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Study on the Changing of the Open Space Structure in the City of Osaka

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Abstract

This study is intended to identify the ideal role of open space planning in the establishment of an urban open space network by elucidating the relationship between the historical development of the urban structure of the city of Osaka and the historical development of its open space structure from the late 19th century to the present day.

The study revealed the importance for the Osaka metropolis of perfecting a new open space structure using zoning controlled open spaces such as scenic zones and linear open spaces such as roads and rivers (in addition to other network elements such as farmland and canals) as its skeletal structure, existing urban parks as focal points, and other open spaces such as privately owned land as supplemental elements.

Study Goal

As cities expand it becomes difficult to maintain a harmonious relationship with open spaces, and this expansion has come to be seen as necessarily involving the subordination of open spaces. In order to solve the problems of the urban environment, however, it has become necessary to restore the harmonious relationship between the city and open space by recognizing open space as a part of the urban infrastructure that, from the viewpoint of environmental conservation, scenic amenity, recreation and disaster prevention, is as important as city streets. The objective of this study is to identify the ideal role of open space planning in the establishment of an urban open space network by elucidating the relationship between the historical development of the urban structure of the city of Osaka and the historical development of its open space structure from the late 19th century to the present day.

Study Method

First an understanding was established of the historical development of open space planning and social trends in Japan by documentary research. Next, five historical periods were defined for study: the late 19th and early 20th century (1868-1926) which were a turning point for open space planning in Osaka; 1926-40 focusing primarily on open space planning in Osaka; the post-war recovery period; the period of rapid economic growth of the 1960's; and the subsequent period of stable economic growth. In addition to establishing an understanding of the urban

structure from city-planning drawings from each of the selected periods, 1/25,000 topographical maps were used to create drawings which highlighted open spaces such as urban parks, farmland, rivers and canals and these drawings used to interpret open space structure. Finally, correspondences were sought by comparing the urban structure of each of period with its open space structure.

Results of Analysis and Discussion

1) *Historical Development of Open Space Planning and Social Trends in Japan*

Table 1 contains a summarization of the historical development of open space planning and social trends in Japan based on documentary research.

The history of park administration in Japan began with the establishment of the concept of the urban park in 1873 by proclamation of the Dajokan (highest government office from 1867 to 1885, when it was replaced by the cabinet). Modern urban parks were constructed by Tokyo municipal ordinance in 1888, and were defined as a urban facility by the old City Planning Law of 1920. Park administration philosophy of the period 1868-1926 was limited to individual urban park projects rather than addressing regionally based open space planning. The concept of regional open space planning in Japan first came into being with the initiation of the Tokyo Open Space Plan in 1932, was carried over into the Air Defense Open Space Plan, and then into the post-war City Restoration Plan. Due to pressure to restore the postwar economy however, the idea of regional open space planning existed in name only. However, when the new City Planning Law was enacted in 1968, the continuation of the idea of regionally based green belts was

Table 1 Historical development of open space planning in Japan

Year	The history of park administration in Japan
1873	Proclamation of the Dajokan :Begining of establisbment of the concept of the urban parks
1888	Tokyo Municipal Ordience :Begining of systematic preparation of urban parks
1920	The Old City Planning Law :Urban parks were defined as a municipal facility
1932	The Tokyo Open Space Plan :Begining of the concept of regional open space planning
1946	The Post-War City Restoration Plan :Enforcement of regional open space planning
1957	The Urban Park Law :Establishment of management system of urban parks
1968	The New City Planning Law :Introducting open space concept to the distinction between urban area and urban cntrolled area
1971	The 5-Year Emergency Measures Law for Construction of Urban Parks: The quantitatve expantion of individual park space
1977	Master Plan for Greenary :Revival of regional open space planning
1985	Urban Tree Planting Promotion :Saving of green space by utility of private land

manifested in the distinction between urban areas and urban controlled areas. Against this background, the concept of regional open space planning lost favor in the designated urban areas, and, as evident in the 5-Year Emergency Measures Law for Construction of Urban Parks provision of 1971, priority tended to be given to quantitative expansion of individual urban park space. Subsequently however, the importance of region-wide open space planning has been rediscovered, with parks and greenery clearly reestablished as important elements of the urban infrastructure in the Master Plan for Greenery of 1977, resulting in resumed discussion of regional open space planning.

2) *Historical Development of Open Space Structure and the Question of Regional Open Space Planning in Osaka*

Taking as a base the historical development of open space planning and social trends in Japan outlined above, a detailed examination is made below of the five periods studied: the late 19th and early 20th century, which was the turning point for open space planning in Osaka, 1926-40 focusing primarily on open space planning in Osaka, the post-war recovery period, the period of rapid economic growth, and the period of stable economic growth.

Figure 1 shows the structure of open space in Osaka during the late 19th and early 20th century. From the figure can be seen that the urban structure of this period is still strongly influenced by the castle town layout of the premodern period. In other words, the town's development along the Uemachi ridge overlooking the Osaka port is evident and the strong influence of topographical features is discernible. Likewise, park provision is concentrated on the Uemachi ridge (Osaka Castle, Shitennoji Temple, etc.) and along its southern extension (Nagai Park, Shirokita Park, etc.). However, with these urban parks serving as excursion districts, there is no evidence of a planned arrangement which would allow the city's open space structure to be discerned from the distribution of urban parks. The open space structure of this period however shows that the two to three kilometer-wide farmland belt surrounding the urbanized section and the numerous canals within the latter performed the function of open spaces, and can be recognized as an organic open space structure.

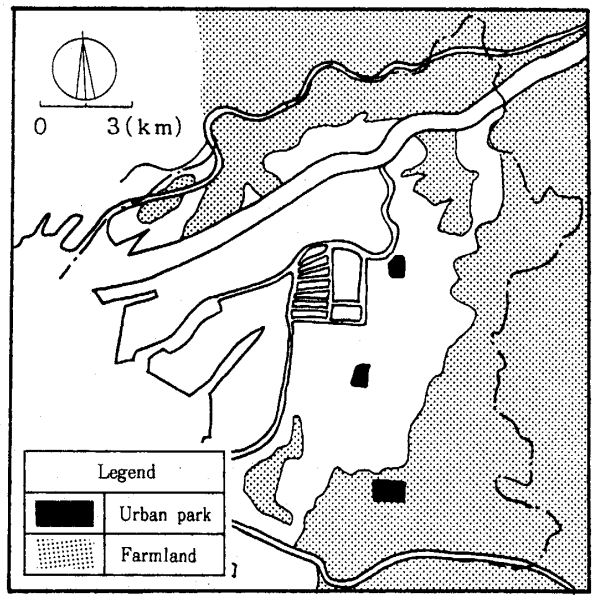

Fig.1 Open-space structure during the late 19th and early 20th century

Figure 2 shows the Osaka Open Space Plan and Air Defense Open Space Plan proposed in 1938. From the mid-1920's, there were calls for a regional open space plan to control the world-wide phenomenon of urban expansion, and an open space plan was proposed for Osaka. The plan focused on large projects such as the Tsurumi and Kyuhoji parks, and suggested a circular green belt that would surround Osaka to control city expansion, or open spaces radiating from the center to form a network with the circular green belt and urban parks.

The Air Defense Open Space Plan added an inner ring of open space to the radiating open spaces and circular green belt described above, and aimed to establish an overall open space network for the city. In the inner city where extensive strips of open space could not be created due to overcrowding, small open spaces for air defense were arranged at regular intervals, and something resembling the modern ideal of even distribution of neighborhood parks began to develop.

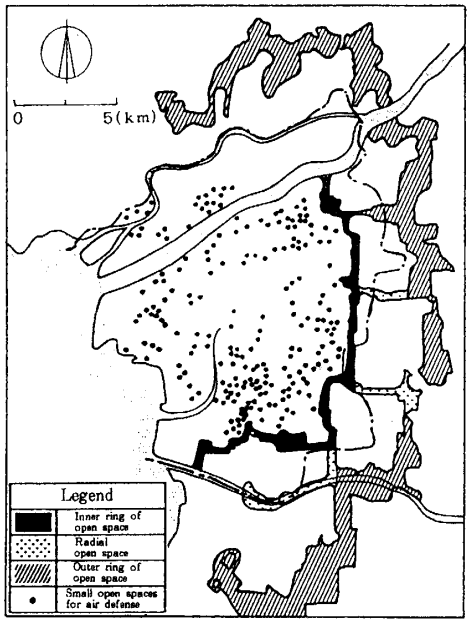

Fig. 2 Air Defense Open Space Plan

Figure 3 shows a city-planning drawing from the post-war recovery period. The Midosuji avenue which runs north to south through the center of Osaka was completed during this time, creating an urban configuration centered around this north-south axis. The designation of the canals running through the city center as urban parks is also an important characteristic of this period.

Figure 4 shows an open space structure drawing from the post-war recovery period. During this period, the regional open space planning of the preceding period was undone, provision of individual urban parks went ahead, and, as can be seen particularly in the eastern portion of the city, farmland was eroded by urban sprawl, leading to the gradual destruction of the organic open space structure. The canals of the city center however were designated as parks by the City Restoration Plan, partially establishing the function of an inner-city open space network.

The New City Planning Law was enacted in 1968, with a distinction drawn between urban areas and urban controlled areas. The regionally based city green belt established when the Osaka Open Space Plan was drawn up, and continued under the planning of the post-war recovery period as designated open space, should, if national trends had been followed, have been de-

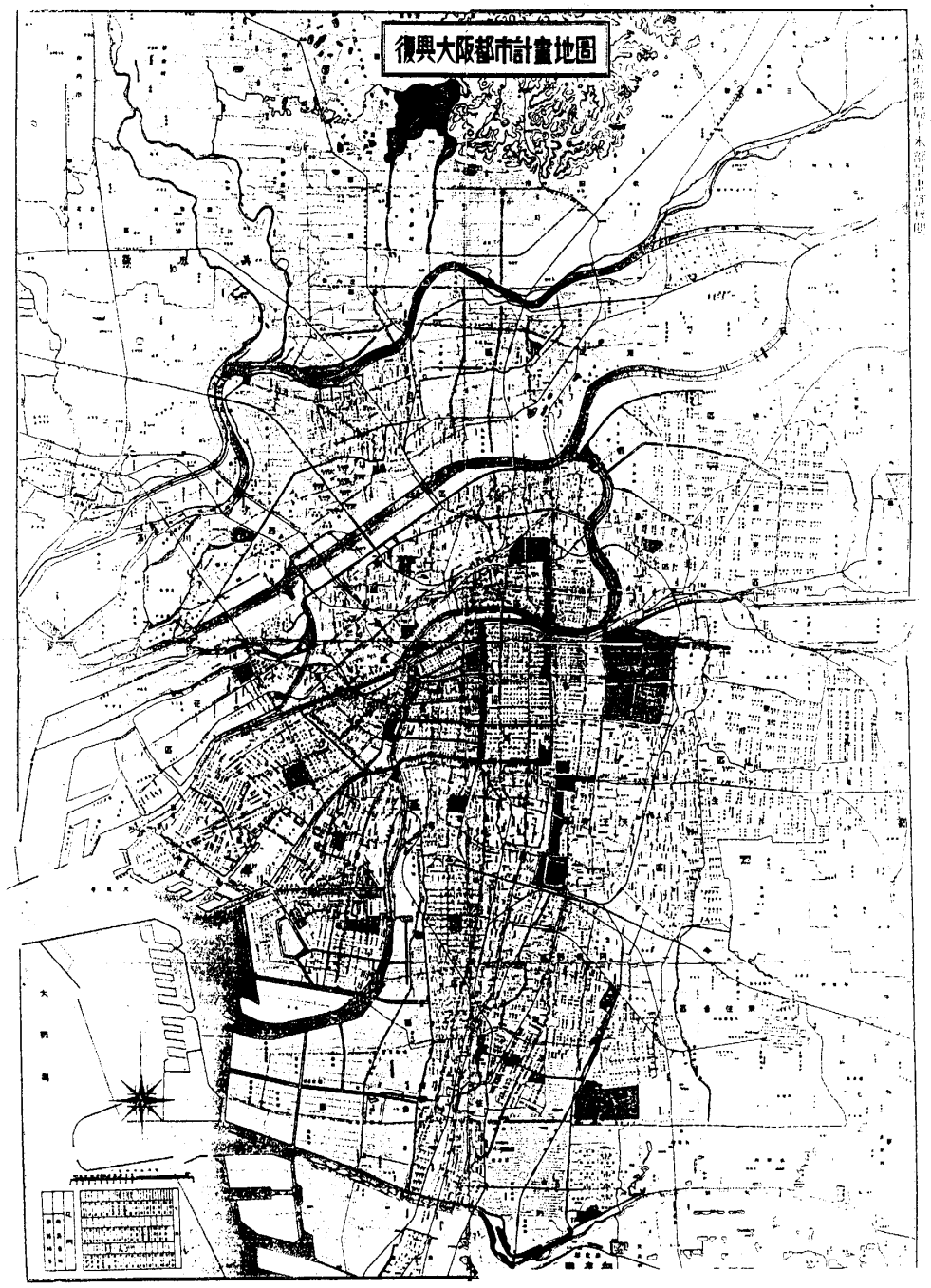

Fig.3 City-planning drawing from the post-war recovery period

signated under the new law as urban controlled areas. However, no such areas were designated in Osaka and the whole city area was declared an urban area.

Figure 5 shows an open space structure drawing from the period of rapid economic growth beginning in the mid-1960's. Quantitative expansion of individual urban parks was the priority during this period, while little attention was paid to the destroyed city green belt which had formed the regional open space structure, with the main emphasis, as can be seen, on providing small urban parks of the block park level. Furthermore, the canals which served as a open space network in the inner city were filled in for the construction of city highways, completely destroying the organic open space structure. On the other hand can be seen an attempt to create

a north-south open space network by designating scenic zones on the Uemachi ridge, and a networking of new open spaces using locally controlled scenic zones began to manifest itself. The urban structure of this period reveals that the north-south axis configuration established during the post-war recovery period might be changed to an east-west axis configuration by the Chikko-Fukae axis, a main route running east-west across Osaka and opened in 1970. This period is also marked by the designation of a large urban park along the riverside of the Yodo River.

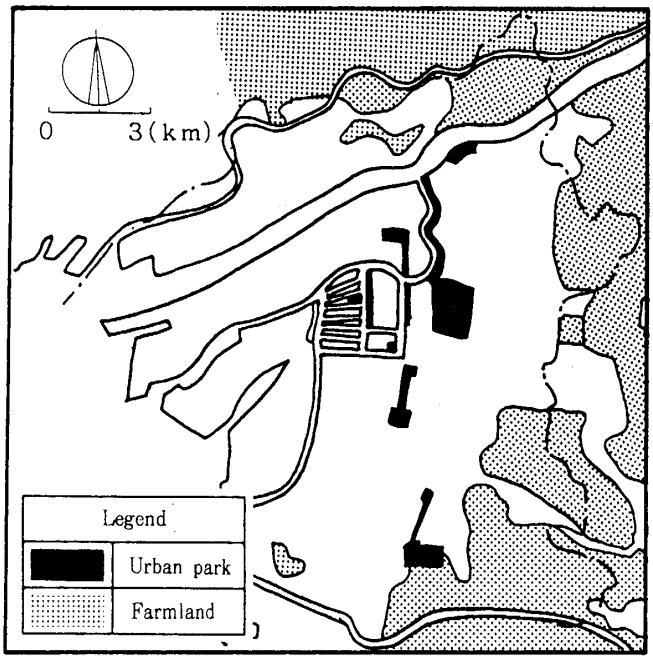

Fig. 4 Open-space structure drawing from the post-war recovery period

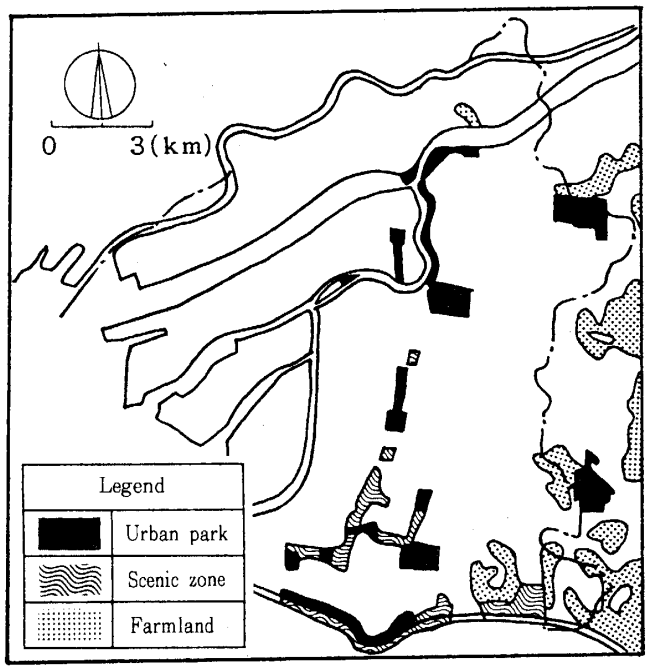

Fig. 5 Open-space structure drawing from the period of rapid economic growth

Figure 6 shows the open space structure during the period of stable economic growth. This shows that a new east-west axis running from the newly developed waterfront area to Osaka Business Park, where a subsidiary urban center is being laid out, has been added to the north-south structure of the city. Accompanying the changes in urban structure described above, change in open space structure is exemplified in the establishment of large-scale urban parks along riverfront. In the case of the Yodo River, almost the entire section of the river within the city limits has been turned into a urban park. The upper reaches of the Yamato River have been designated as a scenic zone, and construction of a urban park is now proceeding in earnest on the lower reaches of the river. On the other hand, the large-scale designation during the previous period of areas of the Uemachi ridge and its extension as scenic zones was now limited to the Ohkawa river basin, Osaka Castle, the Uemachi temple and shrine zone and the Tezukayama area.

Figure 7 shows the greenery distribution drawing for Osaka's First Master Plan for Greenery of 1985. In addition to a north-south axis of greenery running from the Ohkawa river basin past Osaka Castle and to the south of the Uemachi ridge, the main focus of the master plan is on river axes along which much parkland has already been built, and the new east-west axis of

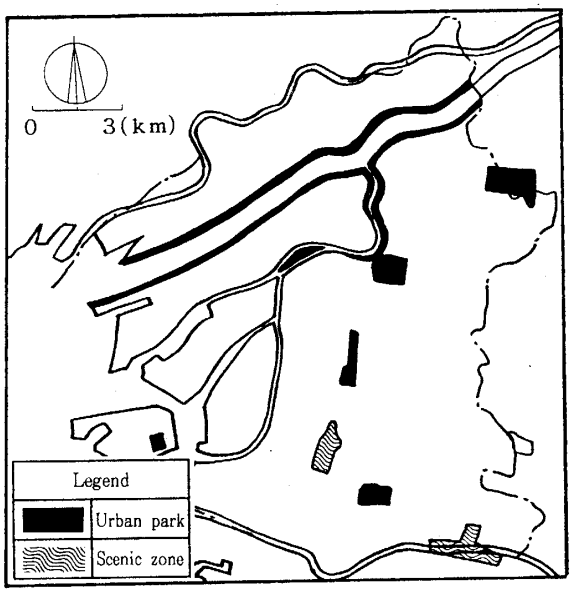

Fig. 6 Open-space structure drawing during the period of stable economic growth

the city's urban structure. An example of a new greening strategy is seen in the 'floral stations' project which involves stations such as Shin-Osaka and Umeda, those along the Midosuji avenue to Nanba, and the area around Tennoji Station. These aim chiefly at increasing the presence of greenery on city streets, and represent the new direction in intraurban greening. One problem of the First Master Plan for Greenery is that it mainly concentrates on a skeletal structure of large open spaces, and does not give adequate scope to diversified local character. Furthermore, the plan to increase greenery focuses only on streets, and has therefore been judged insufficient.

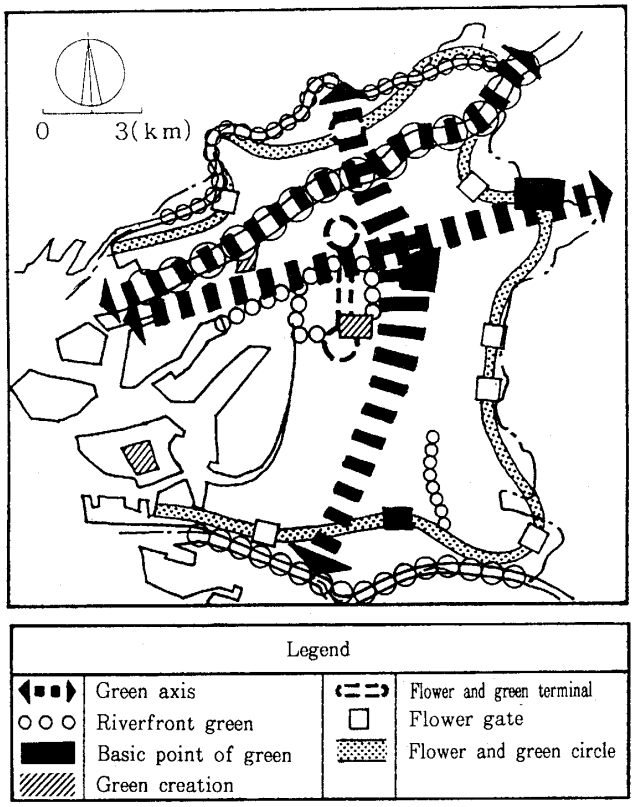

Fig. 7 The greenery layout for the First Master Plan for Greenery of 1985

Conclusion

The above analysis shows how, as a result of the pressure of urbanization, the farmland and canals which had formed the regional open space structure of Osaka gradually disappeared. Subsequently, the idea of regionally based open space planning which emerged in the 1920's fell victim to the war, giving way to a quantitative expansion of individual urban park area. With the First Master Plan for Greenery however, the idea of regional planning has been revived, and an attempt to establish an open space network to underpin the urban structure has begun.

Figure 8 shows the greenery layout for the second master plan proposed at the beginning of the 1990's. This proposal experiments with the structurizing of open space with three cultural axis of greenery concentrating new urban functions: a cross-center zone; the existing north-south axis which is the historical greenery axis, and the riverfront axis which takes advantage of open space along the Yodo River. The city-center area, seaside reclaimed area, the eastern mountain fringe and the traditionally urban western area are all recognized as important parts of the urban structure, and greening projects are carried out so as to conserve local character. In concrete terms, this involves long-term projects such as making use of vacant lots in the city center area, providing water-themed open spaces in the seaside area, using arable land as open space in the eastern area, and promoting the greening of canalsides in the western area, as well as experimenting with the introduction of locally controlled greenery-rich areas such as scenic zones.

As indicated by the second master plan, in order to achieve harmony between city and open space, it is important for metropolitan areas such as Osaka to energetically promote a new type of open space network using zoing controlled open spaces such as scenic zones and linear open spaces such as roads and rivers (in addition to other network elements such as farmland and canals) as its skeletal structure, existing urban parks as focal points, and other open spaces such as privately owned land as supplemental elements.

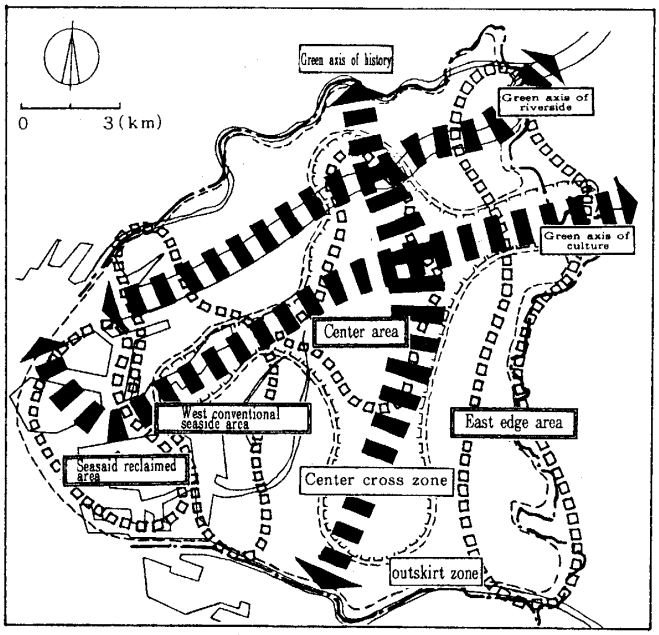

Fig. 8 The greenery layout for the Second Master Plan for Greenery proposed at the beginning of the 1990's.

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