

## Open Space in Sub-District of Lebak Siliwangi, Bandung City, Indonesia

### *Ruang Terbuka di Kelurahan Lebak Siliwangi, Kota Bandung, Indonesia*

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**Abstract:** *Some big parts of the world's population live in the city. While an increasing number population in the cities affects the demands for housing and settlements. But the housing is developed formally and informally. For informal settlements, one of the challenges is to provide open space for the community to do social activities. The objectives of the article are (1) to identify the typology of open spaces for the planning and design of a sustainable urban environment, city, and community, and (2) to recommend open space management in achieving the goal of SDGs 11.7 (provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities). The method used is the literature review, interview, observation. The results showed that the Lebak Siliwangi Sub-District still needs to provide and manage the open space to accommodate community activities and social needs fulfilling. It is important to provide Common Open Spaces and Green Open Spaces to set up livelihood, lifestyles, and standards of community interaction for an urban community in informal settlements.*

**Abstrak:** *Sebagian besar populasi dunia tinggal di kota. Sementara peningkatan jumlah penduduk di kota-kota mempengaruhi permintaan perumahan dan permukiman. Namun perumahan dikembangkan secara formal dan informal. Untuk permukiman informal, salah satu tantangannya adalah menyediakan ruang terbuka bagi masyarakat untuk melakukan aktivitas sosial. Tujuan artikel ini adalah (1) mengidentifikasi tipologi ruang terbuka untuk perencanaan dan desain lingkungan perkotaan, kota, dan masyarakat yang berkelanjutan, dan (2) merekomendasikan pengelolaan ruang terbuka dalam mencapai tujuan SDGs 11.7 (menyediakan akses universal ke ruang hijau dan publik yang aman, inklusif dan dapat diakses, terutama untuk perempuan dan anak-anak, orang tua dan penyandang disabilitas). Metode yang digunakan adalah studi pustaka, wawancara, observasi. Hasil penelitian menunjukkan bahwa Kecamatan Lebak Siliwangi masih perlu menyediakan dan mengelola ruang terbuka untuk menampung aktivitas masyarakat dan pemenuhan kebutuhan sosial. Penyediaan Ruang Terbuka Bersama dan Ruang Terbuka Hijau juga penting untuk mengatur mata pencaharian, gaya hidup, dan standar interaksi masyarakat bagi masyarakat perkotaan di permukiman informal.*

## INTRODUCTION

### Context

Some big parts of the world's population live in the city. While an increasing number of populations in the cities affects the demands for housing and settlements. In addition, urbanism also adds to the population of the cities in Indonesia. The housing and settlements develop into formal and also informal housing (Suhartini & Jones, 2019). In some areas, the community adds houses according to the number of families informally and it becomes an unavoidable slum area. They live together as several new family members are born and come. Usually, they add the size of the house by adding some extensions or developing their houses (Jones, 2017).

This condition also happens in Bandung. Bandung City is the third largest city in Indonesia, with the second largest population density. The city's history dates from the year 1488 when the first reference to Bandung exists. But from ancient archeological finds, we know that Bandung City was home to Australopithecus, Java Man. These people lived on the banks of the Cikapundung in North Bandung, and the shores of the Great Lake of Bandung. In 1810, the Dutch Government gave a mandate to the Regent of Bandung, namely R.A. Wiranatakusumah II to move their regional capital to the side of the North highway, the Pos Raya Road which was newly built by Daendels. The Regent then moved the capital of Bandung which was originally located in Karapyak to the banks of the Cikapundung River and near the Pos Raya Road. Daendels and the Regent also determined the location of Bandung City. Daendels ordered the Regent to immediately build a city in that location. The Regent who provided a location selected for the city of Bandung was very concerned about local wisdom regarding the construction of the city hall (Rusnandar, 2010). It was during this period that modern Bandung urban planning began. Currently, the city of Bandung is getting denser because the population continues to grow. Likewise, the development continues to develop Bandung as a Metropolitan city.

Meanwhile, on one side of Bandung City, an area located in the Sub-district of Lebak Siliwangi, the development of housing and settlements occurred informally, along the riverbank of Cikapundung River and the Cikapayang Creek. Sub-district of Lebak Siliwangi previously was a legacy of earth geology and an ancient lake shore in earlier times. The valley in Lebak Siliwangi was surrounded by the Cikapundung River. It was becoming agricultural land used as a paddy field for generations since the Dutch occupation. The name "Lebak" means basin where water gathers from the water springs and this basin becomes a *water catchment area* or water conservation area. Lebak Siliwangi is a water supply location for the surrounding land which is also used as a green open space. In 1920, an architect designed an area as an open space called Lebak Gede (Big Valley). A Botanical Garden would be built in the South of this area, namely Jubileumpark, and was the beginning of the Tamansari area in Bandung which means a garden for kings (Rusnandar, 2010). The name "Siliwangi" is the name of the King who reigned there. Sub-district of Lebak Siliwangi is a part of the Lebak Siliwangi Valley. Now, this area is used for settlement or housing due to the regulation.

Sub-district of Lebak Siliwangi nowadays is getting denser, since this location is very strategic and near to the public facilities and services. Several universities stand also around Lebak Siliwangi which means there are a lot of newcomer students coming and living there. The inhabitants of Lebak Siliwangi used to have rental rooms to rent to the students. Therefore, the inhabitants tend to keep growing, while the area has already been densely populated and the houses are very closed one to another. Besides, this area is near the Green Open Space of Babakan Siliwangi and is located on the Cikapundung riverbank as well which needs careful maintenance and management due to its environmental function as a green open space and protection or conservation area.

Nonetheless, Lebak Siliwangi is considered as informal settlement where the housing is developed informally and organic, its physical development is unstructured which makes it a slum environment. Everyone seems only paying attention to their houses and economy which come from informal livelihood. Often the open space received less attention because it was considered less important in settlement, especially in slum settlements. Whereas, in SDGs Goal 11 about "Sustainable Cities and Community", it is mentioned in point goal 11.7 that the goal is "to provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women

and children, older persons and persons with disabilities” (Kushendar et al., 2021; Maryati et al., 2018).

This article will discuss how is the typology of the open space in Lebak Siliwangi is the informal settlement and the open space as a common property resource is used and maintained, and also managed properly. The objectives of this study are (1) to identify the typology of open spaces for the planning and design of a sustainable urban environment, city, and community, and (2) to recommend open space management in achieving the goal of SDGs 11.7 (provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities).

## **Literature Review**

Open space is categorized as public space, which means it is a form of space that is used by people together in a community. Generally, this open space can accommodate the needs of an outdoor location for gathering and joint activities within the community. This open space allows people to meet among themselves and then interact with each other. Therefore, in this open space, it occurs joint activities, then this open space is called a common space. The common space is a location that is designed to have access to all aspects of the environment surrounding it. In the open space where people meet and use for doing activities in a common space, the community behavior as the open space user should follow the locally applicable rules and norms.

In land use planning, urban common open space is open space areas for parks, green spaces, and other open areas. The landscape of urban open spaces can range from playing grounds to highly maintained environments to relatively natural landscapes such as a central park. They are accessible to the public; however, urban open spaces may be privately owned. The role of urban open spaces in informal settlements, the open spaces are the key areas for social interaction and community development. It is environmentally significant and plays an important informative role. Open spaces play a major role in facilitating social interaction among people and help know each other better. It is through these spaces which social gatherings and meetings are systematized and cultural differences minimized; helping create a dialogue between the users (Kudale & Narkhede, 2022).

The location of the open space should be the most accessible place for everyone. It needs a wide area with the dominant flat and airy contours and becomes the universal access. Women and children, older persons, and persons with disabilities should be able to inclusively and safely access the open space in the form of green and public spaces. Therefore, the provision of open space becomes the responsibility of the local government. The management and maintenance of the open space are also in the hand of the government and helped by the community.

The organization and governance of the open space are used to determine the location of the open space, the construction, the building, and also the infrastructure. The more common the open space, the more accessible the transportation access, facilities, and utilities are due to its use by many people. The land use factor is also influenced by its organization and governance since the open space should accommodate the various community activities (Herlambang, 2015). The open space of the city generally is the outdoor space in form of the wide and long areas due to its functions and has characteristics more open and basically without any buildings according to the Regulation of Ministry of Home Affairs Regulations (Permendagri) no 1 the year 2007. It relates to the functions of social, ecology and aesthetic, economic, and also the emergency. The planning of the open space should be comprehensive to get the best physical type and characteristics of the open space, the most appropriate, and suitable for the community's needs. The average age of the community gives influences the determination of the open space type (Herlambang, 2015). Another type of open space is green open space. The development of the typology of the open space can help in understanding the relationship between the physical form of the open space, the function it provides, and the other built elements (Sandalack & Alaniz Uribe, 2010). The planning of open spaces is crucial for sustainable spatial development since it shares the space among the people and their neighborhoods enrich human life and contributes to the action of social, environmental, economic, and cultural justice (Wandl et al., 2017).

The open space has ecological, sociocultural, supporting, and complementary functions. Function ecology helps space, especially in protecting groundwater, functions sociocultural make non-green open space a place of community activities, and economic activities that utilize open space become a supporting function and a complementary function for beautifying the environment, resulting in a lack of non-green open space provision can cause social problems or conflicts (Prawesti et al., 2021).

## METHODS

### Location and Time

This article uses the paradigm of the fact of open space as a social space in Lebak Siliwangi, Bandung City, Indonesia. The methodology used is a case study approach to reveal the fact. This study case uses observation, interview, documentation, and literature review to collect the data. The unit observed is the open space area. The resource persons are the leader of Lebak Siliwangi and some people as community members, as the key person. The location is chosen since this area becomes a study area for informal housing and settlement.

### Case Study: Kampung Lebak Siliwangi

Sub-district of Lebak Siliwangi is a part of the District of Coblong, Bandung City, West Java, Indonesia. This sub-district is located between 6° 88' S, and 107° 61' E, with a total of 0.08344 km<sup>2</sup>. The location is located in the center of the city's bustle. The total population is around 4,240 people and the density is around 50,839 people/km<sup>2</sup>. It consisted of 6 RW (neighborhood) and 23 RT (hamlets). From the population figures for the area, it is shown that they tend to be included in the fairly high-density category. Meanwhile, the data from Central Statistics Agency (BPS) showed that the population of Bandung City in 2018 reached 2,503,708 people and a growth rate of 3.7 percent per year. This number is predicted to increase to 4 million people by 2031.

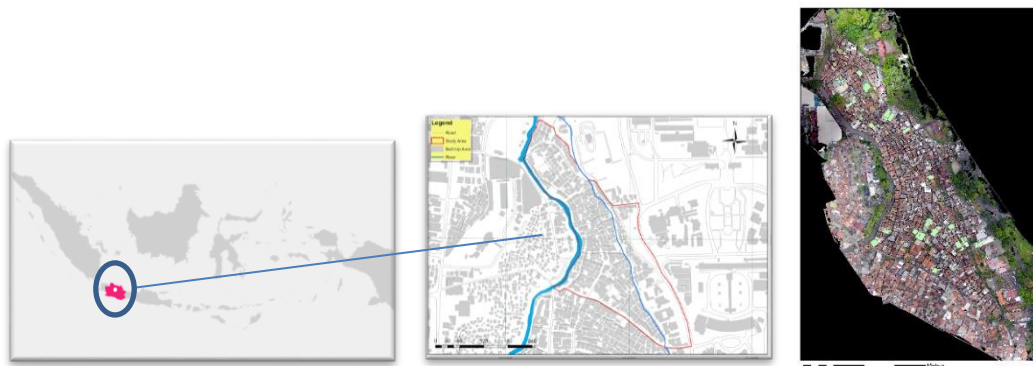


Figure 1. The Lebak Siliwangi is located in Bandung City, Indonesia

## RESULT AND DISCUSSION

### The Social Mapping

The population categorize into age groups from 14-64 years old, which means it is categorized into the productive age. Meanwhile, the total number of men and women is almost the same. It means, there is a huge human resources potency between men and women (*Profil Kelurahan Lebak Siliwangi 2017*, n.d.).

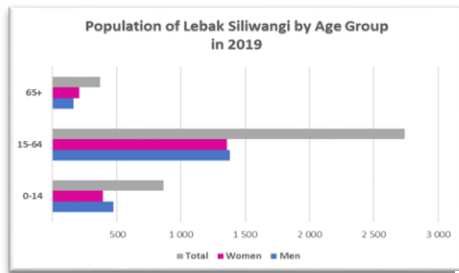


Figure 2. The total men and women are almost the same  
Source: Analysis result, 2022

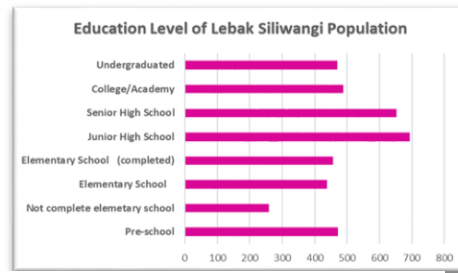


Figure 3. The most education level is Junior High School  
Source: Analysis result, 2022

The most education level is Junior High School. It is followed by Senior High School. Nonetheless, some inhabitants did not finish their elementary school which means it is dominated by adolescences age.

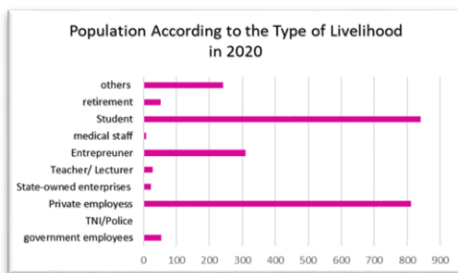


Figure 4. The profession are students, private employees, entrepreneur  
Source: Analysis result, 2022

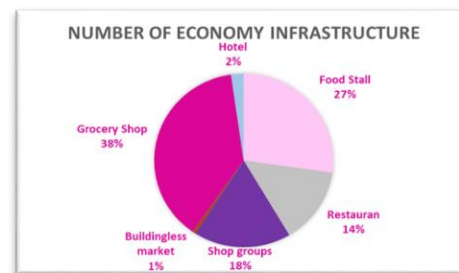


Figure 5. The most number of economy infrastructure are grocery shops & food stalls  
Source: Analysis result, 2022

Most professions or livelihoods are students, private employees, and entrepreneurs. The students are newcomer students who going to study at ITB, Pasundan University, and Unisba. The most economic infrastructures are grocery shops and food stalls. It is suitable for some livelihoods which are the entrepreneur or the private employees.

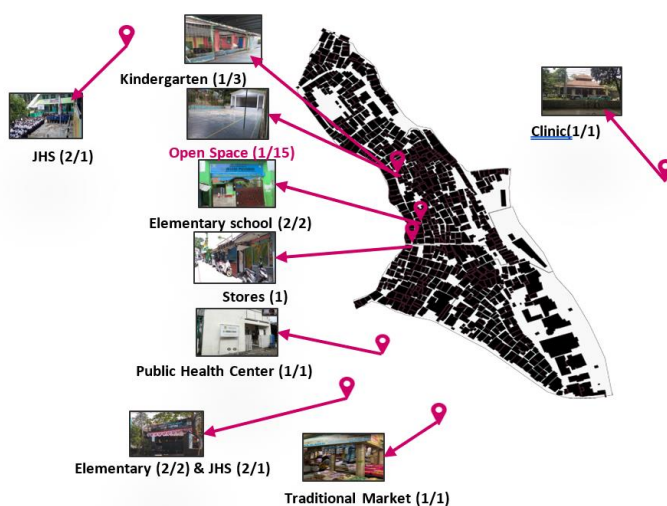


Figure 6. Public facilities surround Lebak Siliwangi compared to the ideal numbers based on population (reference: SNI 03-1733-2004)  
Source: Analysis of Group Good Energy-SAPPD, 2022

Table 1. Public Facilities Surrounding Lebak Siliwangi Compared to the ideal

Facilities	Number of Facilities	
	Existing	Ideal
<b>Commercial</b>		
Stores	spreading at the main alley	1
Traditional Market	1	1
<b>Health Services</b>		
Clinics	1	1
Public Health Center	1	1
<b>Education</b>		
kindergarten	1	3
Elementary	2	2
JHS	2	1
<b>Public Spaces</b>		
Neighborhood	1	15
Open Space	1	15

Source: Analysis result, 2022

Based on regulations regarding Spatial Plan 2015-2035 of Bandung City, the sub-district of Lebak Siliwangi is included in the Protection Zone against its subordinates, which means the area within the riverbanks Sub-zone of Cikapundung River. This area which has a total of around 190.88 hectares is classified also as a Cultural Heritage Zone, Green Open Space of Park Sub-zone under Environment Unit, Green Open Space of Protection of Germplasm ex. situ Sub-zone. It is also categorized as a disaster-prone zone (Sub-zone prone to landslides and erosion), including the zone of Cultivation Zone, Housing Zone (High-density housing zone and medium-density housing zone), Trade and Service Zone (Linear trade and services subzone), Government office zone, Tourism Zone, Public Service Facilities Zone (sub-zones of Education and public service facilities, Health public service facilities, public service facilities of worship, and sports public service) (The Major of Bandung City, 2015).

### The Typology of the Land and the Infrastructure

The provision of the land of Lebak Siliwangi sub-district is provided by PEMDA (local government) and by the water service since the land on the riverbank is owned by the government. Nonetheless, Lebak Siliwangi is considered an informal settlement but the land tenure there is divided into two parts the first one is legal, which means certified with SHM (ownership letter) and the second one is illegal (non-certified) by the government's land. Lebak Siliwangi Legal Status which is a total plot of 822 units, consists of Legal buildings of 121 units, Illegal buildings with no permit are 484 units, and no land certificate or squatter is 227 units (*Profil Kelurahan Lebak Siliwangi 2017*, n.d.).

The governance in the Lebak Siliwangi is managed by the local government which is divided into 6 neighborhoods (Rukun Warga or RW) and 23 hamlets (Rukun Tetangga or RT). Each RW and RT has its leader to facilitate communication and coordination between the government and the community. The scale of service is only for the community of Lebak Siliwangi, which means the inhabitants of Lebak Siliwangi Sub-district including the newcomers who rent rooms there.

The Role of the Stakeholder is formed through the formal institutions of local government. There is the structure of the sub-district institution which consists of heads of the RWs and the RTs. The Local Government of Bandung City has the role of providing the land and also facilitating people to have better, adequate, and adaptive housing. The Sub-district government has the role of informing and helping the local government in socializing and arranging the work and activities within the community. The heads of RWs and RTs have the role of facilitating the community to plan or manage the housing and infrastructures, and the community itself. The community is the beneficiary and has the role of managing public infrastructure maintenance (*kerja bakti*) and the monthly fee for communal needs, and also the daily activities within and among them. The heads of RWs and RTs are also helped by Small Groups of the Community to manage the mosque activities (DKM), the youth activities (Karang Taruna), the women's activity (PKK), and the other 10 divisions which are responsible for residential matters called 'Dasawisma'.

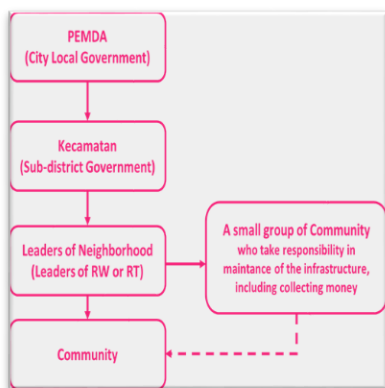


Figure 8. The institutional structure of Lebak Siliwangi and the stakeholders  
Source: Analysis result, 2022

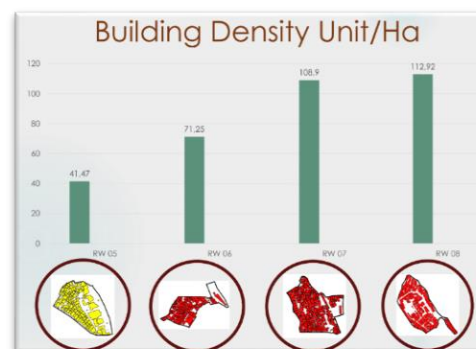


Figure 9. The RWs of Lebak Siliwangi and its density (Source: Dadi Rusdiana)  
Source: Analysis result, 2022

The infrastructures such as water service exist for water provision, communal torrent, and IPAL or communal septic tank provision. There is also a communal well that has existed for decades in the form of the traditional well and also the water service's well. Some other inhabitants have their private torrent for private use.

The governance for the water provision, there is the communal septic tanks which are managed to connect to a larger water piping system. Some families use it, and some others now can afford their toilet or piping connected directly from their toilet to the larger piping and go to the Cikapayang River. The Communal Bath Wash Toilets (MCK) use water from the wells of water service and the traditional wells of the community. Besides for bath and toilet, they wash clothes there. The outlets are directly discharged also to the Cikapayang River. There are assistance programs from the government for the neighborhoods (RW 08 & 07) which formulated the plan together and in cooperation with the community such as Infrastructure programs, and building them. Nonetheless, some problems with communication and coordination exist to maintain the infrastructure for communal use (RW 07).



Figure 10. The communal well and torrent, and IPAL (septic tank)  
Source: Observation result, 2022

The scale of service of water and septic tank does not service all households. Different well and traditional wells, even for bathing, toileting, and washing (RW 07 & 08). Some families use the communal toilet and well, others have their toilet or piping connected from their toilet and have also private torrent. There is a lack of maintenance of the water service's well which is now broken and does not work anymore. Meanwhile, the traditional well serves only 15 households.



Figure 11. The private piping and torrent  
Source: Observation result, 2022

From the typology of the informal settlements in Lebak Siliwangi, it is found also the typology of order and rules. The local spatial order that exists in Lebak Siliwangi identifies two main rule types, namely defined and understood rules (Suhartini & Jones, 2020). These rules represent a set of socially acceptable activities, tasks, and principles that residents use, modify and adapt to produce and refresh existing built and unbuilt spaces to meet varying needs. Rules may change from understood to defined rules and vice versa, and in this setting, systems of self-organization and arrangement of order continue to evolve and adapt (Suhartini & Jones, 2019). The defined rule found

in RW 07 is that the communal septic tanks & wells are managed by the community and it is facilitated by the head of RW. The torrents and wells are supposed to be managed together in the community or RW due to the generator being operational and the septic tank maintained every 6 months. Besides, the understood rules found that a group of communities that is less coordinated and communicated with the head of RW 07 collects the money from the community as the operational cost. The leader tried to facilitate and manage the collection of self-subsistent money with other groups by coordinating and communicating intensively and informally. They try to apply the revitalization of the pomp engine due to the new regulation of the local government.

**The Typology of the Open Space**

The typology of the open space usually includes the open, green, or public urban space, as well as the hybrid of all three types of open spaces. The typology of the open space in this article is discussed either by form, function, size, and land cover, or the combination of these categories. Even though, there is also a typology of the open space with the dimension of socio-cultural and politic-economic which is not discussed here (Suhartini & Jones, 2020).

The open space provision in Lebak Siliwangi is provided by the government on the land of the Bandung City Government. There are two public spaces, one public space in RW 07 located beside the main alley and access to the main route also, and one public space in RW 08 located between the dense houses. The governance of the public space in RW 07, is managed and facilitated by the RW (the head of RW) and helped by the community. The size of the open space is divided into several sections according to its use. The first part is the way into the children's ground and the larger space. This way is planted by the esthetic plants. The children's playground is around 2x4 meters and is installed with green artificial grass. The other part is used for the kindergarten. Besides the playing ground is the sport or playing field. This only public space of RW 07 is functioning for seating, playing ground, sports, also as kindergarten use, and also use for wedding floor. The scale of service of the public space is for the community of RW 07, but the community of RW 08 can use it also.



Figure 12. The open space in RW 07  
Source: Observation result, 2022

There is also a private open space that is locked by the owner of the brown house. But the function this open space is used only for drying clothes, motorcycle parking, and children to play.



Figure 13. The Private open space in RW 07  
Source: Observation result, 2022

In RW 08, the open space is used for playing ground and doing sports. The governance of the public space in RW 08, is also managed and facilitated by the RW (the head of RW). But there is only one side of the open space which has the pattern or sport or playing field. The scale of service of the public space is for the community of RW 08. This field uses a plastic roof cover and it blocks out the sun. But the function of this open space is used for several functions such as motorcycle parking and for some children to play, and very near to the stair of the house access.



Figure 14. The open space in RW 08  
Source: Observation result, 2022

## The Adaptation Features

### Complexity

In the ecology dimension, almost all alleyways are narrow and their size averages only 1 to 2 meters. Only one person can walk in this alleyway. Unfortunately, it blocked the sunlight also, and its ventilation does not distribute the circulation of the air very well. The open spaces used as public areas are covered which prevents them from natural sunlight as well. The alleyways function as the path of the pedestrian, all at once for motorcycles, street vendors, playing grounds for children, and seating areas for the people.



Figure 15. The alleyway in Lebak Siliwangi  
Source: Observation result, 2022

In the economic dimension, the community mainly depends on the informal economy. Some Alleyways are used by vendors to sell their products. The food stall or grocery shops are always located inside the house or attached to the outside of the house. Rental rooms are usually at the house itself.



Figure 16. The business area and small shop  
Source: Observation result, 2022

In the social dimension, families consist of 2-3 generations living in the same building, so the residential buildings host three generations. The family has many children, for example, a family has 14 children. The children married their cousins or neighbors. They live as one big family in one area and their houses are close to each other. The community likes to gather, chit chat, and do the activity together in the houses and also in the open spaces, in the alleyways, etc.

“There are 3 families from 3 generations live in 1 same building house, even there is a family with the grandchildren” (Interview of Bapak Dodi Pahlevi, RW 07). “My family and I live with my mom, and also my sister’s family. We open our food shop (warung) which used to be my mom. Now, my sister and me who manage the warung”. (Interview of the owner of Ubar Lapar (Food Stall), RW 07).



Figure 17. The family photo (Source: Dodi), the family tree, people gather on the alleyways  
Source: Observation result, 2022

### Irregularity

It is found also in the form of the settlement, the boundaries of houses are not on the same line, some houses are out of bounds, and the total floor area of houses varies. Irregularity of patterns in adaptable housing is shown in the different numbers of floors, materials, and vulnerability.



Figure 18. The total area of the houses  
Source: Salma Alaa



Figure 19. The irregularity in level and form  
Source: Observation result, 2022

In the temporal aspects that we found, there is multiplicity. Some houses utilize their small land of the house for several functions such as for car or motorbike parking, one time as a kitchen or living room. There is also fluidity, for example, the boundaries of the houses can be changed according to the people's needs and use, such as for parking, commercial stall, drying clothes, putting the garbage, walking, children playing, seat around, etc. The diversity of the form and functions like the alleyways function as the path the pedestrian, all at once for motorcycles, street vendors, playing grounds for children, and seating areas for people.



Figure 20. The multiplicity, fluidity and diversity  
Source: Observation result, 2022

As the adaptable housing, it found also vertical extension, extrusions, and also external stairs or add-ons. These parts of housing were added by the house's owner for their respective importance.



Figure 21. Vertical extension, extrusions, external stairs, add-ons  
Source: Observation result, 2022

### Irregularity of the Open Space

#### **Multiplicity**

There is multiplicity also in the open space in Lebak Siliwangi. The open space is utilized for several functions such as playing the sport of the community, playing ground for children, in one time as motorcycle parking, and even for a place to dry clothes.



Figure 25. The multiplicity of the open space  
Source: Adhyaksa Adha R

#### **Fluidity**

The boundaries of the open space can be changed according to the people's needs and use, such as for parking, commercial stall, drying clothes, putting the garbage, walking, children playing ground, seat around, and even become access by adding the stairs to the house, or become add on by adding some plastic covers to give the roof.



Figure 26. The fluidity of the open space  
Source: Observation result, 2022

### ***Diversity of Form and Function***

The open space function as a path for pedestrians, all at once for parking motorcycles, a playing ground for children, a seating area for people, and also as the ground floor to carry out events or wedding parties.



Figure 27. The diversity of form and function  
Source: Observation result, 2022

Some people use the small spaces in their houses which are on the boundaries of the narrow alleyways as green open spaces. They put the plants in pots and arrange the pots vertically which looked like a vertical garden or urban farming.



Figure 28. The use of the alleyways as green open space  
Source: Observation result, 2022

### ***The differences with the formal provision***

The formal IPAL septic tank is constructed to be communal facility of the settlement and supposed to be maintained by the community. The good construction created some small spaces on the ground above the IPAL. Therefore, some women used the small space as a gathering spot to chat with their neighborhoods while they were looking after their children playing. Some other people parked or fixed their motorcycle and used it as if it was a private parking area.



Figure 29. The differences of open space to the formal provision

Source: Observation result, 2022

### The Pattern Use

According to the typology, the open space in Lebak Siliwangi can be classified into 4 categories. They are (1) the open space that is a wide field to use as a sports field and wedding floor, and some small spaces as the place to carry out the daily activities and children playing ground, and (2) the alleyways where people can gather to talk and chat, (3) the floor above the IPAL, (4) the small space in front of small shops.

In Lebak Siliwangi it is clear that the open spaces are used for gathering, playing, doing sports, chatting, celebrating such as a wedding or other events, and eating and drinking places. In the dense and informal settlement, where some parts of infrastructure do not work easily, there is always a need the open space to do sports activities for health, recreation, and also socialization. In Lebak Siliwangi, the needs for open space tend to take the private space or change the function and form of other communal space. These changes and also temporal aspects such as multiplicity, fluidity, and different forms or functions give an important role in the social and cultural dynamics in the settlement (Casakin et al., 2015).

The green open space will also give the ecosystem or environmental benefit to the community, such as absorbing the pollution, arranging the local climate, maintaining the land from slides and erosion, and also it is important to mental health since it will give the feel of cool and calm ambiance. The community can also use the green open space directly since it is near to their houses. In the Lebak Siliwangi sub-district, there is no special green open space, because people use the small spaces in their homes as vertical gardens or plants in pots. Even, the main open space uses the artificial grass carpet on the playground.

Lebak Siliwangi sub-district is located on the riverbank of Cikapundung river. Yet the area for the green open space in Lebak Siliwangi is very limited due to the informal settlements. The green open space on the riverbank has an important role in the environment. If there is any space it would be better to plant the tree to function as landslide and erosion barriers.

### Governance of the Open Space

The open space in informal settlements such as in Lebak Siliwangi is often used for additional functions and it occurs the complexity and conflicts between its functions. In Lebak Siliwangi, the open space that is frequently used differently is the alleyways for access circulation and also for the motorcycle parking area, and even the playground. But the communal open space has already a function to accommodate various community activities, including for doing sports, recreation, playground, and also wedding floor.

Based on Permen PU 12-2009 and standard regulation of SNI 03-1733-2004, regarding the provision of open space or green open space (RTH) or thematic parc facilities on the RT scale for a population of 250, there must be a minimum of 250 m<sup>2</sup> of land that functions as green open space with a radius of reach of 300 m from residents' houses. On the RW scale for a population of 2500, there must be a minimum of 1,250 m<sup>2</sup> of land that functions as green open space with a radius of reach of 1,000 m from residents' houses (Darmawan & Utami, 2018).

The community in Lebak Siliwangi uses the common open spaces together. Meanwhile, the head of RW 07 in Lebak Siliwangi has organized and managed the physic of open space very well with the categorized area according to the activities type, including the implementation of the activities type and schedule. The condition is clean, no garbage, there are plants, and physically

very well managed. There is also some standard equipment such as sports and playing ground. The children and the community will use it with ease and comfortable. There is physically no conflict or criminal potency characteristic. In RW 08, the leader still needs to organize and manage the physic of open space until it is suitable for the community activities, including the implementation of the activities type and schedule since there are still changes of functions. The condition is not too clean, even though there is no garbage. But there are no plants there, and physically not adequately managed. There is also some standard equipment such as sports and playing ground. For the common open space, the bottom-up or participatory approach will be suitable based on the community's needs and capacity.

### **Provision of the Open Space**

The redevelopment of the open space will create also adequate living space which will take a smaller footprint, but more open public spaces. Increase the widths of alleyways to enhance the inner network. The open space will also enhance better air circulation and ventilation, and at one time allow sunlight to enter the buildings and the alleyways. The open space will make people live and work comfortably, and they have space to develop their social life.

The Proper public space is a great public space that is accessible to people, engage the public with activities, is comfortable, projects a good image, and fosters a sense of community. Other characteristics of a large public space include promoting human contact and social activity, and being safe, welcoming and accommodating for all user (Hutomo & Fuad, 2020).

## **CONCLUSION**

In response to SDGs Goal 11, goal no 11.7 is “to provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities” (Goal 11, Target 7), the Lebak Siliwangi still need to provide and manage the open space in accommodating the community activities and social needs fulfilling. It is also important to provide Common Open spaces and Green Open Spaces to set up livelihood, lifestyles, and standards of community interaction for the Urban community in informal settlements. The spatial configuration of housing and public space plays an important role in this interaction. The open spaces will provide a healthy environment and social for community gatherings, since it will provide better inner circulation, natural ventilation, and good sunlight, and it is also possible to make people live and work comfortably.

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## **REFERENCES**

- Casakin, H., Hernández, B., & Ruiz, C. (2015). Place attachment and place identity in Israeli cities: The influence of city size. *Cities*, 42(PB), 224–230. <https://doi.org/10.1016/j.cities.2014.07.007>
- Darmawan, S., & Utami, T. B. (2018). Pola Pemanfaatan Ruang Terbuka Pada Pemukiman

Kampung Kota. *Vitruvian: Jurnal Arsitektur, Bangunan, Dan Lingkungan*, 7(3), 127–136. <https://www.neliti.com/publications/265313/>

Herlambang, S. (2015). Pengantar Perencanaan Tapak. *Perencanaan Tapak*, 1–31.

Hutomo, A. S., & Fuad, A. H. (2020). *Engagement and Well-Being in Public Space . Case Study : Suropati Park Jakarta. March*. <https://doi.org/10.5109/2740970>

Jones, P. (2017). Formalizing the informal: Understanding the position of informal settlements and slums in sustainable urbanization policies and strategies in Bandung, Indonesia. *Sustainability (Switzerland)*, 9(8). <https://doi.org/10.3390/su9081436>

Kudale, P., & Narkhede, P. G. (2022). *Significance of common open spaces for Urban Poor Case of Pune , India. July*.

Kushendar, D. H., Rusli, B., Muhtar, E. A., & Candradewini. (2021). Public Housing Management: Review Of Rusunawa Policy In Cimahi City, Indonesia. *Academy of Strategic Management Journal*, 20(5), 1–11.

Maryati, S., Humaira, A. N. S., & Kipuw, D. M. (2018). From Informal to Formal: Status and Challenges of Informal Water Infrastructures in Indonesia. *IOP Conference Series: Earth and Environmental Science*, 158(1). <https://doi.org/10.1088/1755-1315/158/1/012005>

Prawesti, S. A., Purnomo, D., & Hadiwijoyo, S. S. (2021). Analisis Pemanfaatan Ruang Terbuka Non Hijau Sebagai Representasi Ruang Sosial Di Kawasan Kumuh (Studi Wilayah Pancuran Kota Salatiga). *Jurnal Analisa Sosiologi*, 10, 41–59. <https://doi.org/10.20961/jas.v10i0.47638>

*Profil Kelurahan Lebak Siliwangi 2017*. (n.d.).

Rusnandar, N. (2010). Sejarah Kota Bandung Dari "Bergdessa" (Desa Udik) Menjadi Bandung "Heurin Ku Tangtung" (Metropolitan). *Patanjala : Jurnal Penelitian Sejarah Dan Budaya*, 2(2), 273. <https://doi.org/10.30959/patanjala.v2i2.219>

Sandalack, B. A., & Alaniz Uribe, F. G. (2010). Open Space Typology as a Framework for Design of the Public Realm. *The Faces of Urbanized Space*, 35–75. [https://assets.centralparknyc.org/pdfs/institute/p2p-upelp/1.005\\_Open+Space+Typology+as+a+Framework+for+Design+of+the+Public+Realm.pdf](https://assets.centralparknyc.org/pdfs/institute/p2p-upelp/1.005_Open+Space+Typology+as+a+Framework+for+Design+of+the+Public+Realm.pdf)

Suhartini, N., & Jones, P. (2019). *Urban Governance and Informal Settlements: Lesson from the City of Jayapura, Indonesia*.

Suhartini, N., & Jones, P. (2020). Better understanding self-organizing cities: A typology of order and rules in informal settlements. *Journal of Regional and City Planning*, 31(3), 237–263. <https://doi.org/10.5614/jpwk.2020.31.3.2>

The Major of Bandung City. (2015). Regulation of Bandung City Planning. *Nhk技研*, 151, 10–17.

Wandl, A., Rooij, R., & Rocco, R. (2017). Towards Sustainable Territories-in-Between: A Multidimensional Typology of Open Spaces in Europe. *Planning Practice and Research*, 32(1), 55–84. <https://doi.org/10.1080/02697459.2016.1187978>