

Public Open Space Policy in Kaohsiung Taiwan

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Abstract—The public open space policy in Kaohsiung is in accordance with Articles 42 and 43 of “Urban Planning Act”, which is regulated to enhance the convenience of the citizen’s activities and to ensure a good urban living environment. Article 45 also stipulates the parks, green spaces, squares, children’s playgrounds, and stadiums. The public facility in this research is focused on parks. There are 37 parks in Kaohsiung. Parks is important for Kaohsiung people because parks are considered as part of the lifestyle and environmental protection specially to provide better air quality.

Keywords— *public open space, environmental regulation, environmental protection*

I. INTRODUCTION

Located in Southern Taiwan, Kaohsiung is the second biggest city after Taipei. After Kaohsiung county and city merge in 2010, the city has a vision as happiness harbor city with a new horizon. Although Kaohsiung has been facing the gap between the city and the county it does not stop the development in Kaohsiung. Kaohsiung’s government keep working hard to fulfilling people expectation in increasing their life quality. Consequently, to pursue economic and environmental balance Kaohsiung created many programs and one of them is Greene urban. The Greene urban form a green lung of an industrial city. For example, The Aozihdi Park covers a ten hectares area was transformed into an urban forest park and claimed to be the first carbon neutral park in Taiwan (Environmental Protection Bureau Kaohsiung City Government 2015). They also created 18 wetlands over 900 hectares to help absorb carbon sink with beautiful scenery. As a result, in three consecutive years from 2008 to 2010 Kaohsiung considered as the most competitive city in term of environmental capability.

Likewise, Kaohsiung received the Environmental Protection Administration’s review on energy saving and carbon reduction in 2010 and many more achievements in environmental capability. According to Public Work Bureau of Kaohsiung City Government, there are 37 parks and 8 wetlands (P. W. B. K. C. Government 2019). But people things the number of public open space in Kaohsiung is not enough. Based on the statement of Director of Urban Development Bureau of Kaohsiung City Government¹, the public open space should cover a minimum 10 percent of total area of Kaohsiung and the government still working to achieve the ten percent.

Parks are part of Kaohsiung people’s healthy lifestyle. It’s a place to escape from day to day activities, release the stress while connect and interact with others. It’s also a nice place to raise kids while exercise and take the pet around. After enjoying their dinner, Kaohsiung people like to go outside just to walk and relax. Being next to the ocean, Kaohsiung is quite hot therefore people enjoy the parks with more tree to feel the coolness provided by the trees.

II. LITERATURE REVIEW

The increase of human population causes more conflict in the use of natural resources and generate atrophied that need to be addressed. This conflict provokes to an environmental movement around the world (Mol 2000). In the United States, environmental movement began in 1960 and 1970. Taiwan’s environmental movement has been started over a decade. The national leader calling for preservation over development for valuing nature for its own sake (Bol 1998) p.333. In 2015 Kaohsiung city enacted The Autonomous Act of Kaohsiung City on the Maintenance and Management of Environment to Maintain city environmental quality and promote sustainable development (E. P. B. K. C. Government 2018) p. 85.

A. Urbanism

According to (Erdkamp 2010) urbanism describes the distinctive features of everyday experience and interactions in the city. Meanwhile, (Roy 2011) think that although city offers a better quality of life it creates a “subaltern urbanism” which known as the slum area. “The slum as a terrain of habitation, livelihood, self-organization, and politics” (Roy 2011) and how urbanism reshaping the planetary ecology (Hodson and Marvin 2010). Neoliberalism discourse has created a landscape of urban development (Peck, Theodore, and Brenner 2013). Urban development evolution creates new urbanism. The movement of new urbanism started in 1980’s in America. “It promotes mixed-use, mixed housing types, pedestrian-oriented streets, and high design standards” (Grant 2015). Many cities try to incorporate new urbanism in the way they plan the city (Ritchie 2009). The cities begin to integrate environmental to be more ecologically friendly and sustainable (Steiner 2011). Basically, new urbanism offers a modern way of life (Clarke 2015) but not contradict with the environmental (Ansari 2018).

¹ Yu-I Lin, Director of Urban Development Bureau, Kaohsiung City Government reply to my email upon my request for interview and explained about public open space in Kaohsiung.

The email was sent on 7th March 2019. He has been delegating the interview to three of his staff.

B. Environmental Policy

Environmental policy bears meaning for “a government's chosen course of action or plans to address issues such as pollution, wildlife protection, land use, energy production and use, waste generation, and waste disposal”(Encyclopedia 2003). Over the past environmental become omnipresent indicators among the public, policy and scientific domains (Butt 2018) defined as global environmental problems (Adger et al. 2001). Some indicators such as environmental performance index introduce by Yale (Gan et al. 2017).

C. Public Open Space

There were myriad researches about public open space, mostly the research trying to seek the relationship between the public open space with the quality of life. “City parks and open space improve our physical and psychological health, strengthen our communities, and make our cities and neighborhoods more attractive places to live and work”(Sherer 2006). Rutherford et al. explain public open space in detail as:

“Public open space (POS) is generally described as land set aside for the purpose of public enjoyment and protection of unique, environmental, social and cultural values for existing and future generations. Allocation of open spaces is most often determined by a local or state government authority through urban development processes” (Rutherford, Carter, and Christidis 2013).

Furthermore, Rutherford et al. classified public open space into local open space, neighborhood open space, district open space, regional open space. She describes the function of the POS as recreation spaces, sport spaces, and natural spaces. Public open space can also create a sense of community (Francis et al. 2012).

III. METHODOLOGY

The number of interviewees for this research in total was 28 peoples. 4 persons with background comes from Urban Planning Bureau Kaohsiung City Government, 1 person from the Environmental Protection Bureau Kaohsiung City Government. Two professors from National Sun Yat-Sen University were involved in their capacity as an expert in public policy and politics. There were also 9 master students originally from Kaohsiung City. Two international Ph.D. students from NSYSU were entangled to give a foreigner perspective. And 10 people who are resident of Kaohsiung were interviewed as parks visitor. There are several document analysts in this research. The documents being used for analysis were “The Urban Planning Act”, Smart City Development in Taiwan, Kaohsiung City Public Works Collection 2016, Kaohsiung City Strategies and Action on Mitigation and Adaptation Document and some statistic data from Bureau of Statistic.

IV. RESULT AND ANALYSIS

Land planning in Taiwan can be traced back to the Japanese colonial era (1895-1945) said (Chung 2008). At that time Japanese envisioned Taiwan into three major areas, Taipei as center of economic and politics, Taichung the hub of

industry and Kaohsiung the center of heavy industry (Chung 2008). In line with Chung, Kun mentioned that (Kun 2009) Kaohsiung was built to be an industrial port by the Japanese at the beginning of 20th century, since then urban fabric continuously shape Kaohsiung as Japanese effort to invaded the Southeast Asia and conquer East Asia. Under the effect of heavily industrialization and industrial park has attracted people to come to be a worker which causing crowded population in the past. Meanwhile, public service space was very limited. The desire of having public space creating an urban street with informal activities (Kun 2009).

Before 1970 the development in the island concerted in economic development. Heavily industry oriented in land use planning raising some issues in environmental degradation such as land susceptible because of the under-water exploitation for the aquaculture industry. Air pollution and waste management from factory raising people concern and encourage environmental movement. Taiwan government finally shifted their policies by enacting the Regional Planning Act in 1974. The regional planning act regulating the purpose of land use (Chung 2008). The urban planning act has a specific instruction where the road, public facilities, and the specific area should be built.

There is a specific part of the Urban Planning act that regulates the open public space, which is article 42, 43 and 45. Article 42 mentioned if you plan something in the urban planning area you should provide green space or park. Article 43 mentioned population, land use, and transportations should consider if the government want to build public facilities in order to provide convenience to the people. Article 45 specifically mentioned that public space should cover 10% of the city total planning area. The urban planning act must be reviewed every 3, 5 and 10 years. Up to 2008, the urban planning act has been revised for six times. Figure 1 shows the promulgation of the regulation regarding land use and environmental protection. By the promulgation, we can see the shifted policies from those who emphasize the industrial growth to the environmental concern.



Figure 1. Regulation associated with land use and environmental protection (Chung 2008)

“According to Urban Development Bureau, in 2016 city development area was around 29,607.96 hectares, while non-city developed area was 12,248,32 hectares. And for residential used was 29.3%, 5.18% for business and 10.68% for the industry. The designated land for the public facility under planning is 14,979.80 hectares. Besides the pedestrian area (5,365,45 hectares), the majority of designated land is for the use of parks (3,248, 97 hectares), and schools (1,578.74 hectares)”(E. P. B. K. C. Government 2018)p. 89. Under the urban planning act, the park also regulated in a specific way. For example, every community must have one park and each park should not less than 0.5 hectares.

All the interviewees agreed that park is important for Kaohsiung people. People usually go to the park to have exercise; they like to take their dog to have a little walk. They also like to observe the birds, having a conversation with their friend or just play and interact with their children for quality time. Not only family with children who love to go to the park to give their child some running space, from my observation most of the park visitors is elderly. For young couple come to the park not only to exercise but to educate their children about the environmental

“We can bring our children here to let them have contact with nature, so when they grow bigger, they will care more for nature, it is something about education. If you have more greens in a city, the value of the city will be higher. And for Taiwan, the area of the park can’t help much towards the air pollution, but it has meaning of educating towards the younger”².

However, some of the informants expect the government to provide more parks. But mostly they think the number of parks in Kaohsiung is enough. One of the interviewees stated that:

“Kaohsiung have more parks compare with other cities in Taiwan, Kaohsiung having more and more parks within these 10 years, I live around here, and I find that we have quite a big area of green at here”³.

A. Urban Planning Act Policy

According to (Huang 2019) “Taiwanese planning system is highly centralized, technocratic, and development-oriented”. Based on the regional planning act, Taiwan applied a dual land management system the urban planning system and non-urban use control system (Huang 2019). The urban planning law consisting of nine chapters and 87 articles. According to the first article the law is enacted for the purpose of improving the living environment resident, and promoting a planned and balancing development in city, town and rural settlement (Interior 2010). To illustrate how strict the urban planning policy in Taiwan, Huang demonstrate it in the figure as follows:

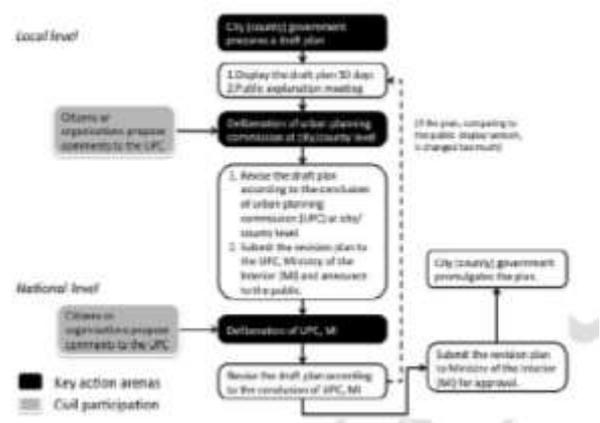


Figure 2. Legal procedure of masterplan-making in Taiwan (Huang 2019)

All urban plan in city and county in Taiwan shall under the guidance of this law. The city planning should anticipate 25 years of development in advance. This law is basically regulated six elements which are a master plan, detail plan, the implementation plan, preferential development area, new urban development and last old area renewal. In article 20 stated that formulated by city or county require the approval of the Ministry of Interior and cannot be implemented before they were presented and approved. Based on article 15 subsection 8 parks is one of the objects regulated in the master plan.

Article regulating the public open space specifically in article 42, 43, 61 and 76. The details as follow:

Article 42: Depending on the circumstances, the area covered by an urban plan shall include land reserved for the following public facilities:

- 1) Roads, parks, greeneries, squares, playgrounds, civil airports, parking spaces, waterways, and ports;
- 2) Schools, social education institutions, sports venues, marketplaces, medical and health institutions, and government agencies
- 3) Water supply and drainage systems, post offices, telecommunications offices, substations, and other public services;
- 4) Other public facilities specified in this chapter.

In principle, the public facilities specified in the subparagraphs of the preceding paragraph shall be installed in public land when available (Interior 2010).

Article 43: The public facilities to be installed, the location and the size of the area shall be determined according to the population, land use, transportation systems, and future development in order to facilitate the daily life activities of the residents and ensure the quality of the living environment (Interior 2010)

Article 45: Parks, sports venues, greeneries, squares and playgrounds shall be installed systematically according to

² Interview with park visitor, which is couple with their children, 23th March 2019.

³ Interview with the 40 years old female park visitor, 23th March 2019

the population density and the natural environment. Except for special circumstances, the total area used for these purposes may not be less than 10% of the total area covered by an urban plan (Interior 2010).

However, in December 2000, the requirement of minimum of 10% for parks, etc. cannot be fulfilled by counties/cities. Only 25 spots out of 446 spots can obtain the expectation it is merely on 2.9% (Interior 2001)

Article 61: After obtaining the approval of the concerned special municipality or county/city government, private individuals or groups may participate in the new urban development. However, the land included in the development plan shall measure 10 hectares at the minimum and the application shall be submitted along with the following documents:

- 1) Proof of land size and ownership or authorization,
- 2) The detailed plans specifications and maps,
- 3) The public facility plans,
- 4) The layout of buildings,
- 5) The engineering schedule and completion dates,
- 6) The financial plan,
- 7) The plan for disposal of land and buildings after completion.

The private individuals or groups referred to in the preceding paragraph shall be responsible for the roads, playgrounds, parks and other necessary public facilities to be installed in the new urban to be developed (Interior 2010).

Article 76: Public land for roads, parks, greeneries, squares, waterways, and ports that falls into disuse due to implementation of urban plans and reclaimed land adjacent to areas covered by urban plans shall be managed and utilized by local governments or township, town or county city offices implementing the urban plan. The proceeds from disposal of such land may be appropriated to fund the implementation of urban plans (Interior 2010).

Furthermore, to avoid urban sprawl, many town and cities create the green belt. Urban growth in Taiwan mostly growth vertically not horizontally. This is related to the expensive of a land price. Taiwan is a small island where land is limited and very precious. One of the informants said that the government builds the park to increase the land price. But this statement was denied by other informants who said that the construction of the park had been adjusted to the urban planning, therefore, the government cannot be easily to increase the land price. Taiwan people have surrendered their space by living in the vertically building, it is understandable if they expect to have public open space because they cannot have the space for private ownership. Taken by this argument the park's existence become essential.

“There are so many people building houses in Kaohsiung, as the number of the houses increase, there will also be much more empty houses that are not necessary. So, I think that we should build more parks instead of houses”⁴.

Why park is important for Kaohsiung people one of them answered:

“The adequateness of greens in the city has been one of the requirements of a perfect city planning; furthermore, Kaohsiung has a bad image which is a city with many industrial areas and bad quality air. Therefore, parks play an important role for Kaohsiung people such as providing the citizens a place to spend their time, and I think trees in the park purify the air in some way”⁵.

While another informant has answered:

“The natural surroundings of the park are important. People nowadays often dealing with huge mental stress, they must get themselves closer to nature, to relax and adjust their mental and physical condition”⁶.

Most of the informants were satisfied with the quality of the parks in Kaohsiung. However, they give some suggestion to improve the parks. There has been a debate between people carrying their pets to the park and the one that not. He complained:

“I think some people will come to the park to walk their dog, and the poop of those dogs is making the environment worse. And I think the cleanliness of the public toilet needs to be improved”⁷.

Other suggestions such as government should pay more attention to the homeless people staying in the park, it has reduced the level of comfort to the park visitors. They also suggest the government to build a library in the park and the park design to be more fashionable. They also hope for more trees, grasses, flowers, and sports facilities. The advice given by informants is not only intended to the government, but there is also one who gives advice to fellow residents:

“The handicapped space needs to be improved. In the center of the city, they are doing well in maintaining the cleanliness of the surrounding, I think maybe it has to do with the etiquette of the residents. And for the rural areas which are far from the city, like Ren Wu district, I think they need to improve the etiquette of the residents. Because the residents over there are throwing rubbish everywhere, and they didn't clean up the poop of their dogs, so I think the education towards the residents need to be done”⁸.

⁴ Interview with the 30 years old male park visitor, 23th March 2019

⁵ Interview with the 27 years old female NSYSU master student, 15th March 2019

⁶ Interview with the 44 years old female park visitor, 23th March 2019

⁷ Interview with the 66 years old male park visitor, 23th March 2019

⁸ Interview with the 48 years old couple with their children park visitor, 23th March 2019.

In 1950 Taiwan was focus on economic development causing some change from agriculturally based to industrializing based. At the end of the 1990s with the reformation of the administration system render the distribution of power, there is some transfer of power from the central government to local government. However, the local government highly depend on the central government for financial support. To generate some revenue, many of the counties and cities convert the farmland into an industrial park.

With highly centralized urban planning triggering some tension between the central government and local government. On one side Taiwanese trust the central government to supervise the land use in counties and cities to avoid overuse land especially for private ownership. But the other side the local government were screaming because of the strict rules of land use, they need to have central government approval to build or develop some areas which consequently binding them to have some freedom in the development.

Public open space in Kaohsiung binding by the urban planning act. The Kaohsiung government cannot arbitrarily create new parks or change the land function without the approval of the central government. This policy can protect the people from the misuse of land function. Event ought the policy be not popular among the city planner. Is it still unclear whether the Kaohsiung government can up to the expectation to provide the 10% of the public open space that should be provided by the government?

V. CONCLUSION AND RECOMMENDATION

Public open space policy in Kaohsiung regulated under the urban planning act article 42, 43, 45, 61 and 76. There are three important findings in this research related to public open space policy in Kaohsiung which are: economically, health and environmental protection. I will address it one by one. At first, Kaohsiung does not build the parks because they have a concern about the environment, Kaohsiung even does not have enough public space. From the history, we know that Japanese force Kaohsiung to be heavily port industry area. Taiwan's policy makes it even worse while emphasizes the economic development and creating a lot of industrial parks which decreasing the environmental quality.

Although Taiwan has quite steady in economic development because of the rapid growth of the industry, they also suffer the consequences. Not only environmental degradation Taiwan suffer from a natural disaster like typhoon, earthquake, and landslide. The high value for health has been a big motivation for Taiwan people to force the government shifted their policies. With more prosperous society increase in Kaohsiung, the demand for healthy life and environmental protection arise. People become more aware in the environment and showing the awareness by trying to manage the domestic waste, reducing the energy consumption, changing the lifestyle by using the mass transportation to reduce the emission produced by the private vehicle. People are aware that environmental damage has a direct influence on their health, for them to

regain a healthy life they need to aware of the environmental.

In term of public space policy, the Kaohsiung city government so far has shown the consistency in implementing the urban planning act. But the government should take into consideration to give another permit to businessman to build another housing or apartment. Instead of granting another permit, they should evaluate the number of occupants in every building. The population in Kaohsiung growing slowly, Kaohsiung does not need new building, but Kaohsiung needs more parks to create a happy, enjoyable and healthy life to be a desirable city.

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