

PAPER • OPEN ACCESS

Mapping of Child Friendly Parks Availability for Supporting Child Friendly City in Semarang

To cite this article: P. Prihantini and W Kurniawati 2019 *IOP Conf. Ser.: Earth Environ. Sci.* **313** 012035

View the [article online](#) for updates and enhancements.

Mapping of Child Friendly Parks Availability for Supporting Child Friendly City in Semarang

P. Prihantini, W Kurniawati

Departement Urban and Regional Planning, Diponegoro University

Email: tin_tinch@yahoo.co.id

Abstract: Semarang is one of a city that gets an award as a child-friendly city. A child-friendly city is a city that has recognized the existence of children's rights, which implements it in policy, including in the development of its city. The availability of service facilities that consider children's needs such as children's playgrounds can contribute to the realization of a child-friendly city. Semarang has 33 active parks in 2014 and continues to grow by approximately 20 parks now, but not all parks provide children's ground. The purpose of this study is to know that the availability of child-friendly parks can support Semarang as a Child-Friendly City. This study uses a qualitative descriptive approach, using a scoring analysis tool. The results of the analysis show that the availability of child-friendly parks is sufficient to influence the predicate of a child-friendly city because child-friendly parks are a representation of the attention and recognition of children's rights.

Keyword: *child-friendly parks, child-friendly cities, children's rights*

1. Introduction

Semarang city has twice received the title of *Child-friendly city*, namely in 2012, 2013, but in 2014 and 2016 Semarang City was no longer received the title. This has also been studied in previous study which stated that Semarang City is not yet worthy for children because of the lack of child-friendly facilities, such as child-friendly parks and the availability is uneven [1]. Thirty three available active parks are not evenly distributed in every district in Semarang City, such as Mijen, Gunungpati, Tembalang, Pedurungan, Genuk, Tugu and Ngaliyan District do not have active parks. In addition, facilities and infrastructure in each park are different. Proven in 2014, Semarang City does not get the title of *Child-friendly city* even until 2016. Then Semarang City made improvements, there are at least 20 parks built and also some fields equipped with playgrounds to fulfill children's needs for child-friendly public spaces. The provision of child-friendly parks is an effort to fulfill the five children's rights clusters. Fulfillment of children's rights clusters has proportion of 70% in the realization of *Child-friendly city*, and the remaining 30% is institutional strengthening which is assisted by the existence of legislative regulations and policies that related to the interests of children.

Child-friendly park is one of the facilities of children's needs that reflect the recognition and fulfillment of children's rights. Child-friendly parks are the facilities of recreation and creativity in utilizing leisure time and become a medium of expression. The availability of children's playground facility is the realization of the fulfillment of children's rights in terms of education, utilization of leisure time and cultural activities. In addition, availability of playgrounds also means that a child has been recognized for its existence and their need has been accommodated, or in other words their civil rights and their freedom have been recognized. Beside that, the availability of the park is also a



fulfillment in the right of health and welfare fulfillment because the provision of parks or open spaces is one way to improve air quality so that creating a comfortable environment as one of the fulfillment of family environmental rights and alternative parenting.

The availability of the park is also one of the means and efforts of the government to give special attention and protection for children. Playground is one of the basic services of the city so it should have easy access or free access so there is no more term “pay for play” (Hart, 2002). Playgrounds can also be one of the visualizations of *child-friendly city*, so with the availability of several child-friendly parks, a city could feel more child-friendly.

The characteristics of a city can be seen from the physical appearance and its community activities, so also with *child-friendly city*. In Indonesia, child-friendly city is a predicate obtained by a city that has been able to fulfill children's rights. One indicator of a child-friendly city is a city that provides a safe and comfortable environment, thus enabling children to be creative, learn, interact socially, develop psychosocial, and express their culture [2].

This indicator is supported by the characteristics of child-friendly city, one of them is creating parenting conditions and safe environment for children's development at all age levels by providing opportunities for recreation, learning, interacting, psychological development, and expressing culture (Karen Malone in Sipe, et.al, 2006 retrieved from UNICEF, 2001). The availability of a park or playground is absolutely necessary because this is one of the children's rights that supports the realization of child-friendly city namely access to basic city services [3]. Most parks and playgrounds in the city are private areas with a tendency to attach importance on profits rather than meeting needs. Paid play area or known by the term “pay for play” [4] is quite a lot available but less affordable for the community.

Space and playgrounds that have wide access are needed by the community because the amount of public space is very limited. According to the Editor and Seto Mulyadi in the September-October Edition on Space Magazine 2010 a city should have provided minimum 1% for children's public spaces. This space or playground is very needed in the process of children development, which will be carried away in collective memory to adulthood. Good and positive generation is born in a conducive parenting atmosphere, therefore an ideal and child-friendly space or playground is very necessary. The criteria for a child-friendly park does not yet exist, specifically in Semarang City, the policy has not been specifically designed, whereas based on previous studies that there is a key to realizing child-friendly city, namely the existence of policies or regulations and planning as the main foundation and followed by the fulfillment of children's rights by creating a sustainable environment. Therefore, the theoretical framework development of a child-friendly park is adapted to child-friendly city, which also has two main things, namely policies or planning and fulfillment of children's rights in creating a sustainable environment.

Policies and planning on child-friendly parks focus on the policy and planning of parks or green open spaces which accommodates child-friendly parks. The fulfillment of children's rights to obtain a sustainable environment can be seen from the existence of child-friendly parks, that taken from active parks in Semarang City with most of them are environmental service scale. The essence of this study is, if in every environment there is a child-friendly park which is good for child development, it indicates that the environment in Semarang City has become a sustainable environment and has fulfilled children's rights to obtain it. It is created if there is commitment from the government through policies/regulations or planning. Both of these are the things that can create Semarang City as a child-friendly city based on the community and the physical appearance of the city.

2. Method

This study tries to give an overview of the relation between the fulfillment of children's rights and institutional strengthening in the provision of child-friendly parks

which is the manifestation indicator of child-friendly city, so this study uses descriptive qualitative methods according to explanation [5]. One of the data collection was conducted by taking samples using interviews to strengthen observations that have been done in the park and then use triangulation by interviews with experts to strengthen the data obtained or referred to convenience sample [6].

3. Result

Study of the characteristics of the park is conducted by looking at the completeness of the facility and also availability and comfort of children in playing with several research items. This assessment is carried out in 29 parks (of the total 33 parks, 4 parks do not meet the minimum area of the environmental park namely 250m²) which includes several aspects of assessment, which is formed based on a summary of various literature (Table 1 and Table 2).

Table 1. Assessment Variable of Child Friendly Parks in Semarang

Assessment Variable	Literature
(1) Minimum area 250 m ²	• Hart (2002)
(2) Open / free access	• Minister Regulation of Public Works No. 05/PRT/M/2008
(3) Have a gathering area such as a sitting group or other room with the same function	• Regional Regulation of Semarang City Number 7 in 2010
(4) Natural / minimum pavement	• Lynch (1990)
(5) Have a special area for children, equipped with a diverse game area	• Dewiyanti (2002)
(6) Interesting and memorable space	• Redaksi in Mulyadi (2010)
(7) Have signs as a child's orientation	• Walsh in Glesson and Sipe (2006)
(8) Have an internet connection network as well as a smart park for children	• Reavey (2010).
	• Moss (2010)
	• Dudek (2005).

Source: Analysis Results, 2014

<u>Class Determination</u>	<u>Range Determination</u>	<u>Calculation of Class Interval</u>
Class = $1 + \log n$		
= $1 + \log 29$	Highest value - lowest value	
= $1 + 1.46$	= 8-3	Interval = Range : Class
= 2.46 ~ 3	= 5	= $5/3$
		= 1.67

Based on the calculation, then the park category will be divided into 3 classes with the lowest value start at 3 and the highest 8, so the results of the class are as follows.

- Class 1 = 3 – 4.66 : Active Park Not Child Friendly
 Class 2 = 4.67 – 6.33 : Child Friendly Park Potential
 Class 3 = 6.33 – 8 : Child Friendly Park

Table 2. Assessment of Internal Conditions of Parks in Semarang City

No	Park Name	Assessment Aspects of Child Friendly Parks Potential							
		1	2	3	4	5	6	7	8
1	Ade Irma Suryani	1	1	1	1	0	0	0	0
2	Cinde I	1	1	1	0	0	0	0	0

3	Ngaglik	1	1	1	1	1	1	1	0	7
4	Lamongan	1	1	1	1	0	0	0	0	4
5	Anggraini I	1	1	1	0	0	0	0	0	3
6	Anggraini II	1	1	1	0	0	0	0	0	3
7	Surtikanti	1	1	1	0	0	0	0	0	3
8	Erowati I	1	1	1	0	0	0	0	0	3
9	Erowati II	Do not meet the minimum park area standard								
10	Banowati I	1	1	1	0	0	0	0	0	3
11	Banowati II	1	1	1	0	0	0	0	0	3
12	Banowati III	1	1	1	0	0	0	0	0	3
13	Progo	1	0	0	1	1	0	0	0	3
14	Sedane I	Do not meet the minimum park area standard								
15	Rejosari	1	1	1	1	1	1	0	0	6
16	Rejomulyo	1	1	1	1	0	0	0	0	4
17	Nias II	1	1	1	1	1	0	0	0	5
18	Maluku	1	1	1	1	0	0	0	0	4
19	Halmahera II	1	1	1	1	0	0	0	0	4
20	Kimar	1	1	1	1	1	0	0	0	5
21	Menteri Supeno	1	1	1	1	1	1	1	1	8
22	Sompok	1	1	1	1	1	1	1	0	7
23	Mangga	1	1	1	1	0	0	0	0	4
24	Belimbing	1	1	1	1	0	0	0	0	4
25	Nangka	1	1	1	1	1	1	0	0	6
26	Erlangga I	1	1	1	1	1	1	0	0	6
27	Erlangga II	Do not meet the minimum park area standards								
28	Rasamala	1	1	1	1	1	0	0	1	6
29	Kruing	Do not meet the minimum park area standards								
30	Ulin	1	1	1	0	0	0	0	0	3
31	Gaharu Utara	1	1	1	1	0	0	0	0	4
32	Gaharu Timur	1	1	1	0	0	0	0	0	3
33	Gisikdrono	1	1	1	1	0	0	0	0	4

Source: Analysis Result, 2014

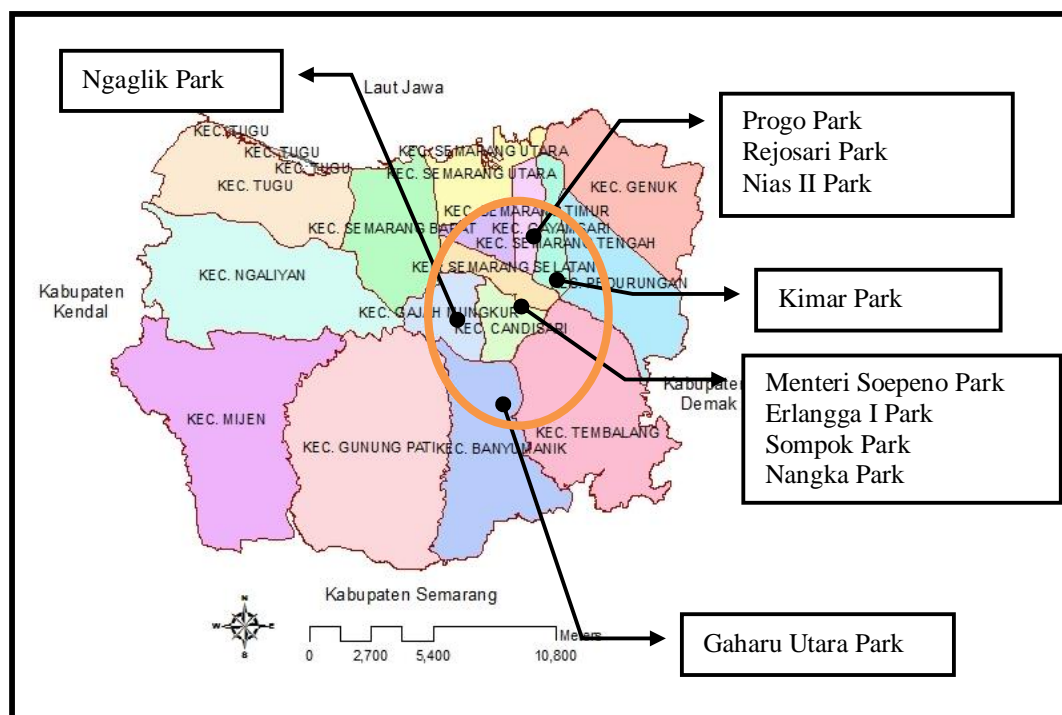
Calculation of Reproducibility Coefficient

$$\begin{aligned}
 Cr &= 1 - e/n \\
 &= 1 - 8/232 \\
 &= 1 - 0.034 \\
 &= 0.966
 \end{aligned}$$

Calculation of Scalability Coefficients

$$\begin{aligned}
 Cs &= 1 - e/0.5m \\
 \text{value } m &= \text{total choice}(n) - \text{total check} \\
 m &= 232 - 128 = 104 \\
 Cs &= 1 - 8 / (0.5 \times 104) \\
 &= 1 - 8/52 \\
 &= 1 - 0.154 \\
 &= 0.846
 \end{aligned}$$

A good Guttman Scale if it has $Cr > 0.9$ and $Cs > 0.6$. Based on calculation, value of $Cr = 0.966 > 0.9$ so that Guttman Scale is good to use, while value of $Cs = 0.846 > 0.6$ which means that the error is still acceptable and the scalability level is good enough to use.



Source: Analysis Result, 2014

Figure 1. Mapping of Child Friendly Parks in 2014

Geographically, Tanggamus District is located at $104^{\circ} 18' - 105^{\circ} 12'$ East Longitude and between $5^{\circ} 05' - 5^{\circ} 56'$ South Latitude. The western part of Tanggamus District continues north from Bukit Barisan Hills. The southern part is tapered and has a large bay, Semangka Bay. In Teluk Semangka there is a port which is a port and fish landing site.

The boundaries of the Tanggamus District administrative area are as follows:

- North is bordered by West Lampung and Central Lampung Districts.
- The South is bordered by the Indonesian Ocean.

- c) Westside borders with West Lampung District.
- d) Eastside borders Pringsewu District.

4. Discussion

This research was conducted in 2013-2014 and at that time Semarang City did not get a title of child-friendly city even until 2016. This is due to the unequal availability of child-friendly parks as seen in Figure 1. Child-friendly parks are only concentrated in the urban areas of Semarang City. Therefore, Semarang City tried to improve by building more than 20 parks and 5 fields in 2017 until 2018, especially in several districts in the outskirts of Semarang City that do not yet have parks (Figure 2). The availability and distribution of this child-friendly park is quite important to support the realization of child-friendly city, even though the amount and quality of its usefulness are still not proportional [7], but at least it can already be felt by the community especially children have space for expression, play, and social interaction.

Addition of the parks number equipped with the playground also resulted Semarang City being able to get the title of child-friendly city in madya category, that means there is an enhancement from the previous predicate, pratama category. Predicate of child-friendly city is divided into five, namely from the lowest category pratama, muda, madya, nindya, and the highest category is utama (<http://www.kla.id>). Semarang City is optimistic can reach child-friendly city with the title utama, namely the highest predicate of child-friendly city if the distribution of park availability is evenly distributed so that it can provide advantage to the surrounding community. It is in line with statement by [8] that child-friendly open space is a public open space, mean of play and child development, part of infrastructure and facilities of child-friendly city, open space, and mean of social activities (see Figure 2).

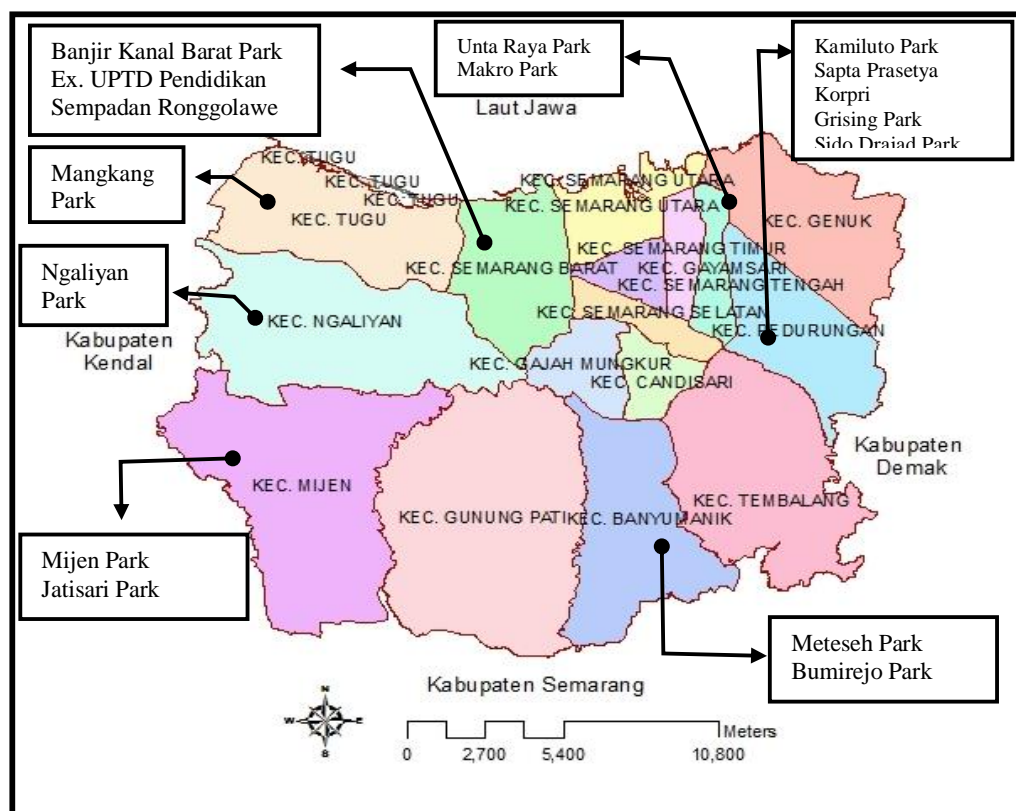


Figure 2. Spatial Distribution of friendly child park

5. Conclusion

Currently, the conditions that occur in Semarang City there are only 10 active parks that have the potential to become child-friendly parks or only 30% of the total 33 active parks that managed by the Semarang City Government. The ten parks are only concentrated in parts of Semarang City. This is certainly lame with the need for child-friendly parks in Semarang City and also shows the absence of planning or policy that pay attention to the needs of the children's facilities so that in 2014 to 2016, Semarang City does not get a predicate of child-friendly city.

Addition of parks that equipped with children's playgrounds starts in 2017 so that at that time the title of child-friendly city was reclaimed on the pratama level. The addition of the parks number and the evenly distribution of parks in several districts, which in 2014 did not yet have a park was continuously carried out and with this effort the Semarang City has succeeded in gaining the title of child-friendly city on madya level in 2018. Enhancement the predicate of child-friendly city will continue to be conducted optimistically until it reaches child-friendly city on utama level, if the availability of this child-friendly park continues maintained and the quality of its services is improved. It proves that the availability of child-friendly parks is important to support the realization of child-friendly city, because child-friendly parks are a means of children's needs, and also representative of the recognition of children's rights to play, recreation, and get a comfortable environment.

6. References

- [1] Prihantini A I, Tachibana S and Itoh K 2014 Evaluation of antioxidant and α -glucosidase inhibitory activities of some subtropical plants *Pak J Biol Sci* **17** 1106–14
- [2] Agustinawati E 2016 Pemenuhan Hak-Hak Anak di Surakarta Menuju Kota Layak Anak *J. Sosiologi, DILEMA* **21**
- [3] Riggio E 2002 Child friendly cities: good governance in the best interests of the child *Environ. Urban.* **14** 45–58
- [4] Hart R 2002 Containing children: some lessons on planning for play from New York City *Environ. Urban.* **14** 135–48
- [5] Nazir M 2003 Metode Penelitian Cetakan Kelima *Jakarta Ghalia Indones.*
- [6] Fink A and others 1995 *The survey kit* vol 9 (Sage Thousand Oaks, CA)
- [7] Herlina N and Nadiroh N 2018 PERAN STRATEGIS RUANG PUBLIK TERPADU RAMAH ANAK (RPTRA) DALAM RANGKA PEMENUHAN HAK ANAK TERHADAP LINGKUNGAN *J. Pendidik. Usia Dini* **12** 104–17
- [8] Hernowo E and Navastara A M 2017 Karakteristik Ruang Publik Terpadu Ramah Anak (RPTRA) Bahari di Kecamatan Cilandak Jakarta Selatan *J. Tek. ITS* **6** C221–C224