

Major Characteristics of Urban Waterfront Redevelopment in Japan

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There are more than 1,100 ports in Japan with a great variety in size and character. These ports have functioned not only as junctions of marine and land transportations but also as nucleus areas for industrial activities and cities since ancient times. With these multiple functions necessary for human life, ports can be said to be the urban waterfronts in Japan.

However, during the period of economic growth, the 1960's and 1970's port functions related to urban life were being neglected, whereas the functions related to industry were greatly intensified. In order to respond to the rapid increase in production and distribution, the extension of wharves and large landfills for industrial areas have been carried out in many ports and harbors all over Japan. Many ports have been developed seaward so that sufficient water depths for larger ships and adequate areas for cargo handling can be obtained, leaving deteriorated inner harbour districts behind, where various problems have occurred, such as water pollution, traffic congestion and loss of access to the waterfront for the people living in the city.

To solve these problems, meet the increasing need for waterfront amenities and make full use of ports for urban development, Japanese port development policy has been drastically changed since 1985. In addition, urban waterfront redevelopment projects, especially for inner harbour districts with their long history and good access to the city center, are currently being carried out in many ports.

This paper introduces the current conditions, basic patterns and major characteristics, as well as some successful examples of inner harbour redevelopment projects in Japan.

1. Construction and Improvement of Ports and Harbours Aimed at the New Epoch

In Japan, ports and harbours, which constitute a large portion of the urban waterfront, have served mainly as distribution and industrial production centers, and therefore tended to emphasize profitability and efficiency. As a result, only these functions have expanded, resulting in the expulsion of others from the waterfront area. This has led to today's typical waterfront in Japan where single-function zones are arranged in a parallel manner. Likewise in many cities, port and harbour areas have become isolated from other urban areas due to their lack of appeal.

To improve this situation and properly meet the needs of a maturing society in 1985, the Ministry of Transport devised a long-range policy for the construction and improvement of ports and harbours, entitled "Ports and Harbours for the 21st Century." This policy has ensured that the first priority in "the creation of a comprehensive port and harbour space" be a plan aimed at creating a high-amenities port and harbour complex where a diversity of functions are integrated in a harmonious way. The focus of the plan was to re-establish the social functions of the area, thereby developing an advanced and refreshing waterfront ideal for the forthcoming age.

As Japanese society becomes increasingly international and information-oriented, the existing functions of ports and harbours will also be required to advance further and integrate a diversity of functions related to various types of services, business and research. Moreover, in order for port cities to progress with sustained vigor, it is important to make full use of the waterfront potential by providing a wide range

of new roles. Thus, ports and harbours in Japan are expected to develop into comprehensive waterfront spaces capable of meeting the needs of a maturing society and offering a refreshing environment to the citizens of the port cities.

2. Full-scale Redevelopment of Ports and Harbours

The development of ports and harbours in Japan aimed at "the creation of a comprehensive port and harbour space" consists of two elements: formation of the "outer harbour" by enlarging the existing port and harbour area, e. g. constructing new wharves, and by developing man-made islands; and extensive redevelopment of the existing port and harbour area, a zone called "the inner harbour" in particular, into a new waterfront space.

(1) Present conditions and problems of the inner harbour

Through years of effort, ports and harbours in Japan have been greatly expanded. Of the entire port area, the inner harbour is the cradle of the port and comprises the oldest of the constructed facilities. Many of these facilities, including quays, sheds and roads, require reconstruction because they have become old and out-of-date as ships have become larger and cargo handling systems have developed.

Moreover, since the inner harbour was developed in earlier times, it often adjoins a highly dense urban area. In using the inner harbour as a modern terminal for mass distribution or as a site for heavy industry, therefore, various problems arise with regard to coordination with urban land use in the surrounding area. Thus, the inner harbour, formerly the most convenient location close to the city center and the area with a full range of services required for port activities, must be redeveloped to enhance the port function as a whole and to create a new waterfront space harmonious with port cities.

(2) Potential of the inner harbour

In developing the waterfront for the future, however, one cannot ignore the advantageous characteristics and large potential of the inner harbour areas.

First, the inner harbour is close to the city center. Coastal cities in Japan, like those in many other countries, have developed with their port activities. In most cases, therefore, the inner harbour area is unified with the city center. It is safe to say that the inner harbour has the largest potential for connecting urban and port activities and ensuring the citizens access to the waterfront.

Secondly the inner harbour experiences mild climatic conditions. Waterfront areas in Japan are generally subject to extremely severe marine phenomena. Ports and harbours, man-made calm water areas permit the safe use of the waterfront for various purposes. The inner harbour, in particular tends to be located at the innermost area of a port, and therefore has a very calm water area.

Due to these advantages, the inner harbour serves in many cases as a terminal for passenger ships or as a base for commercial fishing and small boat activities. It thus has the great potential of offering a special atmosphere and an attractive view of the port area.

The inner harbour is also endowed with historical and cultural resources deeply related to its formation. Many facilities with historical and cultural values, including traditional breakwaters, wharves, warehouses, lighthouses and bridges remain in the inner harbour area, reminding viewers of the efforts and prosperity of earlier times. Buildings with a historical tint are often seen in the city adjoining the port, as well. These areas also have the potential of helping to revitalize the waterfront area.

3. Framework for Policies

To construct a comprehensive port and harbour space through redevelopment and to create an attractive

waterfront area, public works, bond issue and other programs in conjunction with the private sector must be combined in the manner most suited to each project.

Points of particular importance are as follows:

- 1) Basic port and harbour facilities and environmental facilities, including green zones, which are essential, however require a large amount of investment and are not remunerative. They are constructed as a public work, with coordination made with regard to the public use. This enhances the profitability of redevelopment projects, as well as ensuring the proper creation of necessary public facilities.
- 2) When new land development is required, bonds are issued by the port and harbour management bodies.
- 3) The construction of the various facilities in a redevelopment project is arranged, with careful consideration given to the organization promoting the construction work, the scope and scale of the work, such that the financial support system works effectively. In particular, when that organization is a corporation founded jointly by the public and private sectors, many financial support systems are available.

Thus, to properly combine various programs, a comprehensive plan integrating the programs as a whole must be devised. In addition, careful coordination between organizations promoting individual programs is required when the related redevelopment project is commenced. To this end, comprehensive planning, using project research is required.

(1) Project research

As mentioned previously, a series of research projects have been conducted since 1986, in order to prepare the basic plans for projects aimed at the creation of comprehensive port and harbour space.

This project research (research on the roles of private and public sectors and feasibility studies of programs involving private corporations) was based on a master plan made for a key area of a port and harbour development project. Such research, as a rule, is financed equally by the national government, the port and harbour management body and local governments.

Research is divided (mainly) into four groups:

1) Port Renaissance 21 Project research

Research to prepare a master plan for the creation of a comprehensive port and harbour space by redeveloping the inner harbour area of an urban port which has old and out-of-date facilities.

2) Seaside Area Reactivation Project research

Research to prepare a master plan for the overall development of inactive and idle seaside areas. This will be undertaken by making full use of coastlines, and by introducing key facilities for enhanced land use efficiency and public works.

3) Marine Town Project research

Research to prepare a master plan for the construction of an attractive and characteristic seaside town in a local port, by making full use of the marine space, abundant marine resources and the superior features of the coastline.

4) Coastal Resort Project research

Research to prepare a master plan for the creation of a high-amenities resort, by constructing a high-quality marine recreation complex which centers on marinas conducive to the development of the region and meets a variety of recreational needs.

(2) Support for the port and harbour management bodies

In developing a comprehensive port and harbour space, the role of the managing bodies is extremely important. There are three national government financial support systems for these organizations.

First, the national government provides one-third of the project research cost.

Secondly, of the programs conducted in accordance with a basic plan devised and based on the project research results, public works and bond issues are given priority in budget preparations.

Thirdly, a program for the promotion of the advanced use of ports and harbours was promoted. Established in 1987, this program supports a system in which the national government provides one-third of the cost for land development (removal of former buildings and compensation) and the construction of fundamental high-tech facilities (such as artificial foundations), inside an area specified by the port and harbour management bodies.

(3) Support for private enterprises

In creating a comprehensive port and harbour space, the expected role of the private sector is extremely important. To encourage the participation of companies in waterfront development projects by ensuring corporate profitability, public sector support is required. Consequently, several systems have been established since 1986.

"The Provisional Measures Law for the Promotion of the Construction of Specific Facilities through the Participation of Private Enterprises" stipulates that tax reduction/exemption or a 5% incentive subsidy for construction of a facility be provided for specified facilities related to ports and harbours. These include international conference halls, passenger terminals, and port offices.

"The Special Measures Law for the Promoting Urban Development by the Private Sector" stipulates that long-term low-interest rate loans be provided through a private urban development promotion organization, to an enterprise aimed at constructing buildings with public facilities such as green zones or dock roads, which are deemed to contribute to the advancement of the port function.

In addition to these laws, "The Law for the Development of Comprehensive Resort Areas" and "the Multipolar Pattern of National Formation Promotion Law", ensure tax incentive measures for private port-related facilities.

In conforming with these laws in the construction of facilities and off-shore man-made islands, moreover, some supporting measures including no-interest loans (through NTT share sale profits and long-term and low-interest loans by the Japan Development Bank etc.) are also available.

4. Progress and Features of Redevelopment Projects

As mentioned previously, the Ministry of Transport in cooperation with the port and harbour managing bodies, is conducting a project research series for the creation of comprehensive port and harbour space. Of these research programs, the Port Renaissance 21 Project and Seaside Area Reactivation Project research programs are aimed at waterfront development through the redevelopment of ports and harbours; while the Marine Town Project research, Coastal Resort Project research and the offshore man-made islands-related research programs are intended to reactivate the waterfront area via the construction of new ports, rather than redevelopment.

Next, some waterfront development projects focusing on port and harbour redevelopment are introduced. The material is based on the results of the Port Renaissance 21 and the Seaside Area Reactivation research projects.

The table classifies waterfront redevelopment projects currently being promoted according to their basic concepts.

It shows that 22 projects are aimed at the creation of an active amenity space, centering on passenger terminals, about one-third of the total number of projects. The second largest number of projects, constituting about 30% of the total, are those focused on the development of historical and cultural features and scenic beauty. This is followed by projects emphasizing both high amenities for the citizenry and advanced distribution and port functions. This category accounts for about 18% of the total projects.

Projects focusing on international exchange and information functions and those centering on marinas constitute about 11% and 8%, respectively.

This last category of projects may seem to be somewhat few in number; this is because most of areas chosen for redevelopment were developed a long time ago and accordingly have historical and cultural traditions. Marine Town Projects and Coastal Resort Projects, not listed in the table, are in most cases aimed at new port and harbour development centered on marinas.

Table Classification of Waterfront Development Projects through Port and Harbour Redevelopment

Key concept	Number of project sites
1. Active amenity space centered on passenger terminals	22
2. Space with high amenities for the citizenry and advanced distribution and port facilities	12
3. Active amenity space centered on marinas	5
4. Space with amenities for the citizenry and international exchange and advanced information facilities	7
5. Active amenity space focused on the development of historical and cultural features and scenic beauty	20