

# The Effectiveness of Utilizing Non-Green Public Space in Untia Fishermen Settlement

Andi Edy Satar<sup>a,\*</sup>, Idawarni Asmal<sup>b</sup>, Edward Syarif<sup>c</sup>

<sup>a</sup>Housing and Settlement Environment Design Laboratory, Department of Architecture, Faculty of Engineering, Hasanuddin University.  
Email: andiedyas@gmail.com

<sup>b</sup>Housing and Settlement Environment Design Laboratory, Department of Architecture, Faculty of Engineering, Hasanuddin University.  
Email: idawarniasmal@yahoo.com

<sup>c</sup>Housing and Settlement Environment Design Laboratory, Department of Architecture, Faculty of Engineering, Hasanuddin University.  
Email: edosyarif@yahoo.com

---

## Abstract

Public space in a settlement will be effective and useful if it has three intrinsic values, namely democratic, meaningful and responsive. Then the existence of people and how they play a role in space is important in reviewing the public nature of a space. The effectiveness of a public space can be assessed from the level of utilization by the community on the types of activities and social interactions of the people in it. Currently, the use of Non-Green Public Space is still not in line with expectations, namely the realization of a comfortable, productive and sustainable space, marked by the lack of community social activities in the Untia Fisherman Settlement Non-Green Public Space (NGPS). The purpose of this study was to evaluate the effectiveness of the use of Non-Green Public Space in the Untia Fisherman Settlement in the form of Delta Playground and Plaza Park. The research method used in this study was descriptive qualitative research because it describes the research location at the time of observation and compares standards and or theories with the facts of the availability of Non-Green Public Space (NGPS) in the settlements using the Good Public Space Index (GPSI) analysis tool. The results show that the existence of the Delta Playground RTNH is still not effectively utilized. Accessibility factors into the RTNH, comfort factors and diversity of activities (comfortable, relaxation, passive and active engagement and discovery), as well as the availability of other supporting facilities and infrastructure are still lacking, both in quantity and quality. Re-effectiveness of the function and nature of the existence of the Non-Green Public Space in the Untia fisherman settlement requires cooperation from various parties.

*Keywords: Effectiveness; Non-Green Public Space; settlement; utilization*

---

## 1. Introduction

Public space is an important space to meet people's needs for comfort, relaxation, and to carry out active or passive activities outside of the daily activities that people usually do [1]. Meanwhile, environmental parks as part of public spaces that are built and developed in a housing or settlement environment by the developer or local government are actually intended to be used for the general public and are regulated as a shared space for the community. This shared space can be a playground or sports facilities [1]. Sherer [2] shows that environmental parks are public spaces, where people are active in activities, such as sports, chatting and other physical activities, provide space for residents to relax and interact, and will create a sense of community in a residential environment.

The government has determined the rules contained in SNI 03-1733-2004 concerning with Procedures for Planning the Housing Environment in Urban Areas related to the provision of public space in housing to

support the social needs of the residents of the housing. However, problems often arise in the process of providing public space because of the gap between the characteristics of the existing space and its use by local residents. Public space planning also seems not to pay attention to the needs and comfort of its users so that public spaces often become neglected. In Law number 26 of 2007, concerning spatial planning, has also mandated the government to provide Green Public Space (RTH) and Non-Green Public Space (RTNH) both macro in urban areas and micro in every residential area, both existing and planned settlements.

An effective and useful public space in a settlement if it has three intrinsic values, namely democratic, meaningful and responsive ([1] in [3]), which can be interpreted on the quality of the attributes of a successful public space, namely comfort and image, access and connectedness, utilization and social activities [3]. The existence of people and how people play a role in space are important things in reviewing the public nature of a space [4].

---

\*Corresponding author. Tel.: +6281140028585  
Jl. AP. Pettarani NO.30 Maros, South Sulawesi  
Indonesia

Based on these circumstances, a research was conducted on the effectiveness of public space in the Untia fisherman's settlement. Untia Fisherman Settlement is one of the fishing settlements in Makassar City. This settlement was prepared by the Makassar City Government, which at that time was under the leadership of Mayor HA Malik B. Masry, SE., M. Si (1994-1999). The Untia fisherman's settlement, located in Untia Village, Biringkanaya District, Makassar City, is prepared to accommodate fishing communities who were relocated from Lae-Lae Island due to the Makassar City Government's policy to make Lae-Lae Island a tourist area.

As a relocation settlement, the Untia fisherman's settlement has been equipped with more adequate environmental facilities and infrastructure than their place of origin. One of the settlement facilities and infrastructure referred to is the availability of public space. The Untia fisherman's Settlement has three public spaces that are intentionally designed as a place for the community to do daily activities, have recreation and interact. The public spaces are Non-Green Public Spaces in the form Plaza Park, Delta Playground and the other is Child Friendly Public Spaces (RTPRA).

## 2. Literature Review

### 2.1. Utilization effectiveness

Effectiveness is a concept that has a very important meaning, but in reality it is difficult to define with certainty. The reason is that many concepts are related in terms of effectiveness. In general, what is meant by "effectiveness" is a condition that shows the level of success or achievement of a goal as measured by quality, quantity and time as previously planned. Sondang [5] provides the following definition: "Effectiveness is the use of resources, facilities and infrastructure in a certain amount that is consciously determined beforehand to produce a number of goods for the services of the activities it carries out".

Another theory according to Komaruddin [6] in Soetrisno [7] states that effectiveness is a condition that indicates the level of success or failure of activities in achieving the goals that have been set.

### 2.2. Space

Webster [8], explains that space is a 3 (three) dimensional area where objects and events are located. Space has a relative position and direction, especially if a part of the area is designed in such a way for a particular purpose. Space is part of the building in the form of a cavity, between two objects and the open nature that surrounds and surrounds us. Not visible physical and physical objects can only be felt by hearing, smelling and touching.

From the description of the theory about space described above, it can be summarized in one conclusion, namely space is a 3 (three) dimensional area which is a limited or unlimited unit that surrounds us which can be felt by hearing, smelling and touching.

### 2.3. Public space

Webster [8], is a place or area that can accommodate certain human activities, either individually or in groups. Examples of public spaces include roads, parks, pedestrians, plazas, cemeteries, sports fields. Public space is part of the space that has a definition as a container that can accommodate certain activities of the community in an environment that does not have a physical cover [9].

Dewang [10] in Burhanuddin [11] stated that the word "open" in the terminology of public space can be translated into several meanings, namely: free to be entered or used, not closed, not restricted, not prohibited, accessible, not bound, receptionist, and others. Thus, public spaces are parts of the environment that are open to or can be used for spontaneous activities and are freely chosen by the community.

### 2.4. Non-Green Public Space (NGPS)

Types of Green Public Space (GPS) and Non-Green Public Space (NGPS) are part of the public space. Non-Green Public Space is a space that is not physically in the form of a building and is not dominantly overgrown with plants or porous surfaces, can be in the form of pavement, water bodies or other certain conditions (e.g. bodies of mud, sand, desert, rock, and lime) (Minister of Public Works Regulation) [12]. By definition, Non-Green Public Space can be divided into paved public spaces, blue public spaces (bodies of water) and public spaces under certain conditions.

### 2.5. Effectiveness of Non-Green Public Space

The Non-Green Public Space is considered effective if the city community uses it and gets satisfaction after activities in the city park. The management of the city park is said to be successful if the visitors feel satisfied which is indicated by the increasing number of visitors and the frequency of visitors [13] in [14].

### 2.6. Aspects of influence on the effectiveness of Non-Green Public Space

The existence of people (people) and how people (people) play a role in space are important things in reviewing the public nature of a space [4]. Then access and diversity of activities are the main keywords. This is supported by Gehl [15] where the existence of activities in outdoor spaces can be an indicator of the quality of urban public spaces. Logically, it is quite clear, with the assumption that human activities are carried out with random purposes, people tend to prefer activities in outdoor spaces with good quality. Where this quality can be interpreted according to the attributes of a successful public space [3], namely comfort and image, access and connectedness, utilization and social activities.

Carr, et al. [1] in Carmona, et al. [3] argued that public space in a settlement will be effective and useful if it has three intrinsic values, namely democratic, meaningful and responsive. Furthermore, Carmona, et al. [3] and Parkinson [16] described the intrinsic value:

- Democratic, is the availability of good accessibility. With good accessibility, it will encourage the use of public space by various users. This diversity of users can be measured by the diversity of gender, age and several other characteristics.
- Responsive, as a responsive space, public space must be able to provide comfort and flexibility for various uses and activities. In addition to the presence of various activities Shaftoe [17] in Parlindungan [4] user intensity can be used as a benchmark for responsive public spaces.
- Meaning, in the end the existence of social interaction through the formation of space user groups, the intensive use of space and the existence of various activities can explain how public space is meaningful for the community. It can be further explained that the public space provides an attachment for the community which is marked by a sense of concern for the space [1].

From the theoretical description above, we can conclude that the presence of users and user behavior can determine the effectiveness of the utilization of a Non-Green Public Space. This is in line with what is stated by Parlindungan [4] that the presence of users and the behavior of outdoor users can be developed as an approach in the study of public space, especially to assess the response of space users to the quality of public space, especially non-green Public Space.

### 2.7. Factors affecting utilization of Non-Green Public Space

Requirements for the public space [14]:

- a. Meet the comfort criteria
  - Protection against sun and weather
  - There is street furniture (seats, street lamps, signposts and information boards)
  - Road conditions
  - Natural lighting
- b. Utilization of natural elements
  - Vegetation aspects: vegetation is a fairly important element in a public space, because vegetation has many functions such as forming space, aesthetics and regulating environmental temperature.
  - Water aspect: in this case the water aspect that is intended can be various such as ponds/gardens, rivers.
- c. Aspect view
 

The aspect of scenery is no less important in planning a public space because it involves psychological comfort for its users for the community as actors. The beautiful and attractive scenery will make the users of the public space feel relaxed and comfortable in the space.
- d. Access Achievement (accessibility)
 

The factor of access/achievement to the location is also an important thing. An ideal public space is actually easy to reach from anywhere. However, this is also greatly supported by the quality of the road to that location.

- e. Various activities/types of activities
 

To be able to know that public space in one area meets public demands or not, it can be seen from the types of activities that are there. Although the needs of the community in each area are different, there are some general requirements for an ideal public space.

### 2.8. Non-Green Public Space elements design

According to Rubenstein in [14], the supporting design elements that must be contained in public spaces, especially in this case are Non-Green Public Spaces, include:

- a. Pedestrian lights: 4-6 meters high, 10-15 meters placement distance and accommodates a hanger.
- b. Street lighting: even lighting, and choosing the type of lamp based on effectiveness.
- c. Bus Stop: protected from weather changes, for example, heat and rain, placed on the edge of the main road with heavy traffic, and the minimum length of the bus stop is the same as the length of city buses so that passengers can get on from the front or back doors
- d. Direction board: signs are attached to lighting, located in the open, contain information about the location and facilities, not covered by trees, the use of markings must reflect the character of the area, distance and size must be adequate and arranged to ensure visibility, use and presence must be harmonious to architectural buildings, the restriction of large markings that dominate the cityscape.
- e. Public phone: characterize as communication facilities, provide convenience for users, are easily visible and protected from the weather, are placed on the edge or middle of pedestrian paths, and each payphone has a width of approximately 1 meter.
- f. Trans cans: trash cans are placed at a certain distance, for example every 15-20 meters, easy to transport, and different types of trash cans for dry and wet waste.
- g. Vegetation: serves as shade, placed on plant paths (minimum 1.5 meters), branches two meters above the ground, branches do not bend, planted in rows, not only contain aesthetic value, but also as climate control, plants are non-toxic, non-toxic. thorny, the branches are not easily broken, the height of the garden varies, the green color with other color variations is balanced, the types of annual or seasonal plants, the speed of growth is moderate, able to absorb air pollution, and the spacing of the plants is half tight so as to produce optimal shade
- h. Air clean/ Bathroom: clean water/bathroom is needed in public spaces.

## 3. Methodology

This research is an evaluative, is a process of evaluating the effectiveness of the results of the design work after the building is completed [18]. This study aims to evaluate the effectiveness of the utilization of the Non-Green Public Space at the Delta Playground in the Untia fisherman's settlement.

This study uses a mixtode approach. Analysis of research data is explained using qualitative descriptive. A qualitative approach is used to observe the social activities and characteristics of Delta Playground users through observation. A qualitative approach is used to interpret the findings from observations.

3.1. Method of collecting data

Data collection in the study was carried out by observation. Observations were made on social activities and the characteristics of users of public spaces using the Good Public Space Index (GPSI) form with six variables, namely: Intensity of Use (IU), Intensity of social use in groups (Intensity of Social Use - ISU), Duration of visit (People's Duration). of Stay - PDS), Diversity of activities at one time (Temporal Diversity of Use - TDU), Diversity of use (Variety of Use - VU), Diversity of users (Variety of User - VUr).

3.2. Data analysis method

Analysis of the use of public space in the Untia fisherman settlement was carried out using the parameters of the Good Public Space Index (GPSI) [4]. The result of this analysis is an index with numbers 0 – 1 which is directly proportional to the observed variables. From the several levels of the index for the purpose of being more informative, each aspect is categorized into 0 – 0.20 (very low), 0.21 – 0.40 (low), 0.41 – 0.60 (medium), 0.61 – 0.80 (high), 0.81 – 1 (very high). The interpretation of the data is then explained using a qualitative descriptive method, namely accumulating data and explaining phenomena that occur without explaining the relationship between variables, testing hypotheses, making estimates or making meaning implications.

4. Overview of Untia Fisherman’s Settlement

4.1. Geographical situation and population

The Untia fisherman’s settlement is located in the Untia village, Biringkanayya sub-district, Makassar City. The Untia Fisherman's Settlement is located on the west coast of Makassar City (Fig. 1).

Administratively, the Untia fisherman’s settlement consists of three RWs, namely RW 1,2 and RW 5 and has an area of about 198,863 m<sup>2</sup> or about 20 ha (Fig. 2).

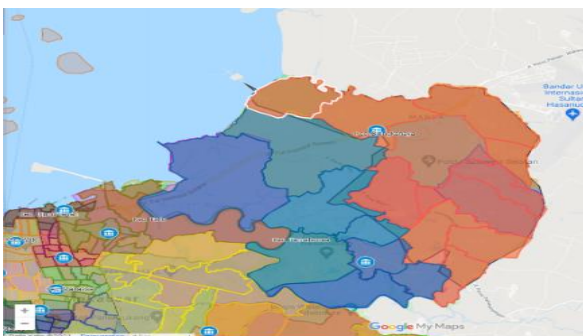


Figure 1. Map of Makassar City which shows the location of the Untia village which is in the Biringkanayya sub-district (Orange color). (Source www.makassar.go.id)

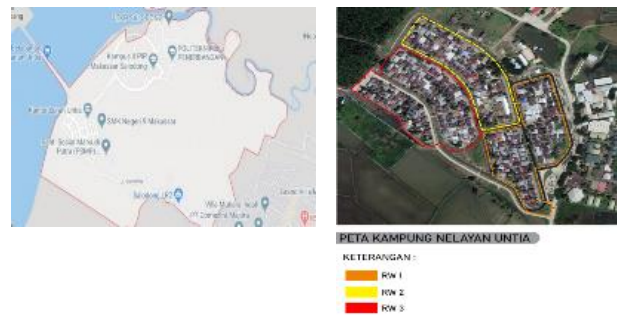


Figure 2. Untia village map (left) and Untia fisherman settlement master plan (Source www.makassar.tribunnews.com/)

Table 1. Population of Untia Fisherman’s Settlement

No	Border area	Population (person)		No of family	No of houses	Area Width (m <sup>2</sup> )
		M	F			
1	RW 01/ RT 01, 02, 03	312	282	140	102	23716
2	RW 02/ RT 01, 02	184	171	97	67	19875
3	RW 05/ RT 01, 02, 03, 04	370	306	170	130	27378
Total		1625		407	299	70969

The Untia Village community does not only consist of one tribe, but consists of various tribes including the Makassar tribe and the Bugis tribe. Many of these ethnic differences occur because of the urbanization of residents from villages to cities, especially South Sulawesi, namely Untia Village. According to the general data of the Untia Village PKK 2020, the population of the Untia fisherman settlement spread over three RWs that can be seen in Table 1.

4.2. Physical condition Non-Green Space of Delta Playground

The Delta Playground is on the inner side of the settlement. The park is in the form of a delta and is surrounded by canals with a width of about 4 m and a depth of about 1-2 m. This park is adjacent to the residential area of RW 03 residents on the north side and RW 01 on the east side with each separated by a canal. Meanwhile, on the south and west sides, they are bordered by residential neighborhood roads which are also separated by canals. With an area of about 1,941 m<sup>2</sup>, and the population of the Untia fisherman’s settlement is around 1,625 people. This park can serve the need for Public Space up to the environmental center or RW level (see Table 2).

The existing physical condition of the Delta Playground (see Fig. 3) and the condition of the supporting elements in the Delta Playground can be seen in Table 3.

Table 2. The scope of public space services

No	Types of Facilities	Number of Supporting Populatiom (Person)	Needs of min. width area (m <sup>2</sup> )	Standard (m <sup>2</sup> /prs)	Targeting Radius (m)	Width of open space-OS (m <sup>2</sup> )	Width of green space-GS (m <sup>2</sup> )	Width of non-green space-NGS (m <sup>2</sup> )	Criteria of location & solution
1	Park/Playground (RT)	250	250	1.0	100	250	CGS x 250	OS - GS	Centre of neighbour hood group
2	Park/Playground (RW)	2500	1250	0.5	1.000	1250	CGS x 1.250	OS - GS	Centre of community activity
3	Park & Sport area (Subdistrict)	30000	9000	0.3		9000	CGS x 9.000	OS - GS	It is suggested that to cooperate with education facilities
4	Park & Sport area (District)	120000	24000	0.2		24000	CGS x 24.000	OS - GS	Located in the main road. It is suggested to cooperate with education facilities
5	Green zone	-	-	15 m		9000	-	-	Located spread
6	Grave yard/Public grave	120000	-	-		-	-	-	Considering target radius and serviced area

Table 3. Condition of the supporting elements of Delta Playground













Facilities	Item	Available	Not Available	Condition	Information
<b>Accesibilities</b>	- Location of playground	✓		Near settlement, in term of width it is activity for community	
	- There is an acces from city centre to Untia Fisherman Settlement	✓		Good condition	
	- Acces to the playground	✓		In sufficient of qualities and quantities only one direction acces not supporting for disabilitas	
	- Parking area		✓	Temporary	
<b>Comfort</b>	- Trees and plants (vegetation)	✓		In sufficient for shady and an astetic	
	- Street Furnitures: Seat, gasebo, direction board & spech, lighting	✓		In sufficient quantities, no maintenance	
	- View/Natural	✓		Interesting	
	- Water/Canal	✓		Good if always maintained	
	- Toilet, clean water, recycle bin		✓	Not available	
<b>Safety</b>	- Guardrails		✓	Not available	
<b>Aktivty</b>	- Child spacecraft	✓		No maintenance	
	- Sport area dan Jogging Track		✓	Not available jogging track	
<b>Management</b>	Management (hygiene, safety, maintenance and program activity)		✓	Not available	



Figure 3. Location of NGPS Delta Playground in Untia Fisherman Settlement

### 5. Result and Interpretation

Observations on the use of Non-Green Public Space at research locations based on variables were then analyzed using the Good Public Space Index (GPSI) parameter and the results obtained in Table 4 and Fig. 4.

Based on the results of the GPSI index as shown in the Table 4, it is known that the quality of each public space is based on each variable analyzed. The discussion of the results of the quality index for each of these variables will be explained as follows:

Table 4. Results of the analysis of the effectiveness of the use of Delta Playground

Public Space/Observable Variables	Variabel Index/Day							Index Average	Variable Category	Total Indx Scoe	GPSI Value	Category
	Mon	Tue	Rab	Wed	Thur	Sat	Sun					
Intensity of Use	-	-	0.00	-	-	0.00	-	0.00	Very Low	3.55	0.59	Standard
Intensity of Social Use	-	-	1.00	-	-	1.00	-	1.00	Very High			
People's Duration of Stay	-	-	0.54	-	-	0.69	-	0.62	High			
Temporal Diversity of Use	-	-	-	-	-	0.53	-	0.27	Low			
Variety of Use	-	-	0.89	-	-	0.89	-	0.89	Very High			
Variety of User	-	-	0.64	-	-	0.90	-	0.77	High			

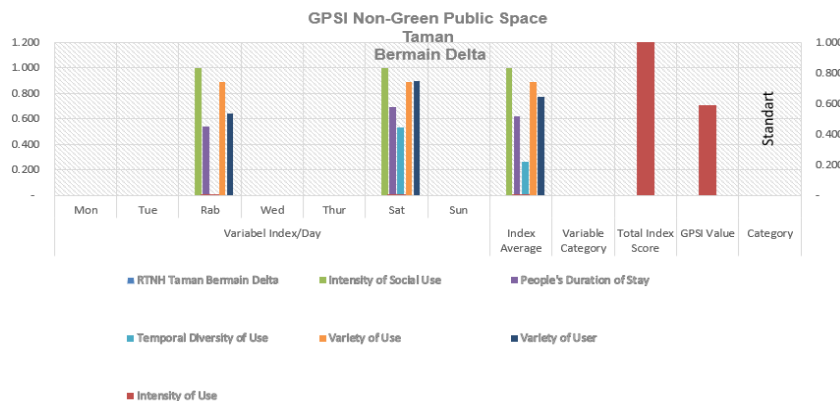


Figure 4. The effectiveness of the utilization of Non-Green Public Space Delta Playground

#### 5.1. Intensity of Use (IU)

From the existing data, it can be seen that the intensity of use in the playground is only twice a week while at the Taman Plaza it is still better, namely four times a week. As shown in Table 4, the intensity of the use of these public spaces is still very low.

Carr et al. [1] in Carmona et al. [3] argued that a good public space must have three intrinsic values, namely democratic, meaningful and responsive. Carmona, et al. [3] and Parkinson [16] described that one important aspect in a democratic public sphere is the availability of good accessibility. With good accessibility, it will encourage the use of public space by users.

Existing data shows the condition of access to the playground as shown in Fig. 5, for example, there is only one pedestrian bridge located on the west side of the playground, while residential areas are located in the east and north. Between the playground and residential areas separated by a canal with a width of 2-3 m. So if

residents want to access the park, they have to go around it first. From the results of interviews with the community around the playground and plaza park,.

The problem of access to public spaces has indeed become a complaint of residents of the settlements. Just to accompany the child to play on the swing or slide, the child and his parents must first go around the canal and look for the nearest bridge to enter the playground.



Figure 5. Map of NGPS Delta Playground with access that can only be accessed from one direction (yellow box)



Figure 6. Activities that take place in the morning at NGPS Delta Playground and conditions during the day

Based on the results of field observations and the theoretical description presented above, this is one of the reasons why this playground in terms of the intensity of use (IU) is very low. So it is not surprising that access to the location is important. An ideal public space is actually easy to reach from anywhere [14].

5.2. Social Intensity of Use (ISU)

One of the functions of public space is as a forum for social activities. So that when the level of social activity that occurs is high, the quality of the public space is getting better [19] which can explain how public space is meaningful to society ([17] in [4]).

The achievement index for the intensity of social use (ISU) variable in both public spaces is in the very high category. This shows that public spaces in fishermen's settlements have been able to accommodate the social activities of their users well. Based on the observations made, there are several activities carried out in groups, such as fishing, children playing slides or gathering, parents bringing their children to play together, chatting or chatting together as shown in Fig. 6. Although in fact this group activity did not continuously take place during the observation period. Figure 7 shows the activities that occur on average users in groups.

5.3. People's Duration of Stay (PDS)

Time of visit and duration of visit in a public space can describe whether or not visitors are comfortable in that public space. When visitors feel comfortable to linger in public spaces, it can be said that visitors feel comfortable in that location. The user's duration of activity is shown in the variable of the duration of the visit (people's duration of stay-PDS). Based on the results of the analysis, the quality index of public spaces based on the duration of the visit was included in the high category at the Delta Playground with an average length of activity of more than one hour and very high in Taman Plaza with an average activity duration of less than one hour continuously for almost a week (long observation).

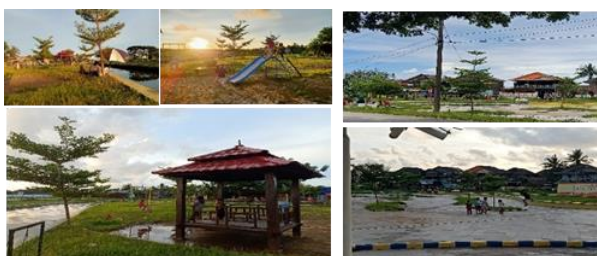


Figure 7. The activities of playground users are more in forming groups in interacting with each other



Figure 8. Natural elements found in Delta Playground as one that makes visitors feel at home for long, although on average it only takes place in the afternoon

The high value of the PDS index in these two public spaces is due to the time distribution of activities when observations are carried out only in the morning and evening, where the hot weather conditions are not scorching hot. Based on the results of observations in these two public spaces in the morning and evening it is quite comfortable, because of the influence of the view of sunrise (sunrise) and sunset (sunset). In addition, there is an element of water in the form of canals that surround and pass through both public spaces which can have a positive psychological impact (see Fig. 8).

5.4. Temporal Diversity of Use (TDU)

Good public spaces generally have more to do than less successful spaces [19]. Based on the variable diversity of activities at one time, the quality index of public space is low. Based on the existing conditions, the facilities for supporting activities, both active and passive, in the two open public spaces are still minimal. There are only play facilities for children, while the existing sports fields are in a dilapidated condition and overgrown with weeds as shown in Fig. 9.

5.5. Variety of Use (VU)

By looking at the results of field observations for the variety of use variables in two public spaces, the results obtained are in a very high category. This means that the Delta Playground with its current condition as a whole (for each day of observation) can accommodate a variety of users with various kinds of activities.

The activities carried out do not always depend on the facilities provided [19]. Even with the existing conditions where the two public spaces are minimal with playing facilities or passive and active activities, users are still allowed to carry out activities that are physical contact such as chatting, playing or exercising with friends and family and at the same time other users can perform activities that require a long duration of time, such as skateboarding, fishing, swimming or other transitional activities such as sitting, standing, playing, and watching.



Figure 9. The diversity of activities that occur at one time of observation

### 5.6. Variety of User (VUr)

With good accessibility, it will encourage the use of public space by various users. This diversity of users can be measured by the diversity of gender, age and several other characteristics. User characteristics also influence the assessment of the quality of public space. A public space that can accommodate various types of users (men, women, children, young adults and old adults) will show a good level of public space quality [19].

Based on the user diversity variable, the VUr index is included in the high category. The quality of a public space based on user characteristics can also be seen from the difference in the number of users based on gender. If the percentage of women in the use of public space is small, then something is wrong with the space, on the contrary if the percentage of women is more, it can be said that the public space is good. This is because women tend to be discriminatory in the selection of public spaces.

## 6. Conclusion and Suggestion

### 6.1. Conclusion

Based on the above discussion, conclusions can be drawn based on the research formulation, as follows:

- a. The quality of the results of the analysis of the average value of the effectiveness index for the utilization of the Delta Playground at the Untia Fisherman's Settlement is rated "medium", that is, not too good and not too bad. This is because there are several variables whose assessments are in very low to very high category, so the GPSI value is in the medium category.
- b. Based on the results of the GPSI assessment analysis and interviews with local communities and village officials, there are several factors that affect the GPSI value of this Non-Green Public Space including the moderate category, among others: (a) accessibility in terms of quality and quantity is inadequate. Facilities for disabled visitors are not available. (b) The vegetation factor as a comfort factor is one of the most influencing factors in people's reluctance to use this Non-Green Public Space, especially during hot weather. (c) Supporting elements are still lacking, such as toilets and trash cans that are not available in this public space. Similarly, lots of food/beverage sellers do not exist at all. (d) Public space management factors that do not yet exist so that the existence of many public facilities is neglected/unmaintained.

### 6.2. Suggestion

Recommendations that can be given in this study are the effectiveness of the reuse of functions and the essence of the existence of the Non-Green Public Space Delta Playground in the Untia Makassar Fishermen's Settlement for better cooperation from various parties. Not only from the disciplines of architecture and urban planner, but also from managers, government and society.

### 6.2.1. Study Advice

#### a. Advanced Studies

There is a need for further studies on Non-Green Public Space that are both able to see the changes that occur and are able to adapt or be flexible by themselves. Many designs of public spaces fail because they do not have a vision of the changes that may occur.

#### b. Attraction and destination

Activities Programmed programs and various attractions will revive the Non-Green Public Space Delta Playground, thus making it a destination for community members to have activities and socialize in the area.

### 6.2.2. Operational Advice

#### a. Good management

No matter how good a design is, without being managed and programmed properly, the public space will not be able to survive and develop properly. An understanding of the character of the institutions, institutions and communities involved in determining how the Non-Green Public Space management process can run well.

#### b. Source of Income

Basically, the Non-Green Public Space can be used as a source of funds for the city government by collaborating with companies to participate in the management and use of the city's public spaces in a proportion that benefits all parties, including residents who use the Non-Green Public Space Delta Playground.

## References

- [1] S. Carr, M. Francis, L. G. Rivlin, and A. M. Stone, *Public Space*. New York: Cambridge University Press, 1992.
- [2] P. M. Sherer, "The Benefits of Parks; Why America Needs More City Parks and Public Space," 2003. [Online]. Available: [http://conservationtools.org/libraries/1/library\\_items/729/The-Benefits-of-Parks-Why-America-Needs-More-City-Parks-and-Open-Space](http://conservationtools.org/libraries/1/library_items/729/The-Benefits-of-Parks-Why-America-Needs-More-City-Parks-and-Open-Space). [Accessed: 30-May-2021].
- [3] M. Carmona *et al.*, *Public Places Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press, 2003.
- [4] J. Parlindungan, "Good Public Space Index: Theory and Method. Research Center of Public Space," University of Brawijaya, 2013.
- [5] P. S. Sondang, *Tips to Increase Work Productivity*. Jakarta: PT. Rineka Cipta, 2002.
- [6] Komaruddin, *Management Encyclopedia*, 2nd Ed. Jakarta: Literacy Development, 1994.
- [7] M. R. Soetrisno, "Effectiveness of Utilization of Non-Green Public Space at Perumnas Toddopuli Panakkukang Permai Makassar City," Diponegoro University, 2010.
- [8] F. Webster, *Theories of the Information Society*, Third edit. New York Roy, 2006.
- [9] E. Budiharjo and D. Sujarto, *Sustainable Cities*. Bandung: Alumni, 1999.
- [10] N. Dewang and Leonardo, "Accessibility of Public Public Spaces for Certain Community Groups: A Study of Public Facilities for People with Disabilities in the Taman Suropati Menteng area, Central Jakarta," *PLANESA J. Plan. Eng. Dep.*, vol. 1, no. 1, p. 8, 2010.
- [11] S. F. S. Burhanuddin, "Assessment of Park Comfort in Public Public Spaces in the Pankajene Riverside Tourism Area," Hasanuddin University, Makassar, 2018.
- [12] "Minister of Public Works Regulation No. 12 of 2009 concerning Guidelines for Provision and Utilization of Non-Green Public Spaces in Cities/Urban Areas."
- [13] S. Meira, "Analysis of the Effectiveness of City Parks through an Approach to Site Conditions and Visitor Behavior," Bogor



- Agricultural University, 2002.
- [14] E. F. Porajouw *et al.*, "Effectiveness of Public Public Space in Tomohon City," *Unsrat E-Journal*, vol. 4, no. 17, 2017.
- [15] J. Gehl, *Life Between Buildings: Using Public Space*. Washington: Island Press, 2011.
- [16] J. Parkinson, *Democrat and Public Space*. Oxford: University Press, 2012.
- [17] H. Shaftoe, *Convivial Urban Space*. Earth scan, 2008.
- [18] W. H. Whyte, *The Social Life of Small Urban Spaces*. Washington: Conservation Foundation, 1979.
- [19] Wardhani *et al.*, "Identification of the Quality of Use of Public Public Space in Housing in the City of Bandung," Bandung Institute of Technology, 2015.