes the year of building, location, scale, content and circumstances, source of investment, etc. A picture is provided for almost every project. Most of the pictures were taken during field trip. Those marked with CIIC are retrieved from a website called "picture China" (http://www.china.org.cn/ch-pic/index.htm). Others are from a variety of sources including pictures in brochures, posters, books and the internet.

Xinghai Park

First built in 1903, 150,000 m^2 occupation area[12]

Xinghai Park was first built during Japanese governance. It is a famous scenic park in Dalian, consisting of a green space of 150,000 m^2 and a beach shoreline of 800 m in length.

Various renovations and constructions have been going on since the proposal to make the Xinghai Bay area into a new CBD of Dalian. A large part of this park remains as green space.

The investment came mainly from the municipal government.

Xinghai Artificial Bathing Beach

Built in 1997, 200,000 m^2 occupation area, 1387 m shoreline

This artificial bathing beach was built to meet the demand for beach areas from the fast developing tourism in Dalian. The shoreline was recast and built into three artificial arcs. 45,000 m^3 sand transported from Beidaihe (another coastal city in Northeast China) was spread on the beach.

Figure 5-6 Xinghai Artificial Bathing Beach (photograph taken by the author)

The investment came from the municipal government.

[12] In this thesis, the term "occupation area" refers to the land area a certain project occupies, while "construction area" refers to the total floor area of a construction. The "construction are" is sometimes a more accurate measurement of the scale of projects than "occupation area", especially with respect to real-estate.

Xinghai Conference and Exhibition Centre

Built in 1996

860,000 m^2 occupation area, 940,000 m^2 construction area

Figure 5-7 Xinghai Conference and Exhibition Centre (from: http://www.dalian-dfdq.com/english/epage3.htm)

The Xinghai Conference and Exhibition Centre was built in 1996 with a rationale that this conference and exhibition facility could provide the hardware for information and trade services, which are indispensable to the vision of building Xinghai Bay area into a new CBD of Dalian.

Since its completion, there has been one exhibition in every ten days on average held in Xinghai Conference and Exhibition Centre. A large number of the exhibitions are international. It has also been the primary meeting place for most of the mega events and festivals in Dalian, e.g. Dalian International Fashion Festival, Dalian Beer Festival, Dalian Import and Export Commodities Fair, etc.

Construction of another conference and exhibition centre is being planned, which will be connected to the old one and form a whole public complex together with it. There will be commercial spaces, office spaces and luxury apartments as well as exhibition spaces. The construction is expected to be completed by September, 2006.

The investment comes mainly from the municipal government.

Xinghai Square

Built in 1997, 1,100,000 m^2 occupation area

Figure 5-8 Xinghai Square (from *Encyclopedia Dalian*)

Xinghai Square is the largest urban square in Asia. Roads in the square go in three circles, which form the basic structure of the road system in Xinghai Bay area. Around the square are music fountains. Lamps on the road sides are all in the form of the Chinese scholartree flower, which is the city flower of Dalian. A central avenue leads 500 m north to the Xinghai Conference and Exhibition Centre and 500 m

south to the sea.

The investment comes mainly from the municipal government.

Figure 5-9 Music fountains in Xinghai Square (from www.dlguide.com/toursite/xinghaisq.htm)

Figure 5-10 Lamps in Xinghai Square (from http://www.china.org.cn /ch-pic/liaoning/lnview8.htm#108)

Sun Asia Ocean World

Built in 1995

Sun Asia Ocean World is a marine aquarium located right on the east side of Xinghai Park. It has the longest underwater passage in Asia (118m).

Figure 5-11 Sun Asia Ocean World (photograph taken by the author)

The investment came from Dalian Sun Asia Co., Ltd, which was established by investors from mainland China, New Zealand and Hong Kong. It is a listed company on the Shanghai Stock Market. The amount of investment was 0.1 billion RMB.

Dalian Commodity Exchange

Built in 1996

Dalian Commodity Exchange was established in 1993 and moved into Xinghai Conference and Exhibition Centre in 1996. The Dalian Commodity Exchange is one of the three futures exchanges in China approved by the State Council of China. Since established on February 28, 1993, the DCE trading scale has been expanded steadily. DCE is currently the largest futures exchange in China, the 2nd largest soybean futures and the largest Non-GMO soybean futures exchange in the world.

The investment comes mainly from the municipal government.

The Tourist Harbour

Built in 2000, 50,000 m^2 occupation land area and 85,000 m^2 sea area, 3 piers

The tourist pier is located immediately to the east of Xinghai Park. It forms the starting point of the tourist route “see Dalian on the sea”.

The investment came from the municipal government.

Citizens Fitness Centre and International Tennis Centre

The Citizens Fitness Centre and International Tennis Centre were built in 2000, with construction areas of 7,953 and 20,000 m^2 respectively. They are located beside Dalian Gymnasium and Dalian Natatorium (which were built in 1994) to the north of Xinghai Conference and Exibition Centre. They were built in order to meet the needs of local citizens as well as to be venues for international competitions.

The investments in these projects came mainly from the municipal government.

Peace Plaza

Built in 2001, 180,000 m^2 construction area

This is a commercial complex located in the northernmost part of Xinghai Bay area. It provides spaces for a supermarket, large department stores, small chain stores, coffee shops, fast food, photography studios, CD shops, book stores, hair salons, spas, etc. There is also a five-star cinema inside with over 2000 seats, which is said to be the biggest and best one in north China. The multifunction hall and music hall provide facilities for Dalian to hold international film festivals and other large cultural entertainment festivals.

Figure 5-12 Peace Plaze (from promotion brochure)

It is a public-private partnership project. It was initiated by the government and listed in the sixteen important public projects by Dalian municipal government. It was also designated as one of the experimental sites for modern logistics by the National Economic and Trade Committee. In order to administrate this mega project, a special purpose administrative committee was formed, with the deputy mayor in charge of commerce assuming the

chairmanship of the committee. Private investment was attracted by investment promotion. The plaza was then divided into commercial spaces and leased to private investors (the lease can be from 1 year to 20 years long). It is believed to be a milestone in Dalian's development and is regarded as "an important step forward toward the 'North Hong Kong' goal".

Xinghai Garden

Built in 2001 with a 12,200 m^2 occupation area and 68,000 m^2 construction area

Xinghai Garden is a multi-functional complex. It contains hotel and office spaces. Since completion in 2001, a number of businesses, including the Air China Hotel have moved in.

Figure 5-13 Xinghai Garden
(photograph taken by the author)

The investment came from Hong Kong Daguang group.

The Modern Museum

Built in 2002 with a 216,000 m^2 occupation area and 30,400 m^2 construction area

The museum is built to exhibit the evolution of Dalian's urban and social development during the past 100 years. The building uses a European architecture style. A variety of multimedia technologies are used to present the customs and achievements of Dalian. It is called "a concentrated chorography" and "a visual encyclopedia" of Dalian.

Figure 5-14 Dalian Modern Museum
(from: http://www.china.org.cn/
ch-pic/liaoning/lnview15.htm#189)

It cost 2 billion RMB of government funds to build the Modern Museum.

Oriana Cruise Ship

Built in 2002; it is 260m long, 33m wide and 52m high

It is one of the four most famous cruise ships in the world. It had served for the British royalty and was called

Figure 5-15 Oriana Cruise Ship
(photograph taken by the author)

"white princess". After being retired from royal use, it was shipped to Dalian and reconstituted as a luxury theme park. There are a theatre, beer garden, coffee shop, restaurants, etc. inside. Performances from all over the world go on everyday all the year around.

Investment came from Hangzhou Paradise Co., Ltd. In the amount of 0.3 billion RMB.

Sun Asia Polar World

Built in 2003 with a 20,000 m^2 construction area

Sun Asia Polar World is a reconstruction of a polar world located beside Sun Asia Ocean World. Various polar animals can be observed. There are also entertainment programs in which people can participate and experience polar lives.

Figure 5-16 Sun Asia Polar World (photograph taken by the author)

The investment came from Dalian Sun Asia Co., Ltd. In the amount of 0.2 billion RMB.

The Marine and Seashell Museum

Built in 2003 with a 2500 m^2 construction area

The Marine and Seashell Museum is located on the hill to the east of Xinghai Square. It looks like a castle. It includes a marine navigation museum, a seashell museum and a castle residence.

Figure 5-17 Marine and Seashell Museum (from: http://www.china.org.cn/ch-pic/liaoning/lnview5.htm#73)

The investment came from the joint venture of Dalian Haiyun Treasure Co., Ltd and Xinghai Real-estate Development Company. The amount was 0.12 billion RMB.

Superior Xinghai

This site is almost finished and has a 108,200 m^2 occupation area and 388,700 m^2 construction area

It is a luxury residential condominium district with superior apartments and amenities.

The investment comes from the joint venture of Hong Kong Fortune Investment Co., Ltd and Dalian Friendship Hesheng Real-estate Co., Ltd. The total amount is 0.2 billion US dollars.

Xinghai Guobao (National Treasure)

Figure 5-18 Xinghai Guobao (photograph taken by the author)

This site is partially completed and is still under construction

Xinghai Guobao is a mega high-class residential project which is located to the southeast of Xinghai Square. It is on the waterfront. It was planned in three phases. The first is a tourist business district, the second is four high-class condominium blocks and the third is a district of luxury houses. The second phase with four 30-floored high rise condominium buildings has been completed. The average price of the condominiums is 10,000 RMB per m^2- more than twice the average price in the urban areas of Dalian[13].

The investment came from Taiwan Sun Better Group. The total planned investment for all three phases is 1.5 billion US dollars.

Xinghai Celebration City

This site is under construction with a planned occupation area of 171,000 m^2

It is located on the seafront to the south west of Xinghai Square. It will accommodate tourism and shopping facilities- a themed tourist entertainment district (Time Ring), a themed water park, a themed tourist restaurant area (Experience of the Mediterranean), and a themed tourist vacation hotel district. The construction is expected to be completed in 2005.

The investment came from the joint venture from Britain VICPAQ Co., Ltd. and Dalian Haichang Group. The amount of investment is 0.22 billion US dollars.

The Finance Building

This building is under construction with a planned occupation area of 140,000 m^2 and a construction area of 910,000 m^2

Figure 5-19 Finance Building (http://www.dl-xh.com/images/555_.jpg_.jpg)

The main contents are a stock exchange hall, hotel and

[13] As a comparison, the average price for condominiums in the four urban districts in Dalian was 3600 RBM per m^2 in 2003 (According to Dalian Evening Paper 02/04/2004).

office spaces.

The investment comes from Dalian Taihongji Investment Co., Ltd.

Xinghai Bay International Yacht Club

This site is under construction with a planned occupation area of 50,000 m^2

It is located beside the Xinghai Bay Tourist Harbour. It will provide service and facilities for an international membership yacht club as well as a yacht training program and water-based recreation programs.

Figure 5-20 Xinghai Bay International Yacht Club (from: http://www.dl-xh.com/images/goujiyt_jpg_da.jpg)

The investment comes from Xinghai Bay Development and Construction Administration Centre. The total amount is 0.2 billion RMB.

Other projects

There are also other projects either planned or under construction in the Xinghai Bay area. They include: Xinghai Bright Pearl (luxury condominiums and hotel), Airway Hotel (five-star), China Futures Centre and Finance City, Big Theatre, etc. Most of them will be completed by inviting private investment.

It can be seen from the above that massive development has taken place in Xinghai Bay area. A variety of projects have been put in place since 1993. These have been funded by the public sector, the private sector or a combination of public and private money. Projects vary widely in their functions, from public open spaces to real-estate development and from tourism facilities to residential accommodations, etc.

Administration, policy and plan

In the early days of development, a temporary “command group” was established to supervise and administrate the initial development, which largely focused upon environmental renovation, infrastructure upgrading and land reclamation. Members of this group were drawn from various government departments, such as Dalian City Construction Management Bureau, Dalian Urban Planning Bureau, Dalian Planning Commission, etc.

After the initial stage of development, a formal administrative institution, Xinghai Bay

Development and Construction Administration Centre, was set up in 1993. It was a special-purpose semi-public agency, with the same administrative rank as the Dalian City Construction Management Bureau. It was assigned the responsibilities of facilitating the planning, construction, administration and place promotion of the Xinghai Bay area. Since it has some financial independence, it has also been involved in some investment projects itself both in the Xinghai Bay area (e.g. the Marine and Seashell Museum) and else where, under the name of the Xinghai Real-estate Development Company,

Since 1993, more than ten years of development has dramatically changed the landscape and raised the land value from 1,000 RMB/m^2 to 10,000 RMB/m^2 in Xinghai Bay area. The Xinghai Conference and Exhibition Centre has introduced a burgeoning conference and exhibition industry into Dalian and this has become an important component of the upgraded functions of the city as well as a brand of Dalian tourism[14].

It is particularly noteworthy that a unique mode of operation has taken shape during the development, which has been called "urban management". "Land is the 'second finance' of Dalian" and "Urban environment is also an important form of state assets"[15] became the core idea of the "urban management" theory. Under this theory, Dalian jumped out of the old mode to rely on financial allocations to develop or regenerate urban lands.

A great effort has been made to create a "culture of Xinghai Bay area" by careful design and selected development projects. The precious plots near to the waterfront have been planned for tourism/recreational uses (i.e. Xinghai Park, Sun Asia Ocean World, Sun Asia Ocean World, The Tourist Harbour, Oriana Cruise Ship, Sun Asia Polar World, Xinghai Celebration City, Xinghai Bay International Yacht Club) or public open spaces (i.e. Xinghai Square), which are believed to be highly water-dependent (Lynch, Spence, and Pearson, 1976). Though such land uses do not elicit as high a land rent as commercial or real-estate properties, it is believed that the "culture" and a diversification of land uses will enhance one another and

[14] Source: China Tourism News 2002-7-5 "Advance city attraction and competitiveness by beautiful and pleasant urban environment"

[15] Source: China Environment News 2001-10-31 "Improve urban environment and upgrade city competitiveness: the inspiration of Dalian's winning of 'World 500 Best of Environment'", by China Urban Development Research Group.

thus achieve a maximum overall output[16].

In the future, according to the outline of a new master plan of Dalian municipality, Xinghai Bay area will strive to build itself into the "four centres" of the city, i.e. the finance and trade centre, the conference and exhibition centre, the business centre, and the culture and tourism centre. Two other central functions are being sought by the area too, i.e. education and research, and information and consultancy. It is believed that the facilities already finished, under construction and forthcoming will provide sufficient hardware for the functions described above.

Nevertheless, another coastal project has been proposed to extend the current Xinghai Bay CBD to the east and west by 12.6 km^2 through land expropriation and reclamation. In the next five to ten years, Xinghai Bay CBD will be extended to 15 km^2, becoming a really modern international business district with greater attractiveness, larger service radius, and more prominent functions. A technological scheme for this was proposed by the Institution of Civil Engineering and Architecture in Dalian University of Technology and approved on the basis of a demonstration organized by Dalian Construction Committee and Dalian Urban Planning Bureau.

An equal importance has been attached to environmental/social benefits and economic benefits in the scheme. A series of impact and feasibility studies have been done, including an environmental impact study (by the Institute of Environmental Engineering in Dalian University of Technology), a feasibility study of sea area usage (by the China National Administrative and Technical Station of Sea Area), an Advanced Feasibility Study (by Dalian Project Consultancy Centre), etc. It was estimated, through input-output analysis that the input will be about 10 billion RMB and the output will be more than 20 billion RMB. Environmentally, the project will hopefully alter the polluted environment and maximize the ecological value of the coast.

Xinghai Bay Development and Construction Administration Centre (Xinghai Real-estate Development Company) will be the development agency. The financing of the project will not

[16] Source: interview with Qihua Su, a staff in the Xinghai Bay management center for Development and Construction.

depend on the government but on the capital market instead. Bank loans can be obtained by mortgaging the facilities and lands formed in the previous developments in Xinghai Bay area. The loan will serve as the initial funds for the project. In the second year of the project, more funds can be gained from leasing, concessions and public sale of the land in new development area.

5.2.2 Binhai Road Area

Overview

Binhai Road area is a waterfront belt along Dalian's south coast, altogether 30.9 km in length. It goes from Fujiazhuang to Haizhiyun (rhythm of the sea) Square.

Several sites in this area began to be developed from the period of Japan governance (1904-1945) as satellite towns where villas and scenic parks were concentrated. A large part of this area remained inaccessible until 1970, when a road was constructed along the coast linking Fujiazhuang, Laohutan and the downtown area. It was built for military purposes and was guarded by the army at both ends. As a result, there were few people visiting the area during the 1970s. In the early 1984, Deng Xiaoping, the President of China at that time, recommended that this scenic road should opened to the public after his visit to Binhai Road. A brief construction plan of the road was completed in 1985 and construction began in 1986. After that, this road opened to the public and became a tourist scenic drive (Figure 5-21).

After nearly twenty years of continuous development, the waterfront belt along Binahai Road has grown into the most beautiful area in Dalian with varied natural scenery of mountains, sea, islands, beaches and parks. There are three segments of Binhai Road, i.e. the north segment, the south segment and the east segment. The east segment extends from Fujiazhuang to Laohutan. It is the longest of the three segments of Binhai Road, going from east to west through "Fujiazhuang", "the Forest Zoo", "Xiuyuefeng", "Yanwoling" and "the North Bridge". The south segment is the most famous and popular segment of the three, going through "Laohutan Park", "Shicao" and "Bangchuidao". The north segments goes from "Bangchuidao" to "Haizhiyun Square".

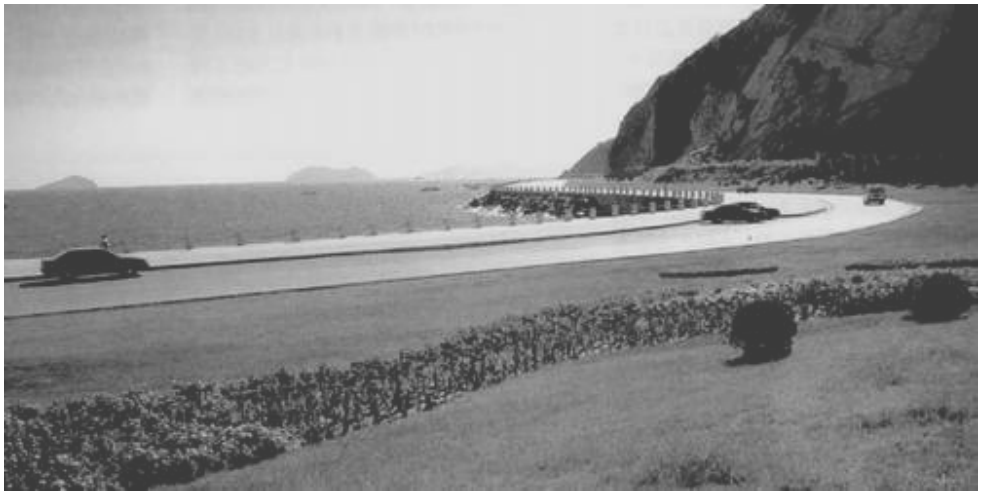


Figure 5-21 A snapshot of Binhai Road

Source: From Dalian Gallery online www.dlgallery.com.cn

Land use pattern

Observation shows that the Binhai Road area remains in a relatively natural status and is used largely for tourism and recreation purposes. The major land uses in this area include hotels and sanatoriums; bathing beaches, parks and squares. Details of each category of land uses are shown in Table 5-2.

Table 5-2. Land use details in Binhai Road Area

Land use Category	***Details***
Hotels and sanatoriums	Coal Office Sanatorium, Air Force Sanatorium, Civil Aviation Sanatorium, Shipyard Sanatorium, Bank of China Sanatorium, Workers' Sanatorium; Regent Hotel, Bangchuidao Hotel
Bathing beaches	Golden Beach, Silver Beach, Fujiazhuang Bathing Beach, Bangchuidao Beach
Parks	Baiyunshanzhuang Park, Fujiazhuang Park, Yanwoling Park,

	Xiuyueshanzhuang Park, Donghai Park
Amusement or Theme Parks	Dalian Forest Zoo, Laohutan Ocean Park
Squares	Tiger Sculpture Square, Haizhiyun Square

Source: by the author.

Featured projects and description

In this section, some detailed information about the projects in the Binhai Road area will be provided. As the development in this area dates back to the 1980s or even earlier, there is not as detailed or complete information as is available for the Xinghai Bay area. The information in this section includes approximate time of building, location, scale, content and circumstances, source of investment, etc. The two major information sources are (1) interviews with Liansheng Yu, Shijie Liu, Yixiao Sun and Jiao Yu[17] and (2) Dalian Yearbook (1986-2002). Pictures presented in this section come largely from the field trip. Those marked with CIIC are retrieved from a website "picture China" (http://www.china.org.cn/ch-pic/index.htm).

Sanatoriums

Most sanatoriums were constructed before the 1980s and located either around Fujiazhuang or Laohutan, which were the only accessible sites in the Binghai Road area at that time. They were constructed by either public institutions (e.g. Coal Office Sanatorium, Air Force Sanatorium) or large state-run corporations (e.g. Bank of China Sanatorium). The Worker's sanatorium was constructed during the Soviet governance in 1948 and was turned over to Dalian Labour Union in 1951. They were mainly used to serve the leaders and staff working in those institutions or corporations. Nowadays they serve also as public sanatoriums.

Bangchuidao Hotel

State meetings were often held in Dalian in the 1950s and 1960s. State leaders and foreign heads also visited Dalian from time to time during that period. Bangchuidao Hotel was built as a state guesthouse in 1961 to meet the need to receive such visitors. It was enclosed and

[17] Positions of and detailed information on interviewees is presented in the Appendix

served exclusively the government officials during the three decades after its completion and was open to the public in the early 1990s.

The investment came from the municipal government.

Figure 5-22 Bangchuidao Hotel (The first picture is a photograph taken by the author; the second one is from http://www.china.org.cn/ch-pic/liaoning/lnview5.htm#70)

Regent Hotel

The Regent Hotel was the first four-star hotel in Dalian. It was built in 1988. It is located near Laohutan. The investment came from Hong Kong.

Bathing Beaches

There are four natural bathing beaches in this area. They are Golden Beach, Silver Beach, Fujiazhuang Bathing Beach, and Bangchuidao Beach. These beaches were open to the public in the mid-1980s. Fujiazhuang Bathing Beach is the most famous beach among these four. An annual Winter Swim Festival began to be held in Fujiazhuang Bathing Beach in 2002.

The initial investment came from the municipal government. The Department of Landscape and Gardening[18] is responsible for maintenance. The funds for maintenance either come from subsidies from the municipal government or the revenue of the Department of Landscape and Gardening (the revenue comes mainly from the admission tickets of parks or leasing/running small businesses in the parks).

Parks

There are five parks distributed along the Binhai Road. They are Baiyunshanzhuang Park, Fujiazhuang Park, Yanwoling Park, Xiuyueshanzhuang Park and Donghai Park. Three of them are on the land side of the road and the other two, Fujiazhuang Park and Yanwoling Park are on

[18] The administration structure of Binhai Road Area will be described in below.

the water side. Four parks were established in the 1980s. The exception is Donghai Park, which was established in 1999. It is the largest park in east Dalian with an occupation area of 4,500,000 m^2 and a coastline of more than 1200 m.

The investment came partially from the municipal government and partially from the Department of Landscape and Gardening. There was also sponsorship from some large state-run corporations, either in the form of money or manpower.

Dalian Forest Zoo

Dalian Forest Zoo was built in 1997. The previous Dalian Zoo was located in the downtown district where there was limited land. The municipal government decided to move it to where it is now and to create an environment more like a wild one. The administrative body of the zoo was made a semi-public agency, which means that it is a corporation on its own while, at the same time, it is a functional department under the administration of Dalian City Construction Management Bureau.

It cost 0.175 billion RMB for the two phases of construction. The funds came from a bank loan, with a state-run corporation being the guarantor.

Laohutan Ocean Park

Laohutan Ocean Park was built on the former Laohutan Park and Xiuyueshanzhuang Park, which were built in the 1950s as municipal parks, with an occupation area of 1,180,000 m^2.

In the year 1991, large-scale renovation occurred in the Laohutan Bay area as part of a city-wide “make city beautiful” movement. Laohutan Park and Xiuyueshanzhuang Park were combined into Laohutan Fairyland. A number of amusement facilities, an underwater world, a bird woods and an open-air sea-animal performance centre were set up afterwards. The administrative body was made into a semi-public agency in 1993.

Since 1996, a large number of development projects have been brought forward by public and private partnership, including The Polar Ocean Life World, The Coral World, The Fishermen’s Dock, The Water-skiing Show Field, Strait Cable Car, etc. In the year 2000, the name was changed into Laohutan Ocean Park. The Polar Ocean Life World is a featured project completed in the past few years.

The Polar Ocean Life World

The polar Ocean Life World was built in 2002. The feasibility study began in 1997. International experts from the United States, Australia, Japan, Korea, Taiwan and Hong Kong were invited to visit Laohutan and provide consultancy services. The project was initiated by the administration body of the park and approved in turn by the City Construction Management Bureau, the City Construction Commission, the City Planning Commission and Dalian People's Congress. The decision to proceed was made in 2000 and it is among the more important recent projects of Dalian.

Figure 5-23 The Polar Ocean Life World (photograph taken by the author)

The Laohutan Fairyland invested mainly in the form of land and the monetary investment were invited from Srik Petroleum (Singpore) Co., Ltd and Dalian Haichang Group.

Tiger Sculpture Square

Tiger Sculpture Square was built in 1991 as one of the renovation projects in Laohutan Bay area. The square occupaties more than 150,000 m^2.

The theme sculpture, the Tiger Sculpture, is 7.5m high, 26m long and 2000 tons in weight and it was designed and carved by a famous artist.

Figure 5-24 Tiger Sculpture Square (from: http://www.china.org.cn/ch-pic/liaoning/lnview12.htm#161)

The investment came from the municipal government.

Haizhiyun Square

Haizhiyun Square is located at the north end of Binhai Road with an occupation area of 380,000 m^2. It consist of five parts, i.e. the theme sculpture square, the open green space area, the artificial waterfall and brook area, roads and the

Figure 5-25 Haizhiyun Square (photograph taken by the author)

parking area. There are 23 sculptures of different sizes in the square.

The investment amounted to 9,300,000 RMB and came from the municipal government.

Again, as found in the Xinghai Bay area, a number of projects have been implemented in Binhai Road area, drawing upon public and private moneys, and forming a pattern of mixed land uses. But this area shows a relatively higher dependence on public investment and a higher inclination towards tourism and recreation uses, reflecting the development strategies and regulations for the area.

Administration, policy and plan

Through almost two decades of development, Binhai Road has become a unique tourism attraction, contributing to the beauty of the "Romantic City" by its graceful curve. An administrative structure, as shown in Figure 5-26, was formed during its development.

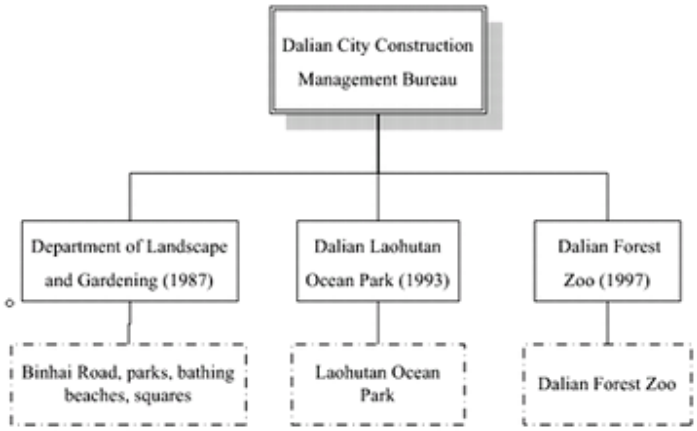


Figure 5-26. The Management Structure of Binhai Road Area (by the author)

The whole Binhai Road area was under the administration of Dalian City Construction Management Bureau. As more and more attention was being paid to tourism and the Binhai Road area became increasingly important as a tourist attraction, a functional department, the Department of Landscape and Gardening, was established in 1987. It was assigned the responsibility of maintenance and development of the road itself and the parks and beaches along it. Later it was also assigned the responsibility of administration of all urban parks of Dalian. It has largely remained a government functional department. The administration body of Laohutan Ocean Park and Forest Zoo came into being in 1993 and 1997 respectively and are

semi-public agencies, which are financially independent of the government.

Binhai Road area won the status of “National Scenery Area” in 1988. State statute regulates that in all National Scenery Areas, construction should be restricted. New construction or expanding of old buildings must follow a plan which is subject to approval by the National Ministry of Construction.

In the future, efforts will be made to upgrade Banchuidao, the Forest Zoo, Fujiazhuang Bathing Beach and Laohutan Ocean Park. Binhai Road will be extended to the east area of Dalian Port, which is being planned for redevelopment, to form a scenic route running through the south coastline of Dalian.

5.2.3 Dalian Port Area

Overview

Dalian Port is located along the south bank of Dalian Bay, beside the downtown area of Dalian. In its over one hundred year history, it has played an essential role in Dalian’s economic development. As introduced above, the city grew up around the port, as many other port cities elsewhere in the world have done. But overwhelming importance was assigned to the port and related activities, which resulted in a coastline filled with port facilities and factories, leaving no accessible waterfront for residents. It is the same situation today. As shown in Figure 5-27, the waterfront is taken up by port facilities, railways and rows of warehouses. The waterfront is physically inaccessible and only visually accessible from a few high-rise buildings in the downtown area.

Figure 5-27 A bird's eye view of the current landscape in Dalian port area
Source: from the website of Port Dalian www.portdalian.com

Several factors have jointly led to the proposition of waterfront redevelopment.

- Dayao Bay Port was constructed to meet the demands of changing shipping technology and a large part of the cargo transportation is being shifted to the new port.
- Building Dalian into an international city has been a basic urban strategy in a world globalization trend since the 1990s. This raised the demand for the old urban area to be more inclined to the development of the tertiary sector, especially foreign trade, commerce, finance and technology. The revitalization and reuse of the port area, which is located in the urban centre, is part of this urban strategy.
- The urban land commercialization brought about by China's economic reform resulted in differential land rents. Thus industrial land uses can no longer afford the land rent in the inner urban areas and are forced to move outwards by the new market forces, yielding the land to other uses that have higher expected profit rates, e.g. commercial or residential uses (Figure 5-28).

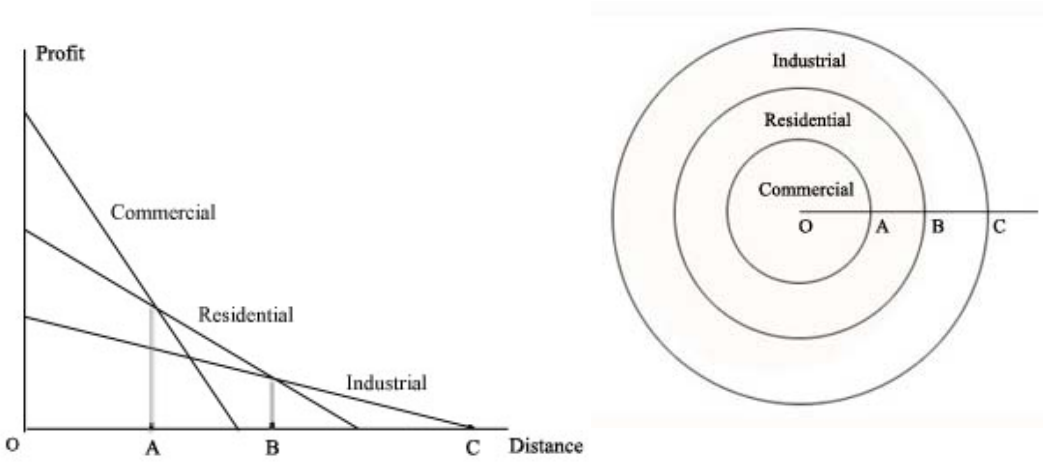


Figure 5-28. Profit decay, differential land rent and land use distribution in relation to the distance from the urban centre (by the author)

Land use pattern

As stated above, the land uses inside the port area are transportation, industrial and storage. Since outsiders are forbidden from entry, no first-hand data could be gained by observation.

According to the redevelopment plan, this area is expected to be opened and connected to the neighboring area. Therefore, it might be helpful to provide some information on the land use patterns in the adjacent area.

Figure 5-29. A snapshot of Renmin Road

Source: photo taken by the author during fieldtrip

Dalian Port area is linked to Zhongshan Square by Renmin Road, which is an arterial

road in Dalian where a great number of high class hotels, shopping centres and head quarters of corporations are located (e.g. Furama Hotel Dalian, Shangri-La Hotel, Hongyu Mansion, Silk Imports and Exports Corporation of Liaoning, etc.). Outside this area along Changjiang Road, a road almost parallel to the coastline, there are also many high-rise superior hotels which are promoted by their sea view (e.g. Dalian Harbour View Hotel, etc.).

Figure 5-30. Skyline of Dalian Port Area (seen from inland)
Source: retrieved from the website of Dalian municipal government www.dalian.gov.cn

Administration, policy and plan[19]

In 1998, Port Dalian proposed that since the old port was no longer able to meet the transportation needs of new technology, the cargo transportation should all gradually be shifted to Dayao Bay Port step by step. The redevelopment of the old port area was essential to the functional change of the waterfront. It was also proposed that, through waterfront redevelopment, Renmin Road would be extended all the way to the sea, further extending the land as well as strengthening the function of the old CBD.

Dalian Port Group Co., Ltd. was established in July 1999, to assume the responsibility of planning, design and investment attraction of the redevelopment of the port area. Port Dalian and Singapore Port Group were the two shareholders, holding 51% and 49% shares respectively. In the same year, Dalian Port Group invited Singapore Yasi Architecture and

[19] Information in this section is based on the interview with Jiwu Han and *Redevelopment Plan of the East Area of Dalian Port* which was prepared by Singapore Yasi Architecture and Design Company in December 2002.

Design Company to provide consultancy services for the master plan for redevelopment of the east port area.

In May 2000, a demonstration of the initial phase was organized by Dalian Planning and Land Resources Bureau.

In July 2001, demonstration of the second phase was organized by Dalian Planning and Land Resources Bureau. Another scheme was proposed by American JG Company. After argumentation, it was decided that the planning scheme would still be commissioned to the Singapore company. Some comments were given for the revision of the scheme.

The demonstration of the third phase was held in February 2003.

The scheme is still under revision at the time of writing.

In the plan, the following objectives are stated:

- To facilitate Dalian's city function upgrade into an international centre of finance, trade and tourism;
- To consolidate Dalian's status as a port city with diversified waterfront activities and facilities;
- To extend the artery into the port as well as to preserve the present spatial fabric of the urban area;
- To create an harmonious land use pattern mix of retailing, commercial, trade, tourism and recreation, residential, etc;
- To create an exciting environment in which both residents and tourists can live, work and enjoy the things around them.

The redevelopment is planned to be carried out in two phases. Altogether a 2,404,000 m^2 is planned to be redeveloped, 1,533,000 m^2 in the first phase and 871,000 m^2 in the second phase. The goal of the first phase is to create a beautiful and joyful waterfront environment which can accommodate high class business, office, retailing spaces and waterfront retailing and recreation activities. In the second phase, both high and low-density residential spaces as well as amenities will be provided. The plan covers urban design guidelines, land use plans and transportation plans. A general idea of the plan can be gained from the land use plan for the two phases (as shown in Table 5-3 and Table 5-4).

Table 5-3. Land use plan in the 1st phase of redevelopment

Land use category	**Area (1,000 m^2)**	**Percentage (%)**
Business/Office/Hotels	307	20
Retail	131	8.6
Public open spaces	246	16.2
Port	203	13.2
Schools	55	3.6
Roads and sidewalks	259	16.8
Compositive	332	21.6
Total	1533	100

Source: from *Redevelopment Plan of the East Area of Dalian Port*

Table 5-4. Land use plan in the 2nd phase of redevelopment

Land use category	**Area (1,000 m^2)**	**Percentage (%)**
Business	69	7.9
Hotels	113	12.9
Low density residence	147	16.9
High density residence	228	26.2
Public facilities	16	1.8
Public open spaces	115	13.2
Roads and sidewalks	183	21
Total	817	100

Source: from *Redevelopment Plan of the East Area of Dalian Port*

5. 3 Summary

On the whole, this chapter provides answers to research questions no. 1 to no. 5 (see research question statement in section 1.2).

Dalian is a city with more than one hundred years' of urban history. Since the period of Russian Governance (1989-1904), the city has been growing as an important port city. Owing

to its mild climate and attractive sea views, some small satellite towns began to develop along the coast during and after the Period of Japanese Governance (1904-1945). But, as in many other port cities, the old downtown area was devoted almost exclusively to port uses.

The developments in two waterfront areas, the Xinghai Bay area and the Binhai Road area, were initiated in 1993 and 1984 respectively, in a context of globalization, massive political and economic reforms, and a rapid growth of tourism. During about two decades' of development, the two areas have experienced dramatic changes. A large number of projects drawing upon government and private moneys have been carried out, reshaping the two areas physically and functionally. The Xinghai Bay area was planned to be and has been developed into a new CBD of Dalian with a unique waterfront culture. New large-scale developments are still to be expected here. Binhai Road area, on the other hand, has been developed into a "National Scenic Area" and a major tourism attraction. The redevelopment of Dalian Port area was proposed in 1998, with the change of transportation technology and demand for new development land in the downtown area being the triggering points. The plan is yet to be approved for massive development projects to take place.

The land uses, projects, policies and administration are documented for each of the three study sites. These will be analyzed the in next chapter using the analytical frameworks proposed in chapter 4.

Chapter 6: Analysis and Findings

In this chapter, major findings and implications of this research are presented, providing answers to research questions no. 6 to no. 8. The phase model is applied to study the development processes that each of the three study sites has gone through. The nature of stakeholders' inputs is summarized and the implications of these are pointed out. Three other issues - national policies, the role of tourism and recreation, and post-industrialization and globalization, which have had great influence on Dalian's waterfront development, are reflected on. The current chapter concludes with an overall evaluation of Dalian's waterfront development.

6. 1 A "Phase" View of Waterfront Development in Dalian

6.1.1 Timing of the Waterfront Development in the Three Study Sites

The previous chapter described the process, projects, policies and administration of waterfront development in each of the three study sites: Xinghai Bay area, Binhai Road area and Dalian Port area. The stages of development of each site have been determined according to the "phase" model that was described in Chapter 3. According to the criteria given in section 3.1.3, events that happened in Dalian (presented in section 5.2) are analyzed using a phase approach. Divisions into phases are made largely on the basis of personal judgment by merging the development facts into the predetermined phases with known characteristics. The results are summarized in Table 6-1. As mentioned earlier, the boundaries of the phases are not always sharp, for each individual project has its own time period which may not be fitted perfectly with a specific date. But since it is not the exact starting and concluding points of a phase that are critical but the changing emphases over the phases that really matter, is still meaningful to look at the phases.

Table 6-1. Timing of waterfront development in three sites in Dalian

PHASES	XINGHAI BAY AREA	BINHAI ROAD AREA	DALIAN PORT AREA
Pre-start-up	? - 1992	The 1970s – 1984	? - 1998
Start-up	1993	1985	1999 - present
Early development	1994 - 2000	Late 1980s	
Mega projects	2001- present	The 1990s – 2002	
Maturity		2002 – present	

Note: the sign "?" denote that the time is unclear.

Source: by the author.

As shown above, Xinghai Bay area is presently in its mega-projects phase. The time spans of each of the phases it went through are pre-1992, 1993, 1994 to 2000, and 2001 to the present. The Binhai Road area has come to a stage of maturity. Earlier phases lasted from the 1970s to 1984, 1985, the late 1980s, the 1990s to 2002, and 2002 to the present. The redevelopment of Dalian Port area is recent and it is still in the start-up phase. The time spans of the two phases are pre-1998 and from 1999 to the present.

6.1.2 Analyzing with a Phase Model

The following three tables indicate the stakeholders involved, main events and issues, and outcomes in each phase for each of the three sites.

Table 6-2. Phases of waterfront development in Xinghai Bay area

PHASES	STAKEHOLDERS	EVENTS AND ISSUES	OUTCOMES
Pre-start-up	▪ The municipal government ▪ The state government	▪ Undeveloped area; ▪ Severe water pollution by Malan Rivern and aquaculture; ▪ The transformation of the city function of Dalian.	▪ Decision of development; ▪ Vision of new CBD.
Start-up	▪ The municipal government ▪ The "Command group"	▪ Strategic master planning;	▪ A master plan;
Early development	▪ The municipal government ▪ Xinghai Bay Development and Construction Administration Centre	▪ Land reclamation; ▪ Publication of the plan and vision; ▪ Establishment of Xinghai Bay Development and Construction Administration Centre (in 1993). Environmental rehabilitation (building of a sewage treatment plant near the mouth of Malan River); ▪ Infrastructure upgrading (water, power, heat supply system; ▪ Public open spaces provision (renovation of Xinghai Park, Building of Xinghai Square, Artificial beach ...); ▪ Provision of conference and exhibition facility (Xinghai Conference and Exhibition Centre); ▪ Provision of business facility (Dalian Commodity Exchange); ▪ Provision of sports facilities (Citizens Fitness Centre, International Tennis Centre); ▪ The holding of several festivals (e.g. The International Fashion Festival)	▪ The establishment of a special purpose agency. ▪ Upgraded transportation; ▪ Improved infrastructure for business and tourism; ▪ Available land tracts for development.

(to be continued)

PHASES	STAKEHOLDERS	EVENTS AND ISSUES	OUTCOMES
Mega projects	▪ Xinghai Bay Development and Construction Administration Centre (Xinghai Real-estate Development Company) ▪ Private investors	▪ Provision of tourism/amusement facilities (e.g. Oriana Cruise Ship); ▪ Building of Museums (the Modern Museum, the Marine and Seashell Museum) ▪ Commercial real-estate development (e.g. Peace Plaza); ▪ Business real-estate development (e.g. the Finance Building); ▪ Residential real-estate development (e.g. Xinghai Guobao);	▪ Increased waterfront accessibility; ▪ Increased land value (from 1,000 to 10,000 RMB/m^2); ▪ A new waterfront image ("The living room of the city", "Blue CBD"); ▪ A reshaped land use pattern and landscape.
Maturity[20]	▪ Xinghai Bay Development and Construction Administration Centre (Xinghai Real-estate Development Company) ▪ Private investors	▪ To create a "culture of Xinghai Bay area" (which actually means a diversification of land uses and beautification of the landscape); ▪ To balance economic, environment and social benefits; ▪ To achieve the "four centre" functions (the finance and trade centre, conference and exhibition centre, business centre, culture and tourism centre).	

Source: by the author.

[20] Judged from the analysis of current policies and plans

Table 6-3. Phases of waterfront development in Binhai Road area

PHASES	STAKEHOLDERS	EVENTS AND ISSUES	OUTCOMES
Pre-start-up	▪ The municipal government ▪ The state government	▪ Inaccessible waterfront.	▪ Decision of development; ▪ Vision: a tourism and recreation road with beautiful sea views.
Start-up	▪ The municipal government ▪ Dalian City Construction Management Bureau	▪ A construction plan	▪ A construction plan.
Early development	▪ The municipal government ▪ Department of Landscape and Gardening	▪ The establishment of a special purpose agency; ▪ Paving the road with a cement surface; Extending the road; Forestation and gardening along the road; Illumination of the road; ▪ Opening of several beaches and parks; ▪ Construction of Regent Hotel (one of the best hotels in Dalian at that time).	▪ Upgraded transportation; ▪ Improved infrastructure ▪ Enhanced tourism facilities.

(to be continued)

PHASES	STAKEHOLDERS	EVENTS AND ISSUES	OUTCOMES
Mega projects	▪ The municipal government ▪ Department of Landscape and Gardening ▪ Dalian Laohutan Ocean Park ▪ Private investors	▪ Construction of squares; ▪ Construction of amusement parks (Dalian Laohutan Ocean Park, Dalian Forest Zoo); ▪ Upgrading renovations and maintenance of parks and beaches.	▪ Recognition as a noteworthy tourism attraction.
Mature	▪ Department of Landscape and Gardening ▪ Dalian Laohutan Ocean Park ▪ Private investors	▪ Upgrading renovations and maintenance of parks and beaches; ▪ Seeking new projects to maintain attractiveness (the two amusement parks); ▪ Preservation of natural beauty and the ecological integrity	▪ Maintenance of attractiveness and reputation

Source: by the author.

Table 6-4. Phases of waterfront development in Dalian Port area

PHASES	STAKEHOLDERS	EVENTS AND ISSUES	OUTCOMES
Pre-start-up	▪ The municipal government ▪ Port Dalian	▪ The change of transportation technology and shift of cargo throughput to a new port; ▪ Separation of the waterfront from the downtown area by storage, railways and port facilities.	▪ The proposal by Port Dalian to redevelop the old port area.
Start-up[21]	▪ The municipal government ▪ Dalian Port Group Co., Ltd.	▪ Formation of Dalian Port Group Co., Ltd. (1999); ▪ Preparation of a master plan (with defined visions, urban design guidelines, land use plan, transportation plan, etc.); ▪ Several rounds of demonstration schemes and revision of the plan.	▪ Dalian Port Group Co., Ltd. was established in July 1999; ▪ A master plan.

Source: by the author.

[21] This phase is still going on.

6. 2 Stakeholders' Input

It was hypothesized that the trend of the temporal evolution of stakeholders' input into the waterfront development in Dalian would be consistent with that shown in Figure 3-2. Analysis shows that except for the redevelopment of theDalian Port Area, which has gone through too few phases for a clear trend to be observable, the developments in the other two study sites have roughly conformed to the trend hypothesized.

6.2.1 Stakeholders' Input in Xinghai Bay Area

In the pre-start-up phase (pre-1993), the city was experiencing a strong impact of increasing globalization and China's open-door policy, which resulted in a reshaping of the overall urban strategies of Dalian. A core urban strategy became the idea of building Dalian into an "international" city. The waterfront development in Xinghai Bay area was proposed for that purpose. The municipal government played the most important role in this phase in seeking a place to accommodate functions supportive of these aspirations.

When compared with waterfront development cases elsewhere in the world, the start-up phase (1993) in Xinghai Bay area is extremely short. A master plan was soon completed and a special purpose agency came into being.

In its early development phase (1994-2000), the municipal government and Xinghai Bay Development and Construction Administration Centre remained the two major stakeholders involved, the latter responsible for the implementation of the plan and administration of development projects and the former responsible for the funding. There was hardly any private investment in this phase, with the Sun Asia Ocean World being an exception.

Since the beginning of the mega-projects phase (2001), the new financial input of the municipal government has been greatly reduced. Most development projects are now funded by the private sector. Maintenance of the facilities and infrastructures are funded by Xinghai Bay Development and Construction Administration Centre (Xinghai Real-estate Development Company) whose revenue comes from land selling/leasing or the profit they make from the investment of the revenue.

Public-private partnerships are actively sought by both the administration centre and private investors. Intense place promotion to attract occupants/visitors as well as investment was carried out jointly by the municipal government and the administration centre.

Judging from current policies and plans, such an input structure will remain largely unchanged in the near future.

The evolution of stakeholders' input through the phases is summarized in Table 6-5. Both the intensity of input and major forms of input are indicated.

Table 6-5. The evolution of stakeholders' input in Xinghai Bay area

Stakeholders / *Phases*	*Municipal government*	*Special purpose agency*	*Private sector*
Pre-start-up	Medium Decision making	--------	--------
Start-up	High Planning	--------	--------
Early development	High Funding, establishing the administrative system	Medium Plan implementation, Administration	Low Investment
Mega projects	Low Monitoring and revision of visions if needed, place promotion	High Plan implementation, administration, place promotion, public private partnership facilitation, investment	High Investment, initiation of projects and seeking public-private partnership opportunities

Source: by the author.

6.2.2 Stakeholders' Input in Binhai Road Area

Strictly speaking, the waterfront development in Binhai Road area is not a "typical" one as defined in the model. For the most part, it is not a commercial waterfront development and it did not follow a master plan approach. Rather, an

incremental approach was adopted. However, the evolution of stakeholders' inputs showed partially the same trend but with some differences.

In the pre-start-up phase (1970s - 1984), the area was inaccessible until the proposal of development was made in 1984 as a direct result of Deng Xiaoping's recommendation to open the area to the public during his visit to Dalian.

As in the Xinghai Bay area, the start-up phase (1985) in this area was short and almost unobservable. A simple construction plan was proposed and the construction followed up soon thereafter.

During late-1980s (the early development phase) a special purpose agency, the Department of Landscape and Gardening, was established to implement the construction of the road, lights, tree planting and so on. Government provided almost all the funding. The private sector joined in this phase but was involved at a low level.

Then came the mega-projects phase (1990s - 2002) during which two more special development agencies were established. New attractions (amusement parks, squares, beaches, etc.) were built through government funds and public-private partnerships. Since some projects in this phase were non-commercial and built in the public interest (such as the building of squares), government financial support remained high. Amusement parks were the focal points of private investment through public-private partnership.

The period since 2003 is the maturity phase of the area. Emphasis has been on the maintenance and upgrading of infrastructure plus some new projects which are aimed to counter possible downturns in the lifecycles of tourism attractions. The funding of the former comes mainly from the municipal government and the latter through public-private partnership.

Two characteristics of stakeholders' input are worth noting here. Firstly, the inputs of the private sector have never reached a high level. This is because after Binhai Road area won its status of "National Scenery Area" in 1988, new construction has been restricted by the state government. The private sector was only able to be involved through public-private partnerships and was not able to initiate development projects by themselves. Furthermore, proposals for development need to go through more approval procedures than elsewhere, which also deters the enthusiasm of private sector

investors. The other characteristic is the involvement of the state government in the pre-start-up phase and later, in terms of the stimulation of development and the regulation of new construction.

The evolution of stakeholders' input through phases is summarized in Table 6-6. Both the intensity of input and major forms of input are given.

Table 6-6. The evolution of stakeholders' input through phases

Stakeholders / *Phases*	*Municipal government*	*Special purpose agencies*	*Private sector*
Pre-start-up	Medium Decision making	--------	--------
Start-up	High Planning	--------	--------
Early development	High Funding, establishing a special purpose agency	Medium Implementation of development, Administration	Low Investment
Mega projects	High Funding, establishing two more special purpose agencies, monitoring, place promotion.	High Plan implementation, administration, place promotion, public-private partnership facilitation	Medium Investment through public private-partnership.
Maturity	Medium Funding (mainly in the infrastructure upgrade and maintenance), monitoring, place promotion.	High Plan implementation, administration, place promotion, public private partnership facilitation	Medium Investment through public private partnership.

Source: by the author.

6.2.3 Stakeholders' Input in Dalian Port Area

Dalian Port area is still in its second phase of development – the start-up phase. It

is also different from the other two study sites in that the development is being initiated by the port agency. Nevertheless, it is similar in that it involves both the input of municipal government and a special purpose agency increase from the pre-start-up phase to the start-up phase while the private sector has not yet been involved.

The evolution of stakeholders' input through the phases is summarized in Table 6-7 where both the intensity of input and major forms of input are identified.

Table 6-7. The evolution of stakeholders' inputs

Stakeholders / *Phases*	*Municipal government*	*Special purpose agency*	*Private sector*
Pre-start-up	Low Decision making	Medium Proposal for redeveloping the port area	--------
Start-up	Medium Evaluation of and recommendations for the plan.	High Formulation of a new development agency by partnership with other port agencies, planning, seeking government approval.	--------

Source: by the author.

6.2.4 Summary

As should be expected, the three sites vary in terms of stakeholders' input. However, the following trends are common in them all:

The input from the municipal government followed an increasing and then decreasing trend. In the first few phases, the municipal government has been involved in the planning procedures in some form, to ensure that the waterfront development would be beneficial on its own as well as be consistent with the overall urban strategies. The government funding in the early development phase was also crucial in that it provided necessary infrastructure and amiable public open spaces which created an attractive investment environment.

As for special purpose agencies, they either existed from the beginning or were established in the second or third phase. Their input kept increasing and, in the end, they played a role that was even more important than the municipal government. The most prominent function of the special purpose agencies was to stimulate private investment.

The private sector was seldom involved in the early development phase or earlier, but their input increased sharply during the mega-projects phase. Most projects involving private investment were capital intensive and highly profitable, requiring large cash flows (e.g. hotels, shopping centres, real-estate development, etc.). For those projects which were both capital and land intensive (e.g. theme parks), public-private partnerships were often used to fund them.

There are also some other findings concerning stakeholders' input and they will be explored in the following sections.

The government role: from direct control to indirect regulation

The evolution of the government role can be seen in the Dalian case both by comparing the different phases in the three study sites and also by comparing the three sites as a whole.

Using Xinghai Bay area as an example, from the analysis of stakeholders' inputs, it can be seen that the input of government changed gradually from decision making, planning and funding to monitoring and place promotion. In the early development phase and before, the government exerted its control by defining the visions for development, formulating the master plan itself (with the assistance of consulting service from elsewhere), and investing in infrastructure construction, etc. But later, the responsibilities were transferred to Xinghai Bay Development and Construction Administration Centre and the government only controlled the development by exertion of approval rights or setting of policies (e.g. positioning of the Xinghai Bay Area as "four centres" in the urban master plan).

In the Binhai Road Area, the government initiated the development. The City Construction Management Bureau (later the Department of Landscape and Gardening) was responsible for the planning, implementation and administration of waterfront development. They are all government institutions. In Xinghai Bay area, first a

"command group" was established to take care of the planning and initial development. All the members of the "command group" were selected from government institutions. Thus, in this sense, it was also a form of direct control. But for Dalian Port area, the development was initiated by Dalian Port Group Co., Ltd., which also formulated the master plan. The government was not directly involved in the planning process, nor is it expected to be involved in the implementation.

There are several strengths of direct control. It simplifies the otherwise time-consuming approval procedure; it ensures the enforcement of government will, which is expected to represent the will of the majority rather than that of a few special interest groups; and it is expected to do better in avoiding undesired environmental damage, as more emphasis can be put on long-term overall economic, social and environmental benefits rather than on short-term economic benefits only. On the other hand, direct control requires funds and management expertise that are sometimes unavailable in the government, especially in the mega-projects phase. This might be the reason why two special purpose agencies were established during the mega-projects phase in the Binhai Road area. Also, for good or ill, direct control limits the participation of the public and those not directly involved in the developments but who may be affected by them.

The start-up phase

As shown in the previous analysis, the start-up phases in Xinghai Bay area and Binhai Road area were very short. This appears to differ from the situation depicted in other studies (Gordon, 1997b, Goodwin, 1999).

Two reasons may also explain the difference. The first is that the waterfront developments in the former two sites were "new" development in a previously unused area, in contrast to a port area, the redevelopment of which will probably require certain approval procedures of upper levels of the government. The second is that, at that time of development of the former sites, China was in a largely top-down political system. In a centralized system, decision making can be expedited for the needs for lengthy negotiations and consultation are short-circuited. As long as the decision had been made by the municipal government, consensus could easily be achieved. Perhaps it is noteworthy that in the Dalian Port area, where direct government involvement is less

than in the other two study sites, the start-up phase began in 1999 and is still going on.

The comparison of the length of the start-up phase between Dalian and its western counterparts reflects a "trade-off" between efficiency and equity. It has been found that the length of the start-up phase increases considerably as more levels of governments are involved in the approval process (Gordon, 1997b). It is also indicated by this study that the length of the start-up phase increases dramatically when more stakeholders are involved. Though it is widely believed that to incorporate the public into the planning process will bring more equity into the development, it will likely reduce efficiency at the same time by delaying the speed with which decisions can be made.

A special group of stakeholders: state-owned corporations

There was a special group of stakeholders who were unique in China who played an indispensable role in the waterfront development: the state-owned corporations, especially in the Binhai Road area. During the early development phase of the Binhai Road area (late 1980s), they participated in the development in various forms. For example, the North Bridge (a bridge on Binhai Road) was designed by Dalian College of Technology and more than five state-owned corporations were responsible for the construction, including Dalian Heavy Machine Factory, Dalian Rolling Stock Plant, Dalian Hoist Plant, etc. They also supported the development by donation or by providing a loan guarantee (e.g. in Dalian Forest Zoo).

6.2.5 Implications of Stakeholders' Input

The trend of stakeholders' input has several implications for the practice of waterfront development:

Previous studies indicate that the role of government is critical for success (Craig-Smith, 1995; Adair et al, 2000). This role includes establishing the preconditions necessary to attract private investment. Public investment is found to be crucial to re-establishing investors' confidence by replacing or upgrading infrastructure serving the waterfront and to develop public spaces in the early development phase (Gordon, 1997b). This study confirms those findings and further reveals that government input is especially important in the early development phase and before. On the other hand, the importance of investment from the private sector rises in the

mega projects phase. Furthermore, the more extensive the scale of the development, the greater is the dependence on private investment (Gordon, 1997b). Effort should be made to ensure sound goals, objectives and strategies in order to establish an attractive investment environment to lever private investment. In other words, public investment in the early stages of the development aiming at the attraction of private funds seems to be the best way to spend public money.

The changing role of government from direct control to indirect regulation is an inevitable result of the overall political and economic reform in China. It calls for the reinforcement of the government's expertise in guiding the development by indirect instruments such as establishment of special purpose agencies (semi-public agencies), policies, plans, urban design guidelines, etc. It is a good sign that a number of plans and urban design guidelines have already emerged, feasibility studies have been conducted and several special purpose agencies have been established. But there still seem to be some problems in implementation of the plans. During the field work, the master plan of Xinghai Bay area was found to be unavailable in the government bureaus nor at the Xinghai Bay Development and Construction Administration Centre. It is evidence for weakness in implementation. Besides, monitoring and regular assessment are still lacking. This can be seen from the fact that there is no such document in either the government or the special purpose agencies indicating that a record is not kept of what happens or has been achieved in waterfront areas.

6. 3 Other Issues and Findings

In addition to findings concerning stakeholders' input, there are some other findings revealed in Dalian's waterfront development.

6.3.1 The Implications of National Policies

The significant implications of national policies and strategies have been prominent in Dalian's case. The most important policies are the "opening up" policy and the "market economy" policy.

The "opening up" policy has allowed Chinese cities to participate in the globalization trend. Thus, the cities can intentionally seek superior city functions. This policy has had a great impact on all the cities in China, especially the coastal cities. The

goal of building Dalian into an “international” city has been an important urban strategy since 1990. The newly developed and redeveloped waterfront were chosen as places to accommodate such functions as the “financial centre”, “tourism centre”, “information centre” and so on. Dalian’s success in waterfront development partially lies in its correctly fitting urban strategies to the national policy. For example, the establishment of Dalian Commodity Exchange in Dalian is a decision of the state council to support Dalian’s proposed image of “North Hong Kong”.

The “market economy” policy has had notable implications too. It provided the possibility of public-private partnership, by which means most of the waterfront projects have been or will be funded. It is also the precondition of differential land rents, which underpins the unique idea of “urban management”. This has greatly changed waterfront development from being a consumer of government funds into a generator of municipal revenue.

6.3.2 The Role of Tourism and Recreation

In an era of increased leisure, recreational participation, and increased environmental and heritage concerns, many of the world’s major waterside cities have used tourism and recreation as catalysts for waterfront development (Craig-Smith, 1995). It is believed that the development of tourism and recreation will build on the waterfront’s specific and unique competitive advantages. This is the situation in Dalian. Tourism and recreation are one of the most important functions of Dalian’s waterfront. Tourism and recreation are an overwhelmingly important land use in the Binhai Road area. In the Xinghai Bay area, the land tracts closest to the waterfront have been devoted to tourism and recreation uses (e.g. parks, tourist harbour, yacht club, cruise ship, etc.).

Along with the benefits brought about by tourism and recreation, two problems have occurred that are common for tourist destinations: the lifecycle of attractions and seasonality. Such problems are extremely severe in the Binhai Road area.

> *“There is a saying in the tourism sector in Dalian –‘There is only half year’s business for Dalian’s tourism’. It’s true, especially true for seaside resorts in North China. Our peak season is from July to September. May, June and October are three months of middle season, probably because there are two long national*

holidays in May and October. We tried some measures. For example, we held a Fireworks and Firecrackers Festival in our park during winter. But the effect was insignificant. We were able to attract some local visitors, but for tourists, most of them believe the seaside is a place for summer.

Product lifecycle is evident. Numbers of visitors usually went down in the third or fourth year after the opening of a project. We kept on building new projects on the one hand and adding new things to the old ones on the other."(Interview with Mr. Yu, Manager of Dalian Laohutan Ocean Park, 10/26/2003).

"Our visitors are highly concentrated during the May Holiday and National Holiday[22].The second high season is summer, from July to September. We received almost seventy thousand visitors during the National Holiday of 2002, that's 10% receptions of that whole year! When the winter comes, wind is strong in the open air area near the sea.

The Forest Zoo went through an obvious lifecycle. It can be seen from the numbers of visitors every year. The zoo was opened on May 24th, 1997. There were 1.3 million visitors that year. After that the number decreased year by year. The second phase of construction added more attractions. After the completion of the second phase of the project in 2000, the number of visitors increased to 1 million that year. But the number has kept going down since then. We only received less than 0.8 million visitors in 2002. For 2003, it was still worse, because of SARS. The number decreased by 30%." (Interview with Miss Sun, Manager of Dalian Forest Zoo, 10/26/2003)

In addition, some residents regard tourism as offensive to their daily life:

"I enjoy the sea view and the public open spaces and green spaces in Xinghai Bay area. But I will not choose the place to live. There are too many tourists there and too many ceremonies and festivals going on. It will bring noise and congestion." (Interview with Mr Wang, TAXI driver, 10/25/2003)

6.3.3 Post-industrialization and Globalization in Waterfront Development

As pointed out in earlier discussion, the world process of post-industrialization and globalization has turned waterfront development into an opportunity actively sought by waterside cities instead of a more passive reaction taken to in response to urban regeneration requirements. The same pattern has been observed in Dalian. This

[22] These are two major holidays in China, at the beginning of May and October, one week long each.

finding can be supported by the overall visions defined for each site[23]:

- Xinghai Bay area: a new CBD of "North Hong Kong".
- Binhai Road area: a famous tourism attraction which can enhance the city image of the "City of Romance".
- Dalian Port area: a special and functional extension of the current downtown area and an amiable space to accommodate waterfront activities.

6. 4 Toward an Evaluation of Dalian's Waterfront Development

Due to the limitation of time and resources, it is not feasible to conduct an elaborate evaluation of Dalian's waterfront development. But as one of the objectives of this study, a brief evaluation of the waterfront development in Dalian will be done based on the analysis of "indicators of success" and "issues of concern".

6.4.1 Indicators of Success[24]

The success of the waterfront development in Dalian is shown using the "indicators of success" developed in the phase model (see section 3.1.4 for details). Many of the indictors of success have been discovered in Dalian. These cover almost the whole set of "indicators of success" presented in section 3.1.4, except for "Preserved/renovated heritage". They include:

- Increased land value. (This is more true for Xinghai Bay area than for Binhai Road area, for constructions in the latter is restricted.)
- Successful business on the waterfront such as Dalian Sun Asia Co., Ltd. The company is one of the few tourism companies listed on the Shanghai Stock Exchange. It came into existence with Sun Asia Ocean World in 1995 and has been an active private investor in the tourism sector in Dalian and elsewhere.
- Updated waterfront functions (New CBD, National Scenic Area).
- Public open spaces and green spaces (Parks, squares, etc.).
- Increased waterfront accessibility and activities for both residents and tourists.
- A sense of place created through urban design, landmarks (e.g. Xinghai Square)

[23] The visions of the other two were summarized through descriptions of interviewees and other relevant documents.

[24] "Indicators" refers to those results or "outcomes" (Hershman et al., 1999; Goodwin, 1999) of waterfront development.

and museums (e.g. the Modern Museum and The Marine and Seashell Museum).

- A rehabilitated waterfront environment.
- A mixed land use pattern and an associated varied and attractive landscapes.
- Preservation of ecological integrity.

6.4.2 Other Evidence of Success

Besides the indicators identified previously, there is still other circumstantial evidence of Dalian's success.

Firstly, all the officials and local residents that were interviewed during the field trip gave an overall positive answer to the question concerning whether Dalian's waterfront development is successful.

There was no specific investigation into users' perception in this research. But some information can be drawn from another study in Dalian. Li (2003) took Dalian as a case to study urban revitalization through the construction of public spaces. Results showed that the squares are compelling and provide important opportunities for Dalian residents to interact with their environment in individual and group, and organized and spontaneous ways. Dalian's residents perceived squares as an indispensable part of their daily life. The squares and people on them also were found to contribute to the vitality of the city. Squares are perceived as impressive tourism attraction for tourists, and they all consider them as catalysts for the tourism development of the city. Those conclusions drawn by Li were based on users' perception on squares in general. But it can be speculated that they should also be true for those public spaces provided through waterfront development.

6.4.3 Issues of Concern

At the same time, several issues of concern have arisen:

- For both Xinghai Bay area and Dalian Port area, all residential land use has been developed for luxury housing. Little effort or attention has been paid to the provision of affordable housing for local residents.
- Seasonality and the tourism product lifecycle are two big problems, especially prominently seen in the Binhai Road area. This is a disadvantage of the unitary

land use for tourism and recreation in that area.

- The emergence of too many high-rise buildings, especially those located close to the waterfront, is being criticized in Xinghai Bay area. For example, Xinghai Guobao was severely criticized for spoiling the skyline. This suggests the need for height control of buildings by urban design guidelines, which is in place in Dalian Port area's development plan.
- An enormous body of literature has indicated that the progress of tourism might bring destination communities' attitudes from euphoria to apathy to annoyance to antagonism (e.g. Doxey, 1975; Carmichael, 2000; Ko and Stewart, 2002). Due to the limitation of time and resources, no special investigation concerning this issue was undertaken during the field work. Casual conversation with local residents showed that the noise and congestion caused by tourism in Xinghai Bay area has already annoyed a number of residents.

6.4.4 Overall Evaluation

Based on the above analysis, the question whether the waterfront development in Dalian is successful can be answered from two perspectives. The first perspective involves the evaluation of effectiveness (Hoyle and Wright, 1999; Hershman et al., 1999; Goodwin, 1999), by which is meant the extent to which the development outcomes meet the development visions. The other perspective involves a critical analysis of the validity of the visions themselves.

From the first perspective, the answer is generally positive. The indicators identified in section 6.4.1 support the evaluation that the developments in Xinghai Bay area and Binhai Road area are successful in meeting the goals and objectives of development. It is currently too early to make a judgment in the case of the Dalian Port area.

From the second perspective, while all of the visions have a main emphasis on economic benefits and have paid some attention to environmental benefits, an important draw back exists that could undermine Dalian's apparent waterfront success – a lack of recognition of the local communities' needs (see section 6.4.2 for evidence).

In summary, the waterfront development has been generally successful in meeting

overall goals and objectives but cautious judgment should be exercised due to the under-representation of the interest of local residents.

Chapter 7: Conclusion

7. 1 Major Findings

Waterfront development has been an issue of wide concern and extensive discussion since the 1970s. Waterfront development first rose as an issue in urban renewal and coastal management in western countries and then become a well-established phenomenon worldwide in the big picture of post-industrialization, globalization, integrated coastal management and sustainable development. While there have been a great number of studies carried out in the western countries, the understanding of the phenomenon in newly-industrializing countries (NICs) and less economically developed countries (LDCs) is less extensive. This study provides more insight into the phenomenon by applying the existing knowledge to a different political and economic context.

A "phased model" is proposed in chapter 3 as a "prototype" of waterfront development. It analyzes waterfront development as a series of five temporal stages, i.e. pre-start-up, start-up, early development, mega projects and maturity. Each of the phases is characterized by the involvement of specific stakeholders, issues and events and outcomes. A tabulation technique is used to organize the complicated elements and issues in a systematic way. The phase approach allows the change to be presented as a sequence of linked events and circumstances. Based on the model, a trend of stakeholders' inputs is discerned. It predicts the rising and descending of the inputs by three stakeholders: the municipal government, the special purpose agencies and the private sector. The pattern of the change is depicted in figure 3-2.

Four periods in Dalian history marked by different governance and development traits are reviewed, providing the information on historical policies, plans, administration and land uses on the waterfront. Then land uses, development projects, policies, plans and administration in three sites of waterfront development, the Xinghai Bay area, Binhai Road area and Dalian Port area were reviewed.

Analyzing the process using the phase model, it is found that all three sites

examined in Dalian fit properly into the stages of the model. This testifies to the applicability of western theory to cases elsewhere in a different political and economic context. Results show that Xinghai Bay area has gone through four phases and is currently in the mega projects phase, whereas Binhai Road area and Dalian Port area are in their maturity phase and start-up phase respectively.

The hypothesis on the evolution trend of stakeholders' input was tested, rendering generally confirmative results. It was found that the three sites are not identical in terms of stakeholders' input, but the following common trends show up in them all:

(1) The ***municipal government***'s input followed an increasing and then decreasing trend. Government input was found to be crucial in (a) ensuring sound visions and appropriate development strategies, either by means of direct or indirect control; and (b) providing necessary funds in the early development phase.

(2) ***Special purpose agencies*** either got involved from the beginning or were established in the second or third phase. Their input intensity showed a rising pattern and exceeded that of the municipal government in later phases. Their most crucial function was attracting external funds or acting as a bridge between public and private participation in later phases.

(3) The ***private sector*** was seldom involved into waterfront development until the mega projects phase. They played an important role in providing funds for massive development especially in capital-intensive projects. This helped to alleviate the pressures on limited government funds and also to bring various land uses to the waterfront.

The following characteristics unique to Dalian were also revealed:

(1) The government role showed a temporal change from direct control (such as decision making, funding, formulation plans and implementing them, etc.) to indirect regulation (such as monitoring, setting up general policies, etc.). Such trend is true not only for the change through phases in an individual site but also for change between the three sites in a temporal sequence.

(2) The start-up phases in Xinghai Bay area and Binhai Road area were very short, which is different from the Dalian Port area as well as from what the literature predicts. This may be explained by two reasons. The first is that development in these two areas

was “new development” as opposed to “redevelopment”. Secondly, the “top-down” mode simplified the decision-making procedures thus greatly reduced the length of the phase.

(3) Another group of stakeholders, state-owned corporations, was found to be important in waterfront development too. But as a special product of the “command economy”, input from them can also be considered as a special form of government input.

As a reflection of issues and trends discussed in the literature review section, the implications of three issues have been examined in the specific context of Dalian. They are national policies; tourism and recreation; post-industrialization and globalization.

Finally, an overall evaluation of Dalian’s waterfront development was carried out. Indicators of success, other evidence of success and issues of concern were presented. It was found that Dalian fulfilled almost the whole set of “indicators of success” (presented in section 3.1.4) except for “Preserved/renovated heritage”[25]. Key informant interviews and other studies carried out in Dalian also gave supportive circumstantial evidence of Dalian’s success. Nevertheless, several issues of concern were also noted, such as the seasonality entailed by tourism, the lifecycle of tourism products and insufficient respect paid to local residents’ interests. These issues of concern could undermine Dalian’s overall success in waterfront development and, thus, merit serious consideration.

7. 2 Recommendations

Based on the findings, recommendations for waterfront development are given in this section. Some of the recommendations are given specifically for Dalian, and some of them can be generalized to waterfront development in other cities in China or even in other countries. The recommendations are mainly in three aspects: planning and implementation/administration; tourism development; and social equity.

[Recommendation 1] This research finds out that a general change of the government role from direct control. On the other hand, it has also been found out that

[25] This absence of “heritage preservation” is largely because the developments completed till now are new development on previously unused land. Heritage buildings are protected elsewhere in the city.

Dalian is weak in expertise of indirect regulation. It is recommended that the development agencies should take the responsibilities of taking records of what have been going on and what have been achieved in the waterfront on a regular base, so that regular monitoring and assessing of the plans can be brought out. Land use regulations and urban design guidelines were found to be the effective tools of indirect control (Acosta, 1990). It is recommended that every waterfront development should have land use regulations and urban design guidelines approved by the municipal or higher levels of governments before starting. And they should be well accessible to the public. The information technology has provided a good media for conveying such information to the public – the Internet. A good example is the on-line land use map of Lujiazui's waterfront, which specified every land plot for development with a number, the area of land, the usage and the plot ratio (see appendix II, figure 9). This will help in soliciting private investment and in ensuring that individual projects carried out by different private investors meet the overall standards and objectives.

[Recommendation 2] Driven from the outset by primarily economic motivations, Dalian has paid insufficient attention to the interests of local people as residents as opposed to recreationists in the waterfront. This could create a negative perception among residents although housing has been upgraded in other parts of the city. Greater attention could have been paid to residents' rights in waterfront development, not only in Dalian but also in other cities of China. Helpful measures could be to provide affordable housing in the neighbourhood, providing more public facilities or open spaces for public benefits (although there is much provision of open space in Dalian), providing opportunities for public involvement in the planning process, and so on. There is a long way to go in this issue.

[Recommendation 3] As suggested by the literature and proved in Dalian, tourism and recreation should not be regarded as the sole solution of waterfront development (Gospodina, 2001). It is really important for waterfront development to ensure a mixed land use pattern. Otherwise the seasonality and the tourism product lifecycle can be big problems that bring seasonality and lifecycle to the whole waterfront.

7. 3 Reflections and Future Research

To conclude, several reflections are made that have implications for future research.

The applicability of the phase model

In this study, the phase model is developed on the basis of literature, a large part of which focussed upon big coastal cities as cases of studies, and it is tested in another big coastal city – Dalian. This raises the question whether this model is applicable or partially applicable to inland or smaller cities. It demands further studies in cities of different sizes and locations.

The mega projects phase – other types of waterfront development

"Mega projects phase" has been chosen to be the name of the fourth phase in the phase model. This term seems to be more appropriate for large waterfront development cases in large cities. Whereas the approach of a master plan plus mega projects was truly adopted by a number of famous waterfront development cases (such as Baltimore and Sydney) and by Dalian as well, a number of a different types of waterfront development also exists in which an incremental approach has been chosen. Cases of the former type tend to be large-scale developments in large cities, while cases of the latter type are often seen in small-scale developments in medium or small cities. Because an emphasis on attracting private funds is essential in this phase, "private led investment phase" might be a more appropriate term. In order to prove whether or not it is true, more research in less "prominent" waterfront development cases in medium or small cities is needed.

Local communities and tourists – other stakeholders

Limited by time and resources, this research only focused on three stakeholders – municipal government, special purpose agencies and private investors. As identified previously in the literature review, local communities and tourists are two not necessarily mutually exclusive groups of stakeholders of the waterfront. While the municipal government, special purpose agencies and private investors as a whole can be seen as the "provision side" or "producer side" of the waterfront; local communities and tourists can be seen as the "demand side" or "consumption side". Thus it will also be interesting to study the use of waterfront by the two "demand side" stakeholders,

local communities and tourists, across stages in terms of the level and nature of usage of waterfront in each phase.

Mixed land use – solution or tension

It has been proposed both in the literature and in this research that mixed land use should be sought in waterfront development to ensure economic vitality and high levels of human use. However, another point has been raised that mixed land use is the cause of tension between different stakeholders/users. Is mixed land use the cause of tensions between different stakeholders? If so, what can be done to address the tension or what other solutions can be used in stead of mixed land use? Such questions are interesting issues to be addressed in future studies.

Appendix

Appendix I List of Interviews Conducted

No.	Name of Interviewee	Date of Interview	Position
	Researchers		
1	Wu, Bihu	10/07/2003	Professor, Department of Urban Planning, Peking University
2	Quan, hua	10/18/2003	Professor, Department of Tourism Management, Northeast University of Finance and Economics
	Local residents		
3	Qu, Ying	10/17/2003	Graduate Student, Dalian University of Technology
4	Wang, Bin	10/25/2003	TAXI driver
	Government Officials		
5	Xu, Yanxia	10/20/2003	Engineer, Department of Projects, Dalian City Construction Management Bureau
6	Xu, Jinhong	10/22/2003	Director, Institute of Urban Planning and Design, Dalian Urban Planning Bureau
7	Gao, Qing	10/22/2003	Director, Department of Planning and Developmeng, Dalian Tourism Administration Bureau
8	Yu, Liansheng	10/24/2003	Director, Department of Construction, Dalian City Construction Management Bureau
9	Liu, Shijie	10/25/2003	Director, Department of Landscape and Gardening, Dalian City Construction Management Bureau
10	Yu, Jiao	10/26/2003	Manager, Dalian Laohutan Ocean Park
11	Sun, Yixiao	10/26/2003	Manager, Dalian Forest Zoo
12	Wang, Jianliang	10/27/2003	Vice Director General, Dalian Urban Planning Bureau
13	Han, Jiwu	10/30/2003	Vice Manager, Port Dalian
14	Zhang, Wenjun	10/30/2003	Minister, Department of Development, Port Dalian

15	Sui, Qihua	11/1/2003	Staff, the Xinghai Bay management center for Development and Construction
	Developer		
16	Liu, Xing	11/3/2003	Sales, Superior Star Sea (a newly constructed community of condominiums open for sale)

Appendix II Understanding the waterfront development of Lujiazui, Shanghai, China

Abstract: In a “postmodern” urban context, waterfront development has become a worldwide phenomenon, among which Lujiazui is an interesting and instructive case. This paper, drawing upon various secondary materials, fist reviews the development process of Lujiazui, and then summarizes the strategies of Lujiazui’s waterfront development and analyzes its principles of success.

Key Word: waterfront development, planning, Lujiazui, Shanghai, China

Introduction

Waterfront development has become a prominent worldwide phenomenon in a “postmodern” urban context (Norcliffe, Bassett & Hoare, 1996). Many municipalities consider the redevelopment and reuse of the waterfront as a unique opportunity to create a new urban environment as well as a more vibrant urban economy. Hall (1993) identified three obvious factors that may explain this universal interest: the availability of large, underutilized land areas in the heart of cities; the tremendous surge in the service sector of the economy; and the near-magnetic relationship between the waterfront and people, which had often been disrupted but could at last be reestablished.

Waterfront development cases, both successful and unsuccessful, have been well documented in the previous two decades (Wrenn, 1983; Breen & Rigby, 1994; Bruttonesso, 1993; Craig-Smith & Fagence, 1995). Some general principles were noted for future reference:

1. In many waterfront rehabilitation cases, particularly in cases like Baltimore and Liverpool, major large-scale redevelopment seemed to be the only practical solution to very serious local problems. The areas had become so run down that only large-scale improvement had any chance of success.

2. To achieve redevelopment on the scale necessary to succeed, central or state governments had to become involved either as financiers or as development agents.

3. Projects on such a scale must be seen as long-term developments, and instant results should not be expected. Success must be assessed only after a

period of about ten years and, in some cases (e.g. Baltimore), major success was only achieved after twenty years of development.

4. Site location is a critical factor. Locations immediately adjacent to city cores have a greater chance of success than sites in more peripheral areas. The Liverpool Garden Festival site is a case in point. Baltimore recognized the problem of access and gave high priority to constructing high-level walkways to connect the harbour with the city centre.

5. While business action groups and development corporations outside the control of the local government may be able to get the job done, there is an associated problem of accountability.

6. People can relate to history and historical buildings and, wherever possible, historic structures should be preserved and rehabilitated.

7. Tourism and recreational use of redeveloped lake, riverside and coastal areas is a realistic possibility in many cases and can be a legitimate economic reuse of redundant buildings. Visitation levels are often significant and may be counted in the millions per annum.

8. The greater the variety of uses for the developed sites, the better. A wide mix of uses ensures less economic vulnerability to the vicissitudes of visitor preferences or downturns in discretionary spending.

Waterfront development became virtually a national phenomenon in China from the 1990s (Wang and Lv, 2001). It has not been confined to waterfronts in big cities along the coastline or the Yangtze River, but also extends to many middle-sized or small cities with a river running through the city or a lake. Due to China's unique political and economic environment and policies, Chinese waterfront development varies from its European and North American counterparts in terms of initiation, goals/objectives and mechanisms.

This paper reviews the characteristics of China's waterfront development in a comparison with those in Europe and North America in order to form a context of further analysis. Then the development process of Lujiazui is documented based on secondary data sources including articles from academic journals, magazines and newspapers, books, on-line information and some internal documents available in the national library in Beijing. Then options of Lujiazui's waterfront development are summarized, followed by the discussion of its principles of success.

Context: Waterfront development in China

China is a country with a vast territory and abundant water resources. She has more than 6000 islands, more than 18 000km of continental coastline and more than 14000 island coastline. Since the opening up policy was put into practice, the construction of ports has experienced a fast growth hand in hand with the economy. Till 2002, China has had more than 33 400 commercial ports in total (mainland only, exclusive of Taiwan, Hong Kong and Macao). Among them, the berths which have a capacity exceeding 10 000 t has a number of more than 810, including coastal ports and inland ports on arterial rivers. In the year 2001, the whole throughput of all the ports exceeded 2.4 billion tons, which is 8.8% more than the previous year (Cai, 2002). Hub ports, regional hub ports and other ports of medium and small sizes formed a port system of different levels. Three port colonies began to take shape, which are port colony around the Bohai Bay, port colony of the Yangtze River Delta and port colony of the Zhuajiang River Delta, respectively.

Moreover, cities along the coastline and the Yangtze River became the most prosperous regions in China and have experienced the fastest growth since 1980. Since 1980, China has established special economic zones in Shenzhen, Zhuhai and Shantou in Guangdong Province and Xiamen in Fujian Province, and designated the entire province of Hainan a special economic zone. In 1984, 14 coastal cities were further opened to overseas investment, which include Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beiha. Afterward, beginning in 1985, the state decided to expand the open coastal areas, extending the open economic zones of the Yangtze River Delta, Pearl River Delta, Xiamen-Zhangzhou-Quanzhou Triangle in south Fujian, Shandong Peninsula, Liaodong Peninsula, Hebei and Guangxi into an open coastal belt. In 1990, the Pudong New Zone in Shanghai was opened to overseas investment, together with more cities in the Yangtze River valley. In this way, a chain of open cities extending up the Yangtze River valley, with Shanghai's Pudong as the "dragon head," has been formed. It is reported by the People's Daily (2002) that three metropolitan areas have been established along China's long eastern coast, which are the group of cities around

the Bohai Bay, the Yangtze River Delta and the Pearl River Delta, coincident with the three port colonies mentioned above.

It seems that China's waterfront scene differs from its North American and European counterparts in that Chinese port cities did not experience as severe a dereliction of inner city's waterfront induced by the degrading port facilities and their failure to meet the needs of new transportation technologies. It is not so common for China's city ports to meet such a decline. This difference could be explained by China's political and economic policy. Before the state decided to reform her economic setup in 1978, China has long been an "inward" economy, which means that the country adopted a "close door" or "autarky" policy, so that the economy is self-sufficient and relies little on import or export. Coastal regions, in such a policy context, were not preferable locations in general, for they are far from inland markets. Investments flew to inland regions for the fear that possible warfare would harm industry in coastal regions, where the frontier would be in case of war. So when China decided to take an active part in the world's economy, China's ports and cities along the coastline and the Yangtze River prospered hand in hand as important gateways to the outside world.

Waterfront development became almost a national-wide scene in China from the 1990s (Wang and Lv, 2001). It is not confined to waterfronts in big cities along the coastline or the Yangtze River, but also extends to many middle or small cities with a river running through the city or a lake.

There has been some literature on China's waterfront development (Zhang and Wang, 2002; Wang and Li, 2000; Xu, 2002; Wu and Jia, 2002), most of which come from a planning or urban designing point of view. By different criteria, China's waterfront development projects can be divided into different categories.

By development objects, waterfront development projects can be divided into two categories (Wang and Li, 2000). For the first category, land resources became the main objects of development, and waterfront development projects often involve the redevelopment of land resources, reform of land use redistribution, functional adjustment and optimization of infrastructure and environmental landscape. As for the second category, buildings on the waterfront became the main objects of development.

Waterfront development projects in this category often involve the maintenance, restoration, renewal, or removal and reconstruction of buildings. In fact, the two categories are at different scales. The former is usually at a larger scale and broader than the latter, and often includes several projects of the latter category.

By major development means, waterfront development projects can be divided into four categories: (1) rebuild, (2) renovation, (3) maintenance and conservation, and (4) environmental/cultural feature upgrade.

The first category often happens in those old inner city areas, where large-scale renovation of infrastructure and a total change of the land use pattern is needed. A new plan and design of a new waterfront followed by an overall destruction and rebuild are the main characteristics of this category of waterfront development. This means of development was preferred by local authorities in early 1990's because of a lack of recognition of heritage value on the waterfront, and the simpleness of this means compared to renovation. While more and more, it is noticed that such a rebuild often deprive a waterfront of its sense of place, with all historical marks erased during the rebuilt process.

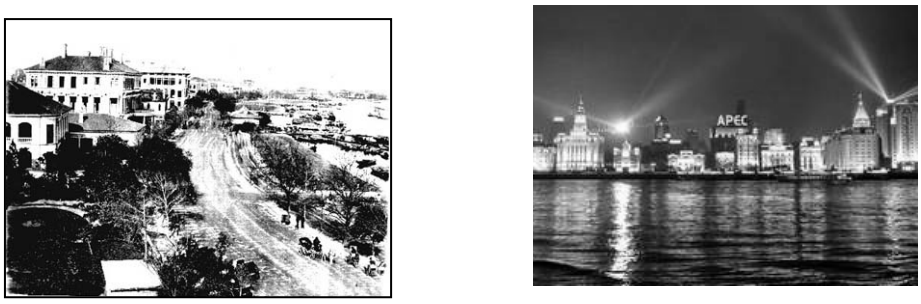


Figure 1. The Bund in thethe 1980s (a) and in 2000 after renovation (b)

The second category also happens mainly in the old inner city areas. It differs from the first category though, in that not all the buildings on the waterfront are destroyed and reconstructed. Treated differently, some of them are renovated, some are extended, and some of the others are rebuilt. Some historical buildings are preserved but their inner decoration and facilities are changed for modern use. Projects of this category take up a large part of China's waterfront development. The renovation of the Bund (Waitan) of Shanghai can provide as a good example. It made the Bund a famous tourist

attraction as well as a revitalized CBD of Shanghai City.

The third kind of means is often adopted by large cities with a long city history and a historical waterfront, where historical or modern landmark buildings are located. Development in these cases should also meet the requirements of conservation. Measures such as land use regulation enforcement, building maintenance, and infrastructure improvement are major components of this category. Objectives of such projects are making the waterfront more viable, expediting the economic development and increasing employment opportunities.

The last category, environmental/cultural feature upgrade, can be seen most on those waterfronts with unique environmental or cultural features and beautiful scenery. Tourism and recreation form a great opportunity to such waterfront. Original environmental and cultural features are programmed and packaged as tourist products and sold to tourists. Many small towns in Zhejiang Province are good examples. E.g. After large projects to alleviate the waterway pollution and to renovate landscape in Wuzhen Town, this small town became a famous tourism destination with the fame of Oriental Venice.

Figure 2. Wuzhen Town

Site profile: Shanghai, Pudong and Lujiazui

Being a city situated beside the Huangpu River in the lower Yangtze delta, Shanghai's development has been linked to its history as China's largest seaport. Its hinterlands (principally Jiangsu Province and Zhejiang Province) are some of the richest in resources and one of the most densely populated regions of the country. The metropolitan area consists of 14 urban districts in the city proper (2057 km^2) and six suburban counties (Wu, 1999).

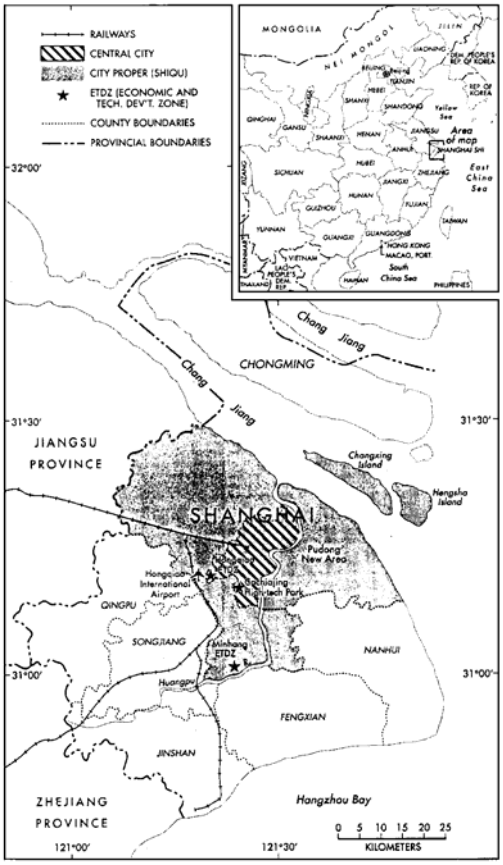


Figure 3. Map of the Shanghai Metropolitan Area. Source: Yusuf and Wu (1997)

While striving to become the new “economic power house” of China and the East Asian region (Kurlantzick, 2002), Shanghai has been undergoing a wholesale change. Urban revival in part relied on the successful redevelopment of the old central city where dilapidated housing and fragmented industrial uses are no longer tolerable. At the same time, Shanghai’s revival is also dependent on the effective development of the Pudong New Area and several other new urban districts, which are aimed at facilitating the growth of the industrial activities and the expansion of the tertiary sector (Yan, 1994).

As proclaimed one journalist on a recent visit, “1990s Shanghai is one of the great urban renewal stories of all time” (Yatsko, 1997, p.66). This profile offers a glimpse of how metropolitan Shanghai has fared in the reform era, with a focus on urban redevelopment and housing provision, and the creation of new urban districts.

Pudong New Area is a new district in the east of the city and beside the Huangpu

River. Based on the model of China's Special Economic Zones[26] (SEZs) and initiated in 1990, Pudong has a total area of 522 km^2, larger than the historical central city (Figure 3.). There are four key development sub-areas in Pudong (Figure 4.): Lujiazui Finance and Trade Zone (Shanghai's new central business district), Jinqiao Export Processing Zone, Waigaoqiao Free Trade Zone, and Zhangjiang High-Tech Park. Planned for a three-phase development, Pudong is designed to relieve the pressure on old Shanghai and become a new center for industrial and commercial activities.

Lujiazui Finance and Trade Zone is the only development area entitled "finance and trade zone" in China. It is designed to be built into a financial and trade centre of China, even of the world. As the symbol and core of Shanghai Pudong New Area, Lujiazui Finance and Trade Zone stands just opposite the Bund across the Huangpu River, the mother river of Shanghai, and is surrounded by the Inner-Ring Road, which is a city highway completed in 1994. Nanpu Bridge, Yangpu Bridge, Yanan Road East Tunnel and eight ferries make up the arteries of cross-river traffic. By the end of the last century, with the completion of Metro Line 2 and the Pedestrian Tunnel, traffic between the two sides of the River became more convenient.

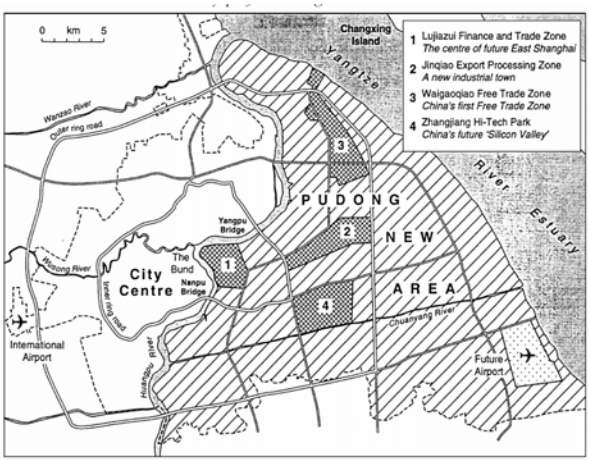


Figure 4. Map of the Pudong New Area. Source: Massey, Shaw and Brown, 1997

Lujiazui not only benefits from the superior location, but also has the advantage of possessing specific functional objectives. Fully supported by the central government and Shanghai Municipality, it enjoys special finance and trade preferential policies in addition to the preferential policies available in other Special Economic Zones.

[26] The key attractiveness of China's SEZs is the provision of preferential incentives to foreign investors to promote investment and exports.

Waterfront development in Lujiazui

Vision: four phases of development

Shanghai set up a four-phased development vision for Lujiazui Finance and Trade Zone in 1992 (Qi, 1992). It is a long-term vision with more than twenty years. As a key component of Shanghai's strategy to develop the tertiary sector, Lujiazui will house a "host of financial institutions, corporate headquarters, as well as commercial and cultural activities".

Phase I: 1991~1995

International consultation, planning, and start-up

Phase II: 1996~2000

Physical and functional development. In this phase, the following were expected to occur.

(a) The completion of the displacement of residents and enterprises of the 1.7 km^2 area;

(b) The removal of old houses and clearance of land;

(c) The authorization and leasing out land tracts available;

(d) The completion of the construction of waterfront section, Finance Street on Pudong North RD, and "high-rise" section;

(e) To carry out massive infrastructure and civic development;

(f) To attract some financial institutions and international corporations to set their branch in Lujiazui;

(g) To form the basic functional framework as a CBD.

Phase III: 2001~2010

Full-scale CBD formation

Phase IV: beyond 2010

Deepening and extension of CBD function

The establishment of Shanghai Finance & Trade Zone Development Company

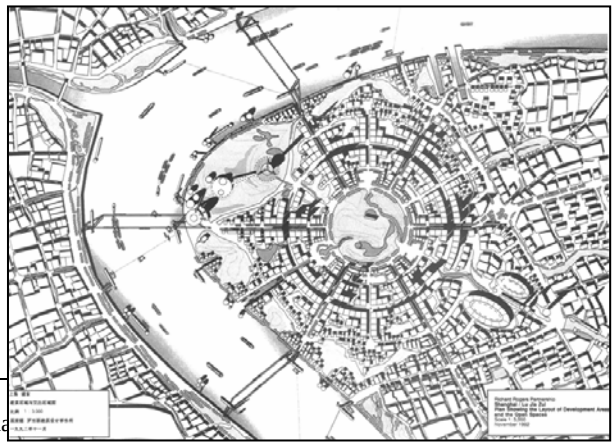
Soon after being assigned special economic status, a special purpose organization, Shanghai Finance and Trade Zone Development Company, was established in September 1990. This company had the chief responsibility to develop the large tracts of land in Lujiazui Finance and Trade Zone, to run comprehensive businesses and to take care of the co-ordination work within the Lujiazui Finance and Trade Zone[27]. Later in 1997, this company was re-organized as Shanghai Lujiazui Development (Group) Co., Ltd., which is one of the sixty-two conglomerates authorized and supported by the People's Municipal Government of Shanghai.

Now the group has 54 fully-invested companies and its business covers real estate, finance, insurance, stock and high-tech industries. The core member of the group is Shanghai Lujiazui Finance and Trade Development Co., Ltd., which is ranked No. 18 among the top 50 listed companies on Shanghai Stock Exchange.

International consultation and the formulation of master plan

The building of the Lujiazui CBD has been guided by the long-term ambitions of the city and facilitated by an international consultative planning process participated in by experts from France, Britain, Italy and Japan (Olds, 1997).

It's believed that a great undertaking depends on keen insight. In order to build Lujiazui into a first-rate city of the world as well as a central business district of Shanghai, the Shanghai Finance and Trade Zone Development Company invited six international teams of architects to propose ideas to develop the area. However, none of the master plan proposed by the consultation group was totally adopted. Instead, the Shanghai Finance and Trade Zone Development Company integrated all the useful ideas to form a plan (Qi, 1992, Liu, Yu & Liu, 2002).



[27] Source: website of Sha

Figure 5. Plan showing the layout of development areas and open spaces

In this plan, the area is developed around an integrated transportation matrix that focuses on public transport and encourages pedestrian movement. The city is designed around accommodating people rather than the cars.

The urban structure is a series of nodes that tie in with the main rail and bus stations. The nodes are built relatively densely to free up areas for open parks, walkways and spaces for leisure. These spaces are designed as a network structured to link the city with the riverfront.

The activities within each node were designed to be multi-layered rather than zoned so as to stimulated vibrant 24-hour activity. Offices and commercial activity tend to line the primary routes whereas housing and leisure sit within the quieter less traveled areas.

Height restrictions were set to ensure that views across the central park and river were maximized.

The fundamental intent was to incorporate all these aspects from the onset in order to develop an urban structure that responded to the needs of people within a very dense urban environment.

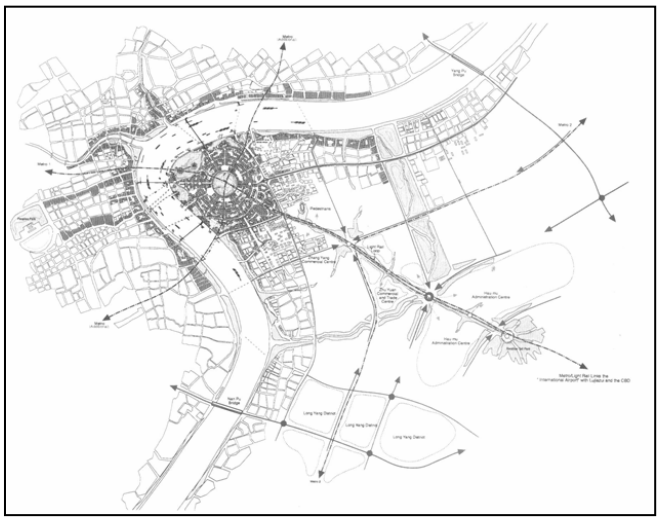


Figure 6. Site plan showing links to Puxi and Pudong

Mega development projects and massive infrastructure construction

Mega developments like the Oriental Pearl TV tower, the Nanpu Bridge, the 88-storied Jin Mao Mansion became or will become new symbols and landmarks of Shanghai. Massive urban infrastructure construction was specially encouraged by the government (Wu, 2000). Not only did these projects greatly the area's accessibility to the downtown as well as the waterfront, but they also quickly transformed urban landscapes (Figure 5, 6.).

Table 1. Major infrastructure and mega development projects in Lujiazui (1990-1997)

PROJECT NAME	PROJECT DISCRIPTION
Shanghai Pudong Int. Finance Bldg.	53 stories in 226m 70,000m2 floor area beside the Oriental Pearl TV Tower
Jinmao Mansion	88 stories in 420.5m 289,000m2 floor area highest building in China and the third highest in the world
Shanghai International Convention Center	11000 m2 floor area on the west side of the Oriental Pearl TV Tower the meeting place of the ‘’99Fortune Global Forum
Lujiazui Central Green	100,000m^2 located at the entrance of the East Yan'an Road Tunnel open to the public at July 1, 1997 developed by Shanghai Lujiazui Development (Group) Co., Ltd. with the total investment of RMB 800 billion yuan
Riverside Promenade	2500m long Major scenic project along the Huangpu River
Oriental Pearl TV Tower	468 m the highest tower in Asia and the third highest in the world
West Bund Sightseeing Tunnel	646.7m long connects the East Nanjin Rd. Bund and the Oriental Pearl TV Tower Visitors are able to see various pictures about history, culture and technology while crossing the river total investment: 510 million yuan
Century Avenue	5 km long and 100m wide links the Oriental Pearl TV Tower to the Pudong Century Park On the north side of the Century Avenue, there are eight China Botanical Gardens, each with the length of 180 meters and the width of 17.6 meters. They are named after eight well-known trees in China, which are Willow, Metasequoia, Cherry, Crape Myrtle, Magnolia, Camellia, Chinese Redbud and Goldenrain Tree.
Nanpu Bridge	total length: 765 m main span: 423 m tower height: 150 m the longest span cable-stayed bridge in China while built The bridge called a total investment of 820 million yuan and was completed and opened to traffic on December 1, 1991. Now the Nanpu bridge is open to tourists.

Yangpu Bridge	total length: 1172 m main span: 602 m tower height: 208 m The medium span distance of the Yangpu Bridge occupies the first place in the world. completed and opened to traffic in September 1993. a total investment of 446 million yuan

Source: Shanghai Urban Construction Website[28]

(a)

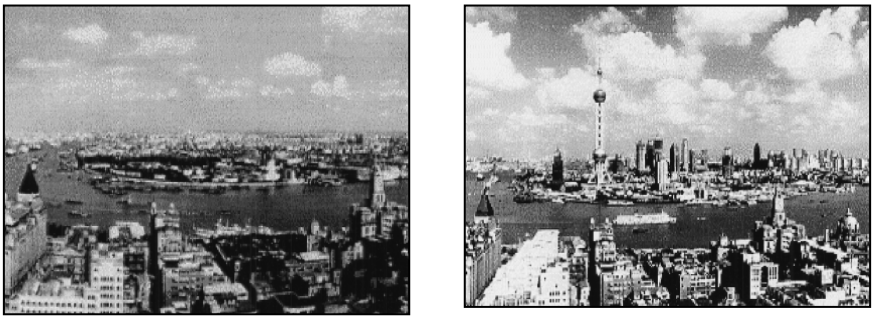
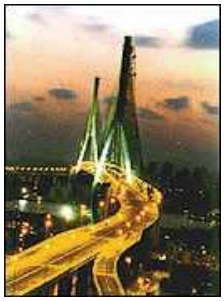


Figure 7. Changing landscapes in Lujiazui (a) in 1990 (b) in March 1997

[28] Available at: http://www.shucm.sh.cn/

(a) (b) (c)



(d) (e)

(f)

(h)

Figure 8. Major infrastructure and mega development projects in Lujiazui (a) Oriental Pearl TV Tower, (b) Jinmao Mansion, (c) Yangpu Bridge, (d) Nanpu Bridge, (e) Century Avenue, (f) West Bund Sightseeing Tunnel, (g) Shanghai International Convention Center, (h) Riverside Promenade , (i) Lujiazui Central Green

Encouragement of private investment and vigorous place promotion

An urban planning style rather new to China can also be seen in Lujiazui's development. The new style of planning no longer relies on conventional resource control and planning mechanism. The dynamic process of negotiation between developer and the administrative institution is involved in every projects carried out. The Internet is used as a publication tool to publicize land-use plans and available sites information to the public and potential developers.

On a map (figure 9.), each land plot is specified with a number, the area of land, the usage and the plot ratio. For example, there are four main types of land use in the Lujiazui Central Financial District. These are mixed-use (M), apartment (A), hotel (H) and commercial and residential use (C&R). Each plot on the map can be "clicked", which in turn links to more detailed specifications of that plot. For example, for the plot X2-1~2, the usage is specified as mixed use, with the land area of 25 822.6m^2 and a plot ratio of 3.68. The land-use plan also specifies infrastructure that is provided for the plot; for example, roads, the metro line station, water supply, the telephone line, drainage, gas pipes and the power line.

Figure 9. On-line map showing available sites and land use plan[29]

Place promotion is a key theme in contemporary urban governance (Wu, 2000). Lujiazui, with the support from the Shanghai municipality and the central state, has adopted a variety of place promotion tactics, among which reinventing a new urban image being the most prominent one. The rise of Shanghai as a financial and trade center is seen as a vital step for the Yangtze River Basin and China to participate in the new global economy. The support from the central state ranges from a special status granted to the Pudong New Area, the favorable tax policy to Lujiazui Finance and Trade Zone, and the support to high-profile conferences and events such as the "99 Fortune global Forum" and the APEC 2001 (which were both held in the international conference center).

The Shanghai Lujiazui Development (Group) Co., Ltd. has divided the development of Lujiazui Area into basically two stages, the first one being the "physical development" stage, and the second one being the "functional development" stage (Yu, 1994). After several rounds of mega development and infrastructure projects, the area achieved an ideal physical development environment. As stated by the president of the Company, the emphasis of the next stage had shifted to "functional development" since 1998. During this period, vigorous effort was exerted to establish Lujiazui's image as a host place of financial institutions, corporate headquarters, as well as a variety of commercial and cultural activities. A wide range of themes were involved in the place promotion of Lujiazui, such as strategic location, preferential policies, efficient and competent government, and *etc.*

A sign of Lujiazui's success in place promotion could be seen from the establishment of Chinese major financial institutions, such as Shanghai Security Exchange, Bank of China, Bank of Communication, etc., and large international corporations, such as Shanghai-Bell, Eriksson of Sweden, Philips of the Netherlands, Xerox and General Motors of the United States, and Mitsubish and Hitachi of Japan.

[29] Available at: http://www.shld.com/develop/xljz/xljz.htm

Understanding Lujiazui Waterfront

Lujiazui's option of waterfront development: strategy and tactic

Vallega (2001) proposed a range of basic options of waterfront development in his discussion of urban waterfront development facing integrated coastal management (Table 2). Although Lujiazui is not located on a coastal site, it is interesting to look at Lujiazui's development through this framework of strategy and tactic options. The original framework is modified to fit Lujiazui's riverine location.

Lujiazui's waterfront adopted the strategy of gateway, differentiation, long term, private, profit, development and ephemeral. On the other hand, the tactic selected by Lujiazui is land oriented, offshore located and luxury housing.

Table 2. The basic options of waterfront development

Basic, strategic options

- ↗ Central place versus gateway
- ↗ Duplication versus differentiation
- ↗ Short term versus long term
- ↗ Social versus private
- ↗ Non-profit versus profit
- ↗ Conservation versus development
- ↗ Ephemeral versus perennial30

Contingent, tactical options

- ↗ Land oriented versus water oriented31
- ↗ Onshore located versus offshore located[32]
- ↗ Lower income housing versus luxury housing

Source: adapted from Vallega (2001)

Principles of success

After its thirteen years of development since 1990, Lujiazui, as planned, has taken

[30] The waterfront plans are inspired by post-modernist criteria, according to which both the architecture and the scenic endowment should reproduce cultural elements from many parts of the world, or are tailored to the need to present and to bring out the local culture. The latter option is pursuable where rich cultural heritages are available to enjoy.

[31] The waterfront wholly or mostly includes land-oriented functions, such as hotels and restaurants, or largely includes water-oriented functions, such as recreational harbours and marine museums

[32] The waterfront wholly or mostly consists of facilities built onshore, such as shopping centers and housing facilities, or is designed with the aim of expanding water-wards through the building up of attached (e.g. artificial islands linked to the city) or independent structures at sea.

the shape of the center for financial and trade of Shanghai City, and even of China and Asia as well. In this section, two crucial questions will be addressed. The first is what factors constitute Shanghai's success. And the second, a broader one, is whether this "Lujiazui mode" can be borrowed by other cities in China or abroad.

Vision and Strategies

As designed at the setout, Lujiazui will be built into Shanghai's new central business district, which hosts financial institutions, corporate headquarters, as well as commercial and cultural activities. Thus the strategies, which followed the vision logically, are *gateway, differentiation, long term, private, profit, development* and *ephemeral*, as noted above. Different from many successful cases in European and North America, a majority of which adopt a water oriented development tactic, Lujiazui's development is rather a land oriented one so far. As discerned by Wood and Handley (1999), water is only one element in a spectrum of other environmental, economic and contractual considerations in property development and purchase. In Lujiazui's case, the advantaged location relative to the Bund, in Pudong New Area and Shanghai ("powerhouse" of China); and the preferential financial and trade policy are obviously the most attractive points.

This doesn't mean that water has absolutely no effect in the development process. Central Manchester Development Corporation (1985-1995), for example, in its Waterway Guide (in Wood and Handley, 1999) notes the role of water in their redevelopment projects:

> …the presence of water and the character of the structures and buildings alongside the canals in particular add to the opportunity for new activity and development in the area. The waterways are important in giving a structure to the area and in linking together places of different activity and character. They give an identity, which can be exploited to attract people and investment.

The presence of water, as generally agreed and in this case as well, does exert a measurable positive effect upon property values. The Riverside Promenade and the Central Green provide residents and employers in this highly urbanized area valuable public open space for out door recreation, and became a key attraction of city.

The advantage of waterfront location was embodied both in its master plan and in its factual layout of the buildings and facilities. The fist scenic drive, the Century

Avenue links the waterfront to the Central Green, the center of the Lujiazui Finance and Trade Zone. And buildings and facilities are arranged in such a way that the more its function depends on water and the more it is oriented to tourism and recreation, the nearer it is situated to the waterfront. For example, the Oriental Pearl TV Tower, which has almost become the symbol of Lujiazui, is located right on the waterfront. The Shanghai International Convention Center, and newly built Shangri-La Hotel, the Shanghai Aquarium, Lujiazui Food Center, the Chia Tai Riverfest are all beside this symbol. Not to say the West Bund Sightseeing Tunnel and the two bridges.

Agency and public-private partnership

Unlike other industrial districts in Shanghai that have received municipal funding for infrastructure construction, Lujiazui to a large extent has had to raise its own financing (in addition to some central funding). In many circumstances, the government's local budget is unable to afford the funds to develop or service the waterfront actually. This means that the government has to find other resources to start-up a land development. To overcome the financial difficulty, the government established a special purpose corporation Shanghai Finance and Trade Zone Development Company (later Shanghai Lujiazui Development (Group) Co., Ltd.) and transferred the development right to it. The development corporation is not required to pay the land premium to the municipality when getting the land. They can in turn transfer the right forward to smaller development (project) companies who can then use the land to get credits from banks and financial institutions and/or form joint ventures with foreign investors. At this stage, the company can pay the land premium to the development corporation who in turn pay it back to the municipality. The innovative feature of this type of "selling the whole plot of land" is the so-called "empty circulation" of land (Xie and Wang, 1995), which requires a lot of promotion efforts. Through it, land development can be started without adding a fiscal burden to the local government.

Place promotion and support from the upper level central government

In Lujiazui's experience, the city adopted a different range of promotion tactics because of the persistence of influence of the central state, government control of land, and resource allocation including public investment in infrastructure. The distinctive feature of place promotion in this case is that selling space is integrated with the shift of urban planning and reorganization of land development in the transition to a market

economy.

The rise of Shanghai as a financial and trade center is seen as a vital step for the Yangtze River Basin and China to participate in the new global economy. Special policies are authorized to Shanghai and Pudong to further enhance its status of the “dragon head” and “powerhouse” of the development of China. In Pudong New Area, enterprises due to operate for 10 years or more are exempt from income tax in the first two profit-making years and allowed a 50% reduction in the following three years. Enterprises set up in Pudong New Area and other development zones can be exempt from local tax until the year 2000 and imports of equipment, raw materials and vehicles for offices, homes and exported product are exempt from duties and taxes. Newly constructed buildings in the economic development areas are exempt from house property tax for five years. Special policies: Foreign banks are allowed to open branches in Shanghai; in Pudong, they can operate RMB business. Foreign investors are allowed to operate tertiary business in Pudong. Such state macro economic strategy and policies are indispensable to Lujiazui’s rise as the CBD of Shanghai.

Besides, the original idea of place promotion through all kinds of media, including the web, TV, magazines, newspapers, and the host of a number of high-profile international conferences such as the “99’ Fortune Global Forum” and the APEC 2001 has quickly create the Lujiazui image as a focus of business opportunities and globalization. As noted above, such an image created through vigorous place promotion is crucial to the success of attracting private investment, which is in turn essential to Lujiazui’s strategy of a *private* and *profit* waterfront development.

Tourism and recreation to make the waterfront more amiable

From the later stage of Lujiazui’s physical development, a series of effort were made to boost tourism and recreation, which would lead to a more amiable waterfront. High rising buildings, the Central Green, the Riverside Promenade, the Century Avenue, the Pedestrian Tunnel, the Aquarium, the riverfest and various festivals altogether constitute major attraction of urban tourism. For example, the White Magnolia Wedding which is jointly sponsored by Shanghai White Magnolia Wedding Committee, Shanghai Lujiazui Development (Group) Co. Ltd. and Pudong New Area Tourism Association. After Lujiazui Development(Group) Co. Ltd. held the first magnificent White Magnolia Wedding on May 27th, the memorial day of Shanghai's liberation, Lujiazui District became the most modern wedding palace in Shanghai. The

international convention center, hotels and such a great number of financial institutions and headquarter of international corporations make Lujiazui an ideal place for conference, exhibition and trade.

During the Spring Festival of 2003, a round tourist bus route came into use, which links the Oriental Pearl TV Tower, International Convention Center, Riverside Promenade, Food Center, Jinmao Mansion, Golf Court, and Central Green and the Aquarium (still under construction). The first “tourism supermarket” in China, the Oriental Tourism Market is being built in Lujiazui. It will be a grand tourism trade market which can host tourism exhibition, transaction, and tourism commodity selling. Tourists can purchase tourist itinerary, souvenir, combined tickets for scenic spots and rent cars here.

It has been repeatedly shown in successful waterfront development cases that the synergy between private uses, such as retail and entertainment, and public open spaces have reinforced each other and maximized public enjoyment of the waterfront. Lujiazui’s case, again, confirms this finding.

While the achievement of the waterfront development in Lujiazui is prominent and gained a lot of compliments, from the analysis above, we can see that Lujiazui forms a rather unique case, in that there is no other waterfront has as superb the location, political economic environment and strong support from the central state as Lujiazui.

But this does not mean that there is no value in Lujiazui’s case for other waterfront development. On the contrary, there are still many common points between Lujiazui’s waterfront development and the general principles of successful waterfront development noted in the introduction, as the involvement of higher-leveled government, the long-term development vision, the special purpose body, the use of tourism and recreation as an impetus and the public-private cooperation, some of which are new ideas and mechanisms to Chinese society.

Conclusion

Lujiazui Finance and Trade Zone is a riverine area, which used to be the place of production. In the background of Shanghai’s aim at the expansion of the tertiary sector and facilitated by the special economic status granted by the central state, Lujiazui has been effectively developed into a new CBD of Shanghai.

This paper reviews the development of Lujiazui from the stage of consultation,

planning, to actual physical and functional development. Later, Lujiazui's basic options of waterfront development are summarized using the framework proposed by Vallega (2001). Analysis reveals that there exist many common points between Lujiazui's success and the general principles of successful waterfront development noted by previous research. While some other factors unique to Lujiazui can not be neglect either, among which the involvement of the central government, the novel attempt to establish a special purpose development company to promote private investment are the most prominent two.

Tourism and recreational use of the waterfront did not receive so much attention at the beginning of the development. But as the maturation of this area, there has been more and more enthusiasm in tourism and recreation activities on the waterfront, both from the tourists' side and from the developers' side.

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