

การพัฒนาพื้นที่สวนสาธารณะเพื่อตอบรับกับนโยบายและมาตรฐานของภาครัฐ : กรณีศึกษา เทศบาลเมืองกระทุ่มแบน จังหวัดสมุทรสาคร

Park Area Development Plan in Response to the Government Policies and Standards: Case Study of Krathumbaen Municipality, Samut Sakhon

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บทคัดย่อ

จากสถานการณ์การพัฒนาเมืองในปัจจุบันที่มุ่งเน้นการเติบโตทางเศรษฐกิจ การดำเนินการตามนโยบายและมาตรฐานของภาครัฐในการพัฒนาพื้นที่สวนสาธารณะในเมืองจึงมักถูกละเลย อย่างไรก็ตาม พื้นที่เมืองพื้นที่หนึ่งที่เป็นตัวอย่างของการดำเนินการตอบรับกับนโยบายและมาตรฐานของภาครัฐในการพัฒนาพื้นที่สวนสาธารณะ ได้แก่ เทศบาลเมืองกระทุ่มแบน จังหวัดสมุทรสาคร บทความวิจัยชิ้นนี้ จึงมีวัตถุประสงค์เพื่อศึกษาสถานการณ์พื้นที่สวนสาธารณะและความคิดเห็นของประชาชนที่มีต่อการพัฒนาพื้นที่สวนสาธารณะ และวิเคราะห์แนวทางการพัฒนาพื้นที่สวนสาธารณะในเทศบาลเมืองกระทุ่มแบน จังหวัดสมุทรสาคร ที่มีประสิทธิภาพและตอบรับกับนโยบายและมาตรฐานของภาครัฐ ผ่านเครื่องมือที่ใช้ในการวิจัย ได้แก่ การจัดทำแบบสอบถาม การสำรวจภาคสนาม และการสัมภาษณ์ ซึ่งผลการวิจัยพบว่าความสำเร็จของการพัฒนาพื้นที่สวนสาธารณะในเทศบาลเมืองกระทุ่มแบนเป็นผลจากการคำนึงถึงการเข้าถึงและกิจกรรมที่เกิดขึ้น และปัจจัยที่ส่งผลให้เกิดการเปลี่ยนแปลงการใช้ประโยชน์ที่ดินในเมืองที่สำคัญ ได้แก่ นโยบายของรัฐ จากการสัมภาษณ์นายกเทศมนตรีเมืองกระทุ่มแบนที่เห็นความสำคัญของคุณภาพชีวิตประชาชนจึงพยายามเปลี่ยนแปลงการใช้ประโยชน์ที่ดินให้เป็นพื้นที่สีเขียวและพื้นที่สวนสาธารณะอย่างต่อเนื่อง แนวทางการพัฒนาพื้นที่สวนสาธารณะที่ตอบรับกับนโยบายและมาตรฐานของภาครัฐ และสอดคล้องกับความคิดเห็นของประชาชนและหน่วยงานภาครัฐในพื้นที่ ได้แก่ การส่งเสริมและรณรงค์ให้ผู้สูงอายุมาใช้บริการสวนสาธารณะเพิ่มขึ้น การส่งเสริมการมีส่วนร่วมของประชาชนในการจัดการพื้นที่สวนสาธารณะ การส่งเสริมเกณฑ์ด้านคุณภาพการให้บริการของพื้นที่สวนสาธารณะและการพัฒนาพื้นที่สวนสาธารณะทางกายภาพ

คำสำคัญ

สวนสาธารณะ

การพัฒนาสวนสาธารณะ

นโยบายและมาตรฐานของภาครัฐ

เทศบาลเมืองกระทุ่มแบน

จังหวัดสมุทรสาคร

Abstract

As a result of the current urban development situation concentrating on economic growth, implementing government policies and standards in the development of urban parks has often been neglected. However, one area that is an example of the response to government policies and standards for park area development is Krathumbaen Municipality, Samut Sakhon Province. In addition, this research article has its goals to study the park area's situation and the citizens' opinions towards the park area development and to analyze the guidelines for the park area development in Krathumbaen Municipality, Samut Sakhon Province where is efficient and responds to government policies and standards through research tools, such as questionnaire preparation, field survey, and interviews. According to the research's results, it was found that the success of the park area development in Krathumbaen Municipality is a result of consideration of accessibility and activities. Also, the important factors that cause the changes of land utility in the city are government policies. From the interview with the mayor of Krathumbaen Municipality, he has seen how the quality of life of people in the community is. Therefore, there has been trying to change the land to become a green and garden area and a park area continuously. The guidelines for the development of the park area in response to government policies and standards and in line with the opinions of citizens and government agencies in the area, such as promoting and campaigning for an increase in the elderly's use of the park, promoting public participation in the park area management, promoting the park area's service quality criteria and physical development.

Keywords

Park

Park Area Development

Government Policies and Standards

Krathumbaen Municipality

Samut Sakhon Province

1. Introduction

“Park” means an area with a good environment and consists of the components arranged in suitable manners for utility. (Wattanakul, 1991; Khongouan, 2016) Park areas have many benefits to humans, such as being the places for recreation and exercise areas, etc. Government agencies are therefore aware of the importance of the urban park area development as can be seen from the details in various development policies, such as Strategy 9: Urban Development and Economic Areas in the 12th National Economic and Social Development Plan (2017-2021), etc. However, the current urban development’s focus has been on economic growth. Therefore, the implementation of government policies and standards in the park area development in the city has been neglected. When considering the the park area development of Krathumbaen Municipality, which is the city area that is important to the economic growth of Samut Sakhon Province and is the settlement of many citizens up to 26,317 people in 2017 (Krathumbaen Municipality, 2019), it was found that although the procurement and increase of the park area for the community have been proceeded continuously, there is still lack of the research that clearly responds to government policies and standards for the urban park development as well as the study of the locals’ needs towards the park area development.

In addition, this research article focuses on searching for answers in ways to develop park areas that are in line with government policies and standards based on the study of the current park area’s situation and the citizens’ opinions on the park area development in Krathumbaen Municipality, Samut Sakhon Province through the important tools, namely field survey, questionnaire, and town planning measures. Hence, the results of the research are helpful in taking care, preserving the city environment, and improving the quality of life of local people. Moreover, they could also be applied to the development of urban parks and other municipalities as well.

2. Research Objective

- 1) To study the situation of parks in Krathumbaen Municipality, Samut Sakhon
- 2) To study the citizens’ opinions about the park area development in Krathumbaen Municipality, Samut Sakhon Province.
- 3) To analyze guidelines for park area development in Krathumbaen Municipality, Samut Sakhon in order to be effective and responds to government policies and standards

3. Research Boundaries

3.1 Area Covered

This research covers the area of Krathumbaen Municipality containing 2.18 square kilometers or approximately 1,362.50 Rai. (Figure 1)

3.2 Content

1) *Government policies and standards*

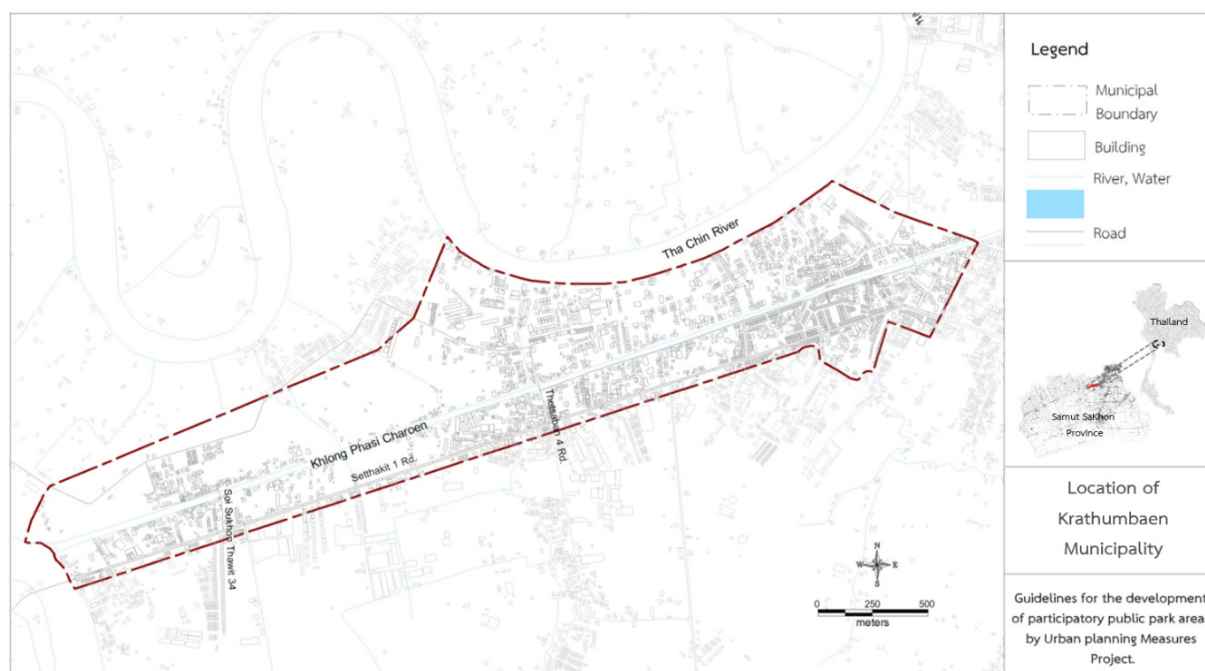
We consider plans and policies that is an important framework and acceptable for the development of park areas both in the international and national, provincial and municipal levels such as Sustainable Development Goals, SDGs, 20 years National Strategy (2017–2038), The 12th National Economic and Social Development Plan (2017-2021) and Samut Sakhon Province Development Plan (2017-2021) with the four-year area development plan (2018-2021).

2) *Studying criteria and standards for park areas*

We consider the criteria and standards related to the comprehensive town planning and procurement of park areas that the municipality must carry out, consisting of the park classification criteria of the park office, criteria and standards for the comprehensive town planning 2006.

3) *Public opinion on park area development*

We consider service satisfaction, the sufficiency of the park in the area and the need of park development in the future based on the results of the questionnaire.



Source: Improved and developed from Geographic Information System data of Samut Sakhon Provincial Office of Public Works and Town Planning, 2019

Figure 1. Study Area of Krathumbaen Municipality, Samut Sakhon

4. Literature Review

A city is an area or area that is heavily populated and has non-agricultural economic activities (Tapananont, n.d.). The city's land uses are divided into 4 types which are land use for housing, for work, for recreation, and for public services (Vichiennoi, 2014). Land uses in urban areas often depend on the factors, including population, transportation, and access to government policies, and land prices (Bongsadadt, 2015).

When considering the park area which is the type of land use for recreation and public services, the parks can be categorized according to the sizes of the areas and the purposes of the services into 7 types which are (1) Pocket Park or Tot Lots with the area not exceeding 3,200 square meters or 0.0032 square kilometers, (2) Neighborhood Park with the area not exceeding 32,000-40,000 square meters or 0.032-0.04 square kilometers, (3) Community Park with the area not exceeding 40,000-200,000 square meters or 0.04-0.2 square kilometers, (4) District Park

with the area not exceeding 200,000-800,000 square meters or 0.2-0.8 square kilometers, (5) City Park with the area not exceeding 800,000 square meters or 0.8 square kilometers, (6) Street Park with the area width more than 3 meters without the limitation of length, (7) Special Purpose Park with no limited number of areas such as Stadium Park, history park, etc. (Department of Environment, Bangkok Metropolitan Administration, n.d.).

Park development has various development principles and concepts such as in the case study of (1) Pearland, Texas, United States, the development of parks according to the Parks and Recreation Master Plan 2015 would be in line with the country's development framework which focused on reducing health problems and impacts from economic development, giving importance to the development of activities in the park, and providing opportunities for people to participate in the the park development. According to this master plan, it generated the constructions of indoor and outdoor exercise areas, indoor leisure, outdoor recreation, and therapeutic

pools, as well as 9 public meetings and there were more than 150 participants joining. People (A CAPRA Accredited Agency, 2015), the case study of (2) Harrisonburg, Virginia, United States on the park development according to Comprehensive Parks and Recreation Master Plan which focused on developing access routes, promoting comfort in the garden activities, social gatherings as well as developing gardens to meet government standards. As a result, it generated the constructions of the swimming pool, the addition of small garden, the improvements of foot paths, bicycle paths, and access routes, etc. (Land Planning & Design Associates, Inc., 2013)

Moreover, from the results of a survey of parks in the central West Sydney area of Australia by George Nehme (n.d.), it was found that access to the park's convenience and image had an effect on the uses of parks. Therefore, it could reflect that the principles and key concepts of park space development include the development of access and linkage, comfort and image, user and activities, social ability (Klongvessa, 2005; Horayangkura, 1998), and public participation that should allow people to participate in decision making, implementation, benefits, and evaluation (Cohen & Uphoff, 1981).

In terms of urban planning measures that have contributed to the park area development, there may be both the negative measures that are measures to control the virtue of the development laws and regulations of the private sector and the positive measures the are measures to create incentives to support and guide the development of the private sector to be effective and in the specified direction, such as the developments of communication routes, public utilities, and public facilities, etc. (American Planning Association, 2007; Tapananont, n.d.)

To succeed in the park area development in Thailand, besides considering the above principles and concepts, the park area development should be under important development frameworks such as (1) the Sustainable Development Goals (SDGs) that

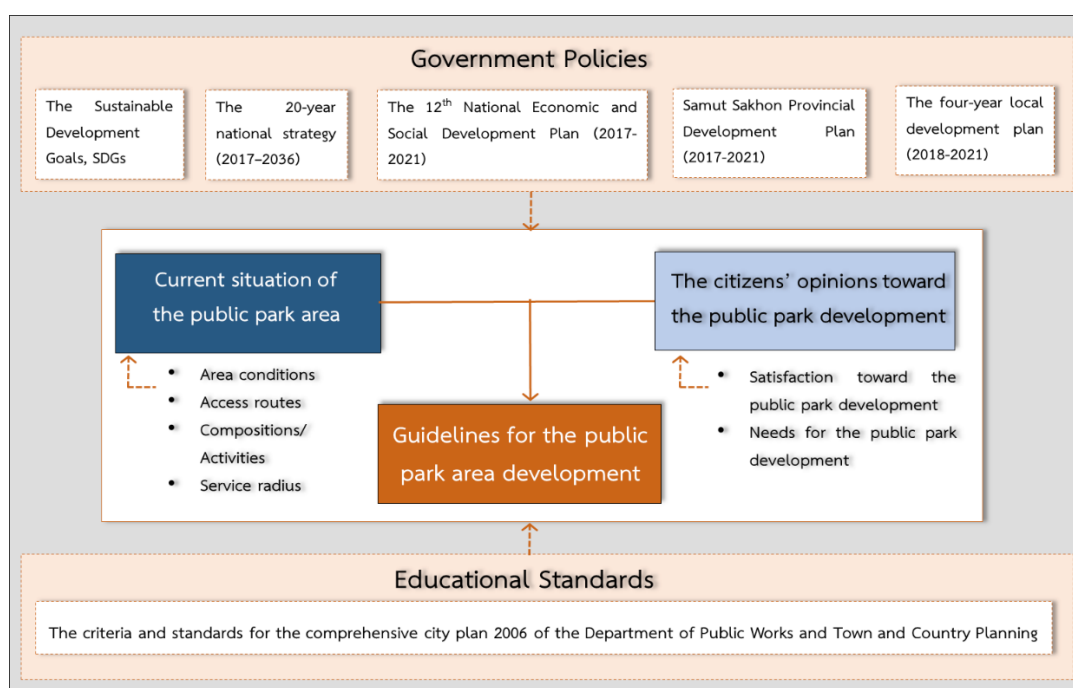
focus on providing access to safe green public areas that cover and are accessible for everyone, especially women, children, old people, and people with physical disabilities within 2030, (2) the 20-year national strategy (2017-2036) prepared by the national strategy committee, the Secretariat of the Prime Minister that focuses on increasing green spaces, including the park areas as sources of pollution absorption and carbon sequestration, (3) the 12th National Economic and Social Development Plan (2017-2021) prepared by the Office of the National Economic and Social Development Board that focuses on the importance of city planning and increasing green areas, (4) Samut Sakhon Provincial Development Plan 2018-2021 prepared by Samut Sakhon Provincial Office that focuses on the development of the environmentally sustainable liveable city and infrastructure to be comprehensive and standardized, (5) the four-year local development plan (2018-2021) of Krathumbaen Municipality prepared by the Office of Krathumbaen Municipality that focuses on having a standardized and thorough infrastructure as well as creating a good quality of life and health for both physically and mentally from sports and exercises. In addition, for the municipal park area development, park service provision must also comply with the criteria and standards for the 2006 Comprehensive City Plan (Department of Public Works and Town and Country Planning, 2006) (Table 1).

From the reviews of the concepts and theories as well as the relevant policies and standards as mentioned, it led to the conceptual framework of the research that "The study of the current situation of the park area in terms of the area's conditions, the access path, the compositions, the activities of utilizing a garden, the service radius, and the study of the citizens' opinion for both the public satisfaction and needs of the park area development, it could lead to an analysis of park development guidelines that are in line with government policies and effective academic standards." (Figure 2)

Table 1. Criteria for parks according to the standards of comprehensive plan 2006 relating to Krathumbaen Municipality

Type Of Park	Area Size (Square Meters)	Area Size (Square Kilometers)	Population	Service Area
Pocket Park	80-800	0.00008-0.0008	500-2,500	Nearby people in the community Residential community
Neighborhood Park	40,000-80,000	0.04-0.08	2,000-10,000	300-500 Meters
Community Park	40,000-80,000	0.04-0.08	10,000-20,000	12.5 KM. or by public transportation that use time less than 30 minutes
District Park	48,000-120,000	0.048-0.12	50,000-100,000	3-6 KM. or by public transportation that use time less than 1 hour.
Other Green Areas	Unlimited	Unlimited	-	Up to each area

Source: Department of Public Works and Town and Country Planning, 2006



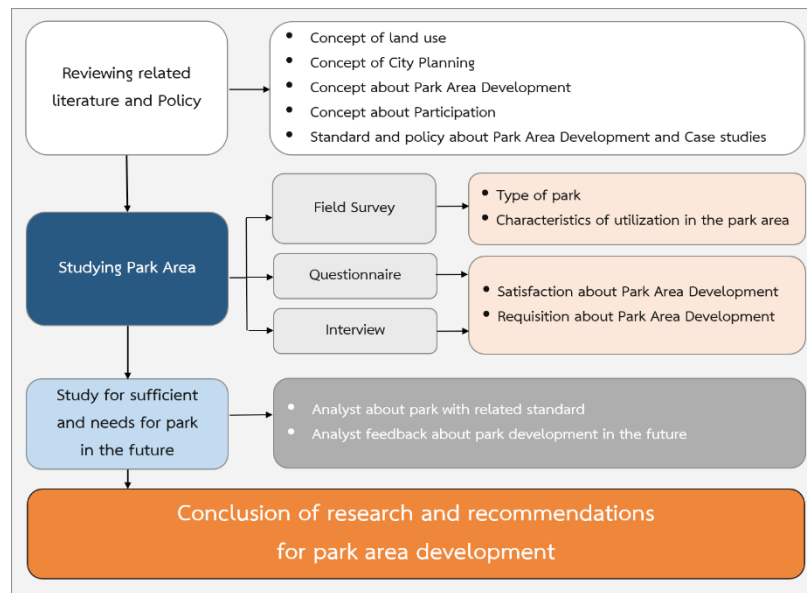
Source: Conducting studies and analysis by researchers

Figure 2. Research Framework

5. Research Procedure and Tools

5.1 Research Procedure - consisting of important steps including 1) Reviewing concepts, theories, plans, policies, and relevant standards 2) Studying the situation of park areas by conducting field survey questionnaire and interview 3) Studying the sufficiency and the needs of the park in the future by analyzing the situation of the park including the standards and opinions of the park development. 4) Summarizing the research findings and propose guidelines for the development of park areas (Figure 3)

5.2 Research Equipment - consist of field survey, questionnaire, and interviews. In the questionnaire section, the sample size was determined based on population proportion according to Yamane's formula at a 95 percent confidence level to represent at the Krathumbaen Municipality which was equal to 394 people. However, 410 people were the actual number of people and they were sampled by the Accidental Sampling method. The content used for collecting the questionnaire would include a summary of statistical data regarding the usage of park of the citizens in the area, public satisfaction in managing



Source: Conducting studies and analysis by researchers

Figure 3. Research Procedure

park area, and the needs for future park development. The content in the interview section was the interview with the Mayor of Krathumbaen Municipality in terms of the park area's situation and the concepts of the park area development in the future.

6. Research Result

6.1 Situation of Park Area

There are 4 categories of park in Krathumbaen Municipality area determined by the Department of Environment, Bangkok Metropolitan Administration including: (Figure 4 and Table 2)

1) *Community Park* - 84th King's Birthday Park is a public park created from the needs of Krathumbaen Municipality for providing exercise and recreation areas for the public, because the size of the municipality area is limited, therefore having to purchase the land outside the municipality to develop into park. This park contains 43,600 square meters or 0.0436 square kilometers of land. Even this park locates outside the education area, but it can be reached conveniently by road transportation from Krathumbaen Municipality (Economy Road 1). The park consists of a football field, swimming pool,

running ground, fitness equipment, and children's playground. The overall condition of the park is good. However, some areas are under construction, so the environment still has a mess of construction materials. People use the park at all times, especially during the period of 17.00-20.00 hrs. every day, most of them use the area for exercise.

2) *Village Park* - King Rama 9's 72nd Birthday Park - It contains 10,848 square meters of land located on Economy Road 1. The park consists of a small football field, recreation area (pavilion, chair), activity area, and children's playground. The overall condition of the area is good. People use the park at all times, especially during the period of 17.00-20.00 hrs. every day, most of them use the area for recreation and exercise.

3) *Pocket Park* - It includes gardens in government offices or public areas whether in the Public Library in honor of HRH Princess Maha Chakri Sirindhorn, Krathumbaen Hospital, Phasi Charoen Water Delivery and Maintenance Project, Krathumbaen Provincial Electricity Authority and Krathumbaen Municipality Office, with a total area of approximately 2,400 square meters. These park areas are focused on decorating the places rather than using them for

exercise and recreation, except in the area in front of the Krathumbaen Municipality Office, where is separated as a basketball court and a small football field. (Most users are municipal officials.) For the park area in front of Krathumbaen Hospital, it is for recreation seats. (The users are mostly patients or hospital visitors). The overall condition of the area is good.

4) *Multi-Purpose Park* such as Phasi Chareon Canal Waterside Park, containing 1,264 square meters of land. It looks like a walkway along the canal with about 2 meters wide, and about 800 meters long. The overall condition of the area is good. However, most of the area's users focus on traveling and seeing the scenery along the canal. Most of the users focus on traveling and slightly looking at the scenery around the canal.

When considering the criteria and standards of the 2006 Comprehensive City Plan of the Department of Public Works and Town & Country Parks in Krathumbaen Municipality, it was found that the 84th Anniversary Maharaja Park with the development area of 43,600 square meters (on the actual area 70,400 square meters) is consistent and meets the academic standards of community parks. The service radius of 12.5 kilometers can be accessed by public transport for no more than half an hour and can support the services for citizens, approximately 20,000 people (the total population of Krathumbaen Municipality is 26,317 people in 2017). Therefore, it is able to respond and provide sufficient services to people in the municipality area efficiently (Figure 5).

Moreover, there is another park called King Rama 9's 72nd Birthday Park with smaller area but there are a variety of areas and activities such as recreation pavilion, playground, small football field, and activity area which benefit people in the municipality area more than just a playground or general green space.

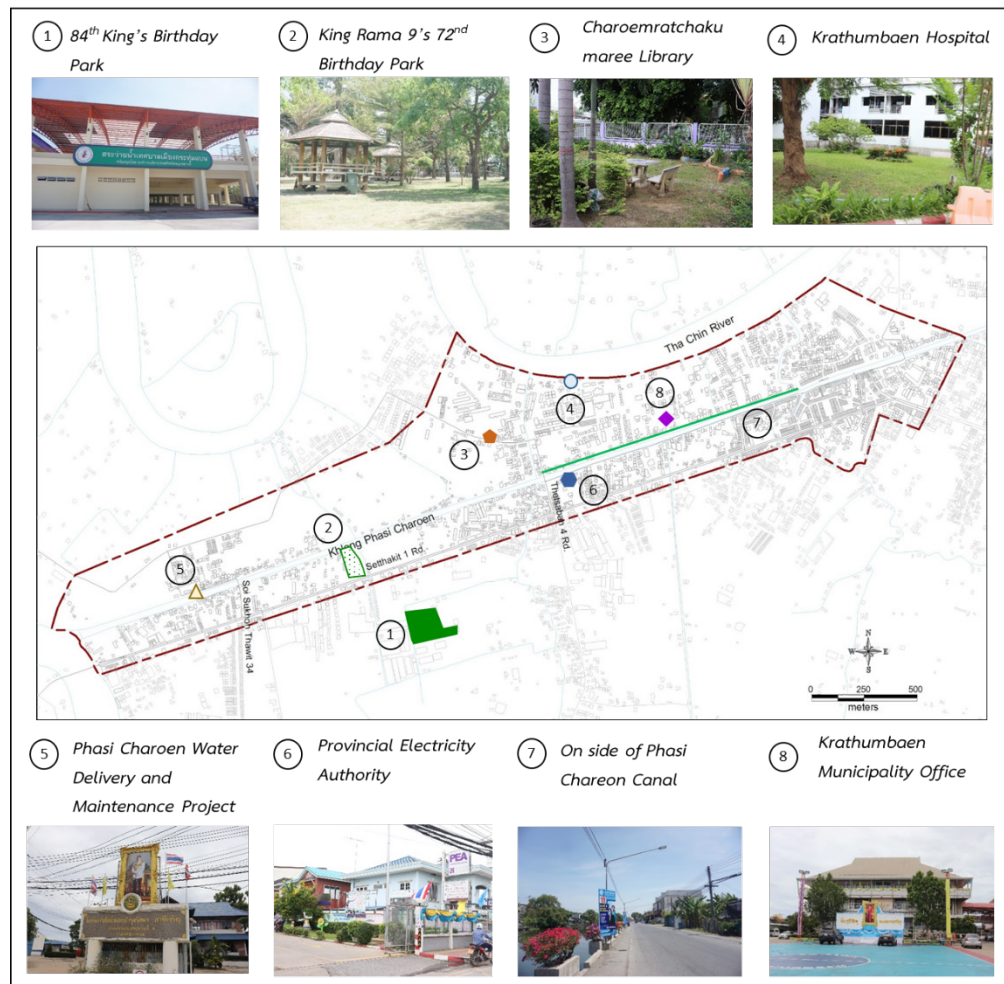
6.2 *The citizens' opinions/public opinions on the park area development*

The public opinions or the citizen's opinions were gathered from the distributed questionnaires and the statistical process in order to acquire the information on the public usage situation, public satisfaction in managing park areas, and the needs for the future park development, summarized as follows:

1) *General Information of respondents* – Most respondents are female (65.37%), age between 35 and 54 years (20.98%). The least age group of people using the park is seniors over 64 years old (7.07%). The most of respondents graduated in Bachelor Degree (33.17%) with career of private business owner / merchant (33.66%). Most of these people live in this area for more than 10 years (81.46%).

2) *Park area situation information* – Most respondents come to the park for exercising such as jogging, doing aerobics (50.60%), followed by sitting leisurely, viewing scenery (22.29%). Most people come to the park by private motorbike (49.75%), followed by private cars (28.05%). The journey to the park takes around 10-20 minutes (55.12%). From the previous period, most respondents saw a change of the park area as better way (76.10%). The park contains more exercise facilities, such as fitness equipment, sporting equipment. The park has spacious area and provide various sports and activities (54.10%). The respondents are satisfied with the beautiful landscape with area organized proportionally (19.67%).

3) *Information on public satisfaction in managing areas in the park* – According to the questionnaire dividing satisfaction information into 9 aspects, it was found that the average value/mean value in each area is quite similar to one another. With details of satisfaction, the highest average is the convenient in using park area (mean value of 4.13), followed by satisfaction in the number of park in the area, the safety in using park areas, park area



Source: Field Survey conducted in June 2019

Figure 4. Parks in Krathumbaen Municipality Area



Source: Conducting studies and analysis by researchers, 2019

Figure 5. Service radius of Community Park (84th King's Birthday Park)

Table 2. The situation of the park area in Krathumbaen Municipality, Samut Sakhon Province

Type of Park	Park Name	Location	Area size (Sq.m.)	Area condition	Way to reach	Activities in park	Way to use
Community park	84 th King's Birthday Park	Outside the area of Krathumbaen Municipality connecting with the Economic Road 1	43,600	The park is design and decorated with ornamental plants, small and large perennials. The overall condition is clean and in good order. However, some areas are under construction, so there are clutters of construction materials.	Even this park is located outside the education area, but it can be reached conveniently by road transportation from Krathumbaen Municipality (Economy Road 1) However, there isn't clearly separation of walkway and bicycle lane.	This park provides area for exercise including football fields, swimming pools, running grounds, and exercise equipment. In addition, some areas are also arranged for children's playgrounds and recreation.	People use this park all the times. (The park opens daily from 06.00 to 20.00 hrs.) Moreover, from 17.00-20.00 of every day, a lot of people come to the park for exercising and playing sports, including running and playing football. Swimming pool is in addition to providing services to the general public, it is also a swimming school for the municipality's boarding school and water aerobic activities for the elderly.
Village Park	King Rama 9's 72 nd Birthday Park	The Roadside of Economy Road 1	10,848	The park is designed and decorated with ornamental plants, small and large perennials, bench and pavillion. The overall condition of the area is in good condition, clean, orderly and beautiful.	Since this garden is located on the side of the Economy Road 1, therefore it is convenient to access. However, there isn't clearly separation of walkway and bicycle lane.	This is a public park with space for recreation and exercise, with pavilions, benches, small football fields, playgrounds, and activity areas.	The people use the park at all times. (The park opens daily from 06.00 to 20.00 hrs.) Most people mainly use the area for relaxing and exercising (Playing football).

Source: Field Survey conducted in June 2019

Table 2. The situation of the park area in Krathumbaen Municipality, Samut Sakhon Province (continued)

Type of Park	Park Name	Location	Size (Rai)	Area condition	Way to reach	Activities in park	Way to use
Pocket Park	Gardens in various government offices or public areas	Can be seen in - the Public Library in honor of HRH Princess Maha Chakri Sirindhorn - Krathumbaen Hospital - Phasi Charoen Water Delivery and Maintenance Project - Krathumbaen Provincial Electricity Authority - Krathumbaen Municipality Office	2,400	It is a small garden decorated with ornamental plants, small and medium-sized perennials and garden flooring with grass. The overall condition of the area is clean and in good order.	As this is way to access various government offices or public areas. Therefore, it can be conveniently access. However, there isn't clearly separation of walkway and bicycle lane.	It mainly purposes for decorating the place rather than using it for exercising and relaxing, except in the area of Krathumbaen Municipality Office, where is separated as a basketball court and a small football field.	Since the park found is small and focus on the decoration of the place. It is mostly used for exercise or recreation. Therefore, it only found in the Krathumbaen Municipal office area. (Most visitors are municipal officials) and for the garden area in front of Krathumbaen Hospital is often the waiting place for visitors.
Multi-Purpose Park	Phasi Chareon Canal Waterside Park	On side of Phasi Chareon Canal	1,264	This is a park along Phasi Chareon Canal. The width is about 2 meters, and the length is about 800 meters. The overall condition of the area is good.	It can be accessed via Charoen Bun Road. This park area is close to the municipal fresh market and the bustling Luang Ta Thong Shrine.	Responding the public needs as being a pedestrian area along the canal with the decoration of Bougainvillea ornamental plants. However, there isn't clearly separation of walkway and bicycle lane.	Since it is a long-distance park that runs along canals and water traffic route, the majority of the users focus on traveling and walking around the canal to see the scenery. Therefore, there are sparse users found in this park area.

Source: Field Survey conducted in June 2019

management, Attractive of activities in each area (mean values of 3.90, 3.81, 3.8, and 3.76 respectively). However, the least satisfaction was Public participation in park area management. The average of total satisfaction was 3.79, indicating that the respondents were quite satisfied with the management of the park areas which was in line with the public opinions of the mentioned park's situation above as the park has changed for the better (Figure 6, on the left).

4) *Information of public requirement to manage the park area in the future* - The need to manage the park area is divided into 10 sub-areas, with the majority of respondents wanting to manage the park area in the future at a high level (mean value of 4.07). The details show that the average value of each area is very close to one another. What the respondents wanted the most was to manage the area in terms of improving the landscape and park environment (mean value of 4.14), followed by adding more attractive activities (mean value of 4.12), Allowing public to participate in area management with an average equal to installing lights and increasing brightness in parks (mean value of 4.09) in accordance with the public satisfaction data above. There were a few users that are involved in managing the garden areas (Figure 6, on the right).

5) *Consideration of the relationship between population and park changes*

When taking the demographic data into consideration in relation to park changes, it was found that age had a significant opinion on park changes which most of the 35-44 year-olds acknowledged the park change the most (31.63%) (Figure 7 on the left) and people over 64 years wanted the park to be developed in terms of the footpaths into the area (58.62%) (Figure 7, on the right).

Moreover, when considering the interview results of the Mayor of Krathumbaen Municipality, it is found that the information of the park area situation and the important concept of park area development processed by the municipality are as follows:

1) King Rama 9 72nd Birthday Park – The main problem encountered is the area organization, insufficient parking space. The suitable development plan should focus on the properly organizing the usage of the park area, keep the equipment and facilities in the park to last for a long time focusing on repairs rather than purchase the new ones.

2) 84th King's Birthday Park – It is a public park that people participate in the process of land acquisition, land acceptance, suggestions and various needs, collaboration with the municipality to prepare the park area development plan by sending a community representative to participate in those processes. Therefore, the future development planning by 2020, it would purchase another 16,000 square meter or 0.016 square kilometers of land that is currently building a bleachers for complete stadium, expected to be finished by the end of this year to be ready for use in various ceremonies, including planning to improve the landscape around the garden, especially increasing shade of trees, ponds, and relaxing place at the waterfront, installing more lighting to the park area, adding exercise equipment to suit all ages and activity areas such as a fitness room, futsal court, badminton court.

3) Chareonboon Road along with Phasi-Chareon canal - This is the future development plan focusing on renovation the canal landscape, by coordinating with Department of Public Works and Town and Country Planning to build a dam and lay the floor of walkway along the canal. Then the municipality will take over after the construction is finished and plan to improve the waterside walkway in the future.

7. Discussion and Conclusions

From the research, both the situation of the park area and the people's opinions on the development of the park area above can be discussed and summarized as bellows:

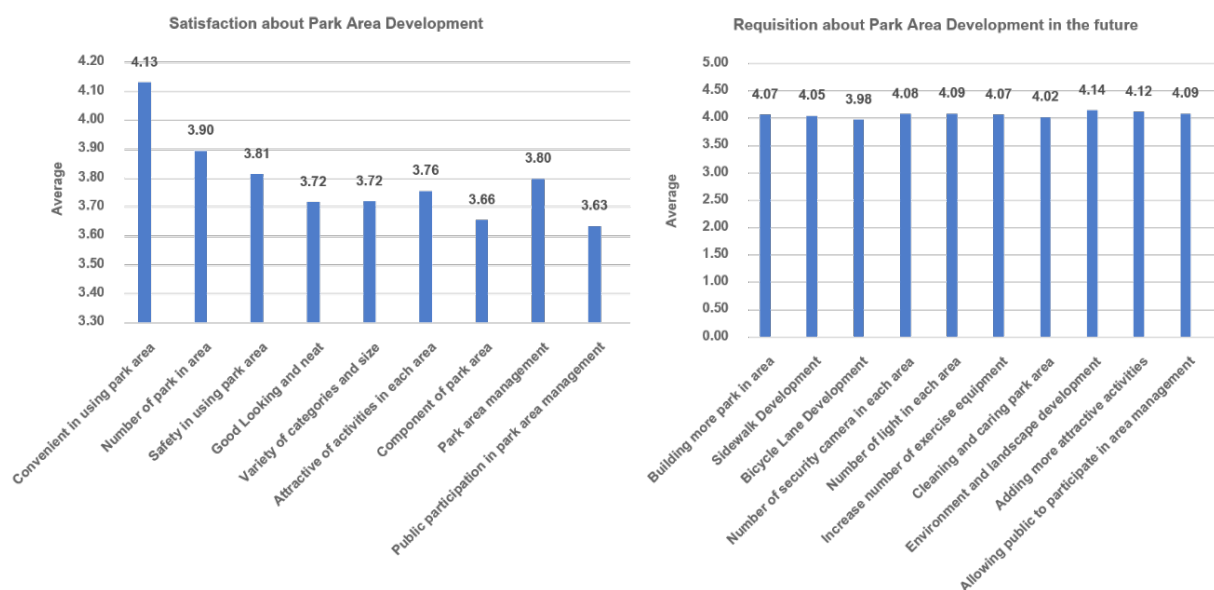


Figure 6. (left) Satisfaction of Park Area Development, (right) Requisition of Park Area Development in the future

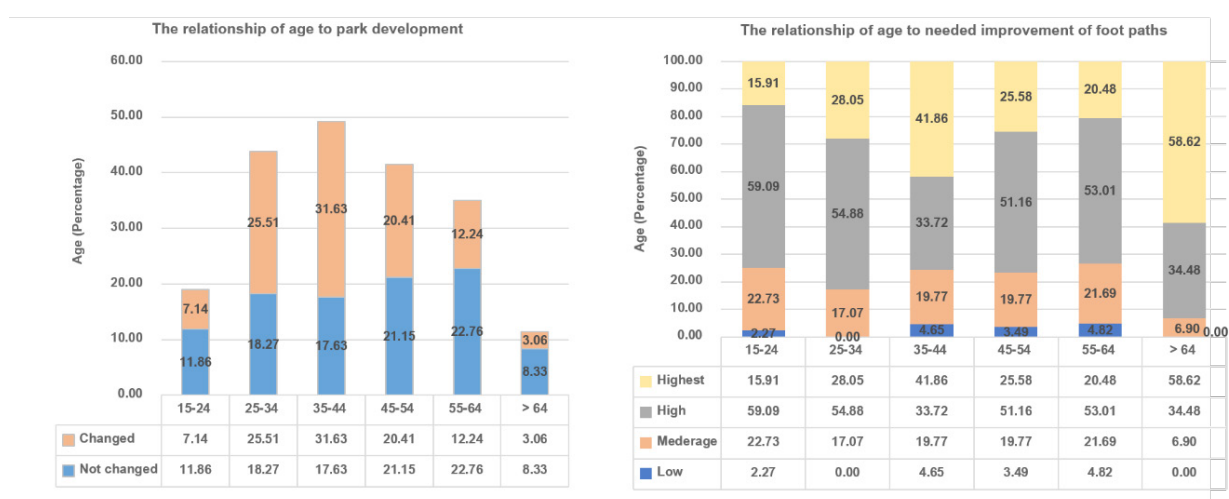


Figure 7. The relationship of age to park development (left), The relationship of age to needed improvement of foot paths (right)

7.1 The park areas development occurring in Krathumbaen Municipality responds to government policies and standards.

The development of park areas in Krathumbaen Municipality responds to government policies and standards including the Sustainable Development Goals, SDGs, 20 Years National Strategy (2017–2036), The 12th National Economic and Social Development Plan (2017–2021), Samut Sakhon Province Development

Plan (2017–2021), 4 years area development plan (2018–2021) and The Standards of comprehensive plan 2006 of the Department of Public Works and Town and Country Planning, as can be seen from the situation of park areas and the opinions of people and government agencies such as the situation of park areas developed and created various garden areas, including Community Park, Village Park, Pocket Park and Multipurpose Park.

Although the size of municipality area is limited and the interview result of the Mayor of Krathumbaen Municipality initiating to purchase the land to develop into a large park area, as well as the concept of development of the park area or public areas along

the canal in the future, all concepts are in line with the 20-year national strategy (2017-2036) focusing on increasing green areas in order to be a source to absorb pollution and keep carbon. (Table 3)

Table 3. An Analysis of Consistency and Responses of Park Area Development in Krathumbaen Municipality towards the Government Standard Policies

Government policies and standards	Analysis of the consistency to educational results with government policies and standards	
	Results of the study on the situation of park areas	Results of the study on public opinion and government agencies
Sustainable Development Goals, SDGs • Focusing on providing safe, comprehensive public green area that everyone can access, especially women, children, the elders and people with physical disabilities.	• Development of 84 th King's Birthday Park, despite it has the small area and located outside of the municipality area, but it can be access conveniently and safety. • The park provides service for all age groups. It can be seen from the activities occurring in the park, such as the use of space in park for arranging swimming class for students from the school in the municipality and the water aerobic activities of the elders, etc.	• The interview results of the Mayor of Krathumbaen Municipality initiating the land purchase to develop into a large park area. • The questionnaire results that most people are satisfied with the convenience of accessing the park at a high level. However, the small group of people in park is older than 64 years old.
The 20-years National Strategy (2017-2036) • Focusing on increasing green space including the park area to be a source to absorb pollution and keep carbon.	• Developing a variety of park areas, including Community Park, Village Park, Pocket Park and Multipurpose Park, although the size of municipality area is limited.	• The interview results of Mayor of Krathumbaen Municipality initiating the land purchase to develop into a large park area, as well as concepts of developing the park areas along the canal in the future.
The 12th National Economic and Social Development Plan (2017-2021) • Focusing on giving importance of city planning and increasing green space.	• Developing a variety of park areas, including Community Park, Village Park, Pocket Park and Multipurpose Park, although the size of municipality area is limited.	• The interview results of Mayor of Krathumbaen Municipality initiating the land purchase to develop into a large park area, as well as concepts of developing the park areas along the canal in the future.
Samut Sakhon Province Development Plan (2017-2021) • Focusing on the development of an environment that is sustainable and livable city and the development of infrastructure to be comprehensive and standardized.	• Developing a variety of park areas that makes the city area remains green and natural. • Development of park areas supporting physical and recreational activities, which is the development of infrastructure with a service area or conveniently access hours in accordance with the standards of comprehensive plan 2006 of the Department of Public Works and Town and Country Planning.	• The interview results of the Mayor of Krathumbaen Municipality seeing the importance of building a park area as well as supporting the various activities in the park area. • The questionnaire results represented that most people are satisfied with the accessibility of the park at a high level. However, most people still need to develop physical characteristics in the park such as sidewalk, light, etc.
The Four-year Local Development Plan (2018-2021) of Krathumbaen Municipality • Focusing on having a standardized and thorough infrastructure, as well as creating a good quality of life and healthy both physical and mental for people by playing sports and exercising.	• The Park area development promotes physical and recreational activities which is the development of infrastructure with a service radius or conveniently access hours in accordance with Standards of comprehensive plan 2006 of the Department of Public Works and Town and Country Planning.	• The interview results of the Mayor of Krathumbaen Municipality seeing the importance of building a park area as well as supporting creation of exercise areas in the park, including swimming pools, football fields, running fields, etc. • The questionnaire results was found that most people mainly use the park area for exercising purpose.

Table 3. An Analysis of Consistency and Responses of Park Area Development in Krathumbaen Municipality towards the Government Standard Policies (continued)

Government policies and standards	Analysis of the consistency to educational results with government policies and standards	
	Results of the study on the situation of park areas	Results of the study on public opinion and government agencies
Standards of comprehensive plan 2006 by Department of Public Works and Town and Country Planning	<ul style="list-style-type: none"> • Development of community park areas with a service area of 12.5 kilometers, covering the entire municipality area. People takes half-hour time to access the park. The park can support approximately 20,000 people corresponding with the population in the municipality. • Developing various types of park areas, including Community park, playgrounds and general green spaces. 	<ul style="list-style-type: none"> • The interview results of the Mayor of Krathumbaen Municipality seeing the importance of building a park area and park areas, including the concept of extending the park areas in the future, and that will make the Krathumbaen Municipality area to become a District park (with containing the area of approximately 70,400 square meter or 0.0704 square kilometers • The questionnaire result represented that most people travel to the park within 10-20 minutes.

Source: Conducting studies and analysis by researchers

7.2 The positive urban planning measures was utilized to development the park areas in Krathumbaen Municipality.

The park area development occurred whether it is procurement of land to develop into a larger park and to construct the facilities like a swimming pool and exercise areas, etc., All of these changes reflect the spatial development of positive measures by developing utilities or specific area development projects in one area which have been done by government agencies to support and effectively guide the development of the private sector. However, the use of negative measures occurred in the form of regulations. Moreover, when considering the concepts of land use, the research results show that the occurred public park area development generated the use of land in Krathumbaen Municipality for the purposes of living, working, recreation and public services. The important factors that cause changes in land use are government policies.

7.3 Success of the park areas development in Krathumbaen Municipality is a result of consideration of accessibility and activities

The questionnaire results were found that most people are satisfied with the access of the park at a high level and they mainly use the park area for exercising. All results reflect crucial factors of successful development of park area, including access and linkage as well as User and activities. However, the factors of comfort and Image and Social Ability still need to be improved and supported in the future in order to comply with the academic principles and public opinion that still need to develop various physical details in the garden such as walkways, pavements, light, etc.

Moreover, the questionnaire results represented that most people are least satisfying with the participation of the people in managing the park area. It is also reflected that opportunity provision for people to participate in the development process of the park area, including the Decision Making, Implementation, Benefits and Evaluation are not sufficient. (Cohen & Uphoff, 1981)

8. Recommendation

For the guidelines for the park area development in response to government policies and standards, the public and government agencies' opinions can be applied for the suggestions as follows:

8.1 Supporting and campaigning for the elderly to use the park services more

From the table 3 showing the consistency analysis, the results of the study with government policies and standards show that according to sustainable development goals, the elderly groups should be encouraged to use parks as the results of the questionnaire show the age group that uses the least public services, is those who are older than 64 years old. The result is in line with the consideration of the demographic relationship to the changes of the public park. The people who are older than 64 years want to have more development and improvement, particularly foot paths to enter the park. Therefore, the physical development and policies are recommended as follows:

1) Physical Development

To provide convenience to the elders, the disabled and park users in all ages in accordance with the policy of Sustainable Development Goals (SDGs), policy that focuses on providing safe, comprehensive green space with everyone can access especially woman, children, the elders and people with physical disabilities. The area should be developed to support the accessibility to the park. There are activities in the park focusing on the suitability for the elders, the disabled, both of who need someone to take care and the elderly who take care of themselves, emphasizing on providing the activities and environment suitable for resting leisurely, relaxing, and creating slope way for supporting the access of wheelchair users.

2) Policy Development

To operate in accordance with the local development plan of Krathumbaen Municipality focusing on the development of standardized infrastructure and thorough access in the park area. It focuses on safety measures and covers all type of users. The development guidelines may consider using incentive measures with private sector agencies (Tapananont, n.d.; American Planning Association, 2007) to be more effective, especially improving access to the area and adjusting the area in the park.

8.2 Supporting public to participate in park area management

To respond to the public satisfaction, the questionnaire was found that people are less satisfied with participation in managing the park area. In the future, there is a need to get involved in managing the park area.

- Policy Development

In order to develop the park area successfully, we must consider the users and activities, along with the social ability. The users are the people in the area that should be given the opportunity to participate in the decisions and help evaluating the use of park areas. (Cohen & Uphoff, 1981) To enable public participation corresponding with the vision of Krathumbaen Municipality emphasizing on public brainstorming for these urban development, the government agencies should consider strengthening the people's participation in the management process, organize accessibility to the park area, gardening care, as well as providing opportunities for people and community representatives to help manage the park area.

8.3 Supporting service quality criteria of park areas - to increase the satisfaction of the people in the area and promote the development of the park area to be more standardized.

- *The Policy development* – According to limited size area of the town municipality Krathumbaen, so the park is small, especially the King Rama 9 72nd Birthday Park. When considering the classification of parks according to the criteria and standards of the Department of Public Works and Town and Country Planning (Department of Public Works and Town and Country Planning, 2006), it results in the park being classified as having low service radius since the criteria is mainly considered from the size of the park areas. In fact, this park is fully qualified in terms of physical development and convenient services for a variety of activities that can meet the needs of all ages and genders. Therefore, when considering the criteria and standards, it should be added the consideration to the quality of use in the area, the quality per device usage, the layout of the area that are appropriate for the activities and the environment, besides considering only the park area size and service radius.

8.4 Physical park area development - it is necessary to improve the parks' physical condition for users' convenient.

1) *The improvement of sidewalk and running track in the park*

Referring to the questionnaire result, it reflects the public need to develop sidewalk and running track in the park. The running track in the 84th King's Birthday Park is currently still a rugged stone path, causing the park user having an ankle flipping problem while walking. When considering this problem together with the relationship of the age requiring to develop the foot path, it was found that 15-24 years old people needs the development of the park at a high level and the age over 64 years needs the development of the park at a highest level. To make the development meet the Sustainable Development Goals (SDGs), emphasizing comprehensive and safe access. Regarding a four-year local development plan (2018-2021) of Krathumbaen Municipality, walkways and

runways in the park should be developed by pouring synthetic rubber suitable for jogging, laying the lawn and adding shade while strolling, viewing scenery suitable for the elders.

2) *Landscape adjustment by adding shade and lighting to the park*

Regarding to the questionnaire that the people are satisfied with the improvement of the landscape of the municipality in the past, in addition to the campaign for people to look after their health and exercise according to the four-year local development plan. (2018-2021) of Krathumbaen Municipality by managing access hours to use various services according to each age range causing the need to use the area at different times and can use the park at all times. In order to use the park with full capacity and to solve the lighting problem in the park, therefore, there should be improvements to increase the lights in the park, such as adding more lights to the park and adding shade in the playground, which will create safety for all ages in accordance with the Sustainable Development Goals (SDGs).

3) *Adjusting the landscape along the canal, developing the walkway on Charoen Bun Road and along Phasi Charoen canal*

From the project of the Department of Public Works and Town and Country Planning, it requires to build a dam and pave the waterside walkway. The municipality cooperated with the Department of Public Works and Town and Country Planning to oversee the development. After the construction was completed, they have plans to improve the waterfront walkway in the future. Therefore, they propose a guideline to adjust the landscape along the canal to be beautiful such as decorating the flowering trees as a path between the canals, together with creating a path connecting the canal to increase access to nature and improve the pedestrian to be prominent and safe by raising up the walkway from the road level.

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