

Unity in Diversity

A contribution to Indonesia's new Capital

Diploma thesis
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DIPLOMARBEIT

Unity in Diversity
A contribution to Indonesia's new Capital

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Kurzfassung

2019 kündigte die indonesische Regierung einen Plan an, die nationale Hauptstadt von ihrem derzeitigen Standort in Jakarta an einen neuen Standort auf der Insel Borneo zu verlegen, um das seit langem bestehende Problem der Überbevölkerung und der Überschwemmungen der derzeitigen Hauptstadt zu lösen. Die neue Siedlung wird in der Provinz Ost-Kalimantan liegen, einer der unberührtesten und am dünnsten besiedelten Regionen Indonesiens. Das Ergebnis des Wettbewerbs ist eine Metropole, die aus einem Hauptkern und mehreren sektororientierten Wirtschaftsklustern besteht. Ziel der Regierung ist es, eine der modernsten, umweltfreundlichsten und lebenswertesten Städte der Welt zu schaffen. Die lokalen Gemeinschaften der Provinz Ost-Kalimantan haben jedoch Bedenken geäußert, da sie befürchten, dass die futuristische Vision der Hauptstadt ihre Bedürfnisse und ihre Präsenz in der Region sowie ihre traditionelle Lebensweise nicht berücksichtigen wird. Das Ziel dieser Arbeit ist es, einen Beitrag zu der neuen Stadt zu leisten und zwei verschiedene Siedlungen in den Dörfern Pemaluan und Bumi Harapan zu entwerfen, die im Gebiet der künftigen Hauptstadt liegen. Sie werden auf der Kampung-Typologie basieren, einer auf dem indonesischen Archipel weit verbreiteten Siedlungstypologie. Insbesondere werden zwei völlig unterschiedliche Planungsansätze verwendet, um lebenswerte und lebendige Viertel zu schaffen, die den Bedürfnissen der Landbevölkerung im neuen städtischen Umfeld entsprechen.

Abstract

In 2019 the Government of Indonesia announced a plan to move the national capital from its current location in Jakarta to a new location on Borneo Island to deal with the long-standing overpopulation and sinking problem of the current capital. The new settlement will be located in the East Kalimantan province, one of Indonesia's wildest and least densely populated regions. The outcome of the competition is a metropole consisting of a main governmental core and several sector-oriented economic clusters. The government aims at creating one of world's most modern, environmentally friendly, and liveable cities. However, voices of concern have been raised by the local communities of the East Kalimantan province as they fear that the futuristic vision of the capital will not consider their needs and presence in the region as well as their traditional way of living. Motivated by such concerns, the contribution of this thesis is to design two different neighborhoods in the villages of Pemaluan and Bumi Harapan located in the future capital area. The settlements will be based on the kampung typology, a settlement typology widely spread across the Indonesian archipelago. In particular, two completely different design approaches will be used to create liveable and vibrant neighborhoods that will answer the needs of the rural people in the new urban environment.

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Analysis



East Kalimantan

Fig.1

Indonesia's new capital

On August 26th, 2019, the Indonesian President Joko Widodo, also known as Jokowi, announced a plan of moving the national capital Jakarta from its current location on the island of Java to the province of East Kalimantan in Kalimantan (Borneo) island¹. Earlier on in 2017, a preliminary search for the potential capital location took place. According to initial statements of the government representatives², a possibility consisted in moving the capital away from the Java Island, i.e., the most populous island of Indonesia. According to official motivations such relocation would seek to resolve the overpopulation on Java and correct the unequal distribution of population all around the archipelago. Besides these pressing demographic issues, most of the national economic activity takes place on Java too. Hence, according to the President Jokowi „the burden that Jakarta is holding right now is too heavy, as the center of governance, business, finance, trade and services³.” Other motivations include the unfavorable position of the current capital and its livability. Jakarta is indeed facing a serious and increasing process of sinking. Due to its location on swampy lands, the city has always been exposed to regular floodings. However, in the last ten years the northern part of the city sunk by 2,5 m. Estimations say that until 2050 around 95% of the city could end up below sea level⁴. Besides, the air quality level in current Indonesia's capital lists regularly among one of the most congested cities in the world⁵. Having taken into the consideration all these factors, moving the capital seems like an inevitable solution. However, the selection of one of the wildest areas of Indonesia that hosts among the most virgin rainforests in the world has raised many dissenting voices among environmentalists. The government reassures though, that the new city will not have any negative impact on the natural habitat of East Kalimantan: “We will not disturb any existing protected forest, instead we will rehabilitate it”⁶

Location

East Kalimantan is an eastern province of the Kalimantan Island, commonly known as Borneo. Borneo is the third biggest island in the world and is divided among three countries: Indonesia, Malaysia and Brunei Darussalam. Indonesia owns the biggest part of Kalimantan, and its territories are divided into five provinces: West Kalimantan, East Kalimantan, North Kalimantan, South Kalimantan and Central Kalimantan⁷. Altogether the population of the Indonesian Borneo equals 16 490 people⁸. The location of the future capital is planned in the eastern province of the island, around 20 km from Balikpapan - the biggest city in Borneo - and 40 km from Samarinda - the current capital of the East Kalimantan province. Given its size, East Kalimantan is one of the least densely populated provinces of Indonesia with only 29 persons / km²⁹. In comparison, the population density in Jakarta equals 15 900 persons/ km²¹⁰. According to the official census from 2020 East Kalimantan is inhabited by 3,721 million people, while the territory of the Special Capital Region of Jakarta has about 10,56 million inhabitants, in an area that, to put it in perspective, is nearly 20 thousand times smaller than East Kalimantan¹¹. At the same time, East Kalimantan is the fourth biggest province of Indonesia in terms of area, placing after Central Kalimantan, West Kalimantan, and South Papua¹². To sum up, it appears clear the island of Kalimantan is one of the wildest and most untouched regions of Indonesia which completely contrasts with the state of the current capital Jakarta. Its central position in the country and thousands of square kilometers of barely inhabited space offer to the authorities a seemingly perfect location for Jakarta's substitute. At the same time, nevertheless, the Island of Kalimantan has very complex ethnic and cultural conditions, not to mention its natural environment and ecosystem. All of these aspects should be considered in the masterplan for the potential new capital and will be covered in the upcoming chapters of this thesis.



Fig.2 Location of Indonesia



Fig.3 Location of East Kalimantan

Climate and ecosystem

The province of East Kalimantan is located between 113°44E and 119°E and between 2°33'N and 2°25'S, with the equator passing through it. East Borneo has a tropical rainforest climate zone with two seasons, one rainy and one dry. Most of the rainfall occurs between November and April while the time between June and October is relatively dry. East Kalimantan is characterized by high humidity levels and stable temperatures all year long¹³. Its topography is quite diverse, with lowlands in the seaside areas and mountains in the north-western parts of the province. Its highest elevation is Gunung Cemarua with 1636 m.a.s.l. In comparison to the other big Indonesian islands, it also has very low earthquake frequency which makes it a safe choice for a new capital. East Kalimantan is rich in natural resources too, such as coal, gold and timber. Additionally, many forestlands have been transformed into plantation forests in order to produce rubber, coconut and palm oil¹⁴. These factors contribute to make East Kalimantan the second richest province of Indonesia (with the first one being Jakarta¹⁵). Despite this, gold and coal mining, as well as palm oil production, has been having a highly detrimental impact on the local rainforest. The Borneo rainforests are home to more than 15000 plant species and over 1300 animal species, out of which more than a hundred are endemic¹⁶. The most famous examples are Bornean Orangutan or Proboscis Monkey. Due to the constant exploitation of the Kalimantan rainforests the natural habitat of the first one shrank in the last 20 years by at least 55%¹⁷. Therefore, many environmentalists oppose the idea of constructing a new capital in East Kalimantan despite the government reassurance that the relocation will not have any negative impact on the Kalimantan natural environment.

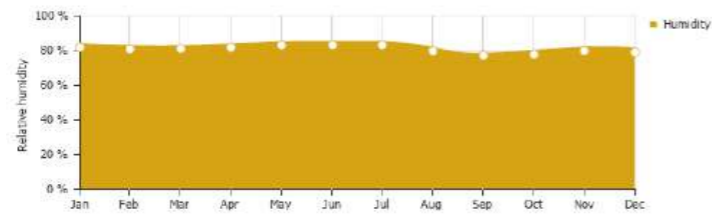


Fig.4 Average relative humidity in Balikpapan, Indonesia

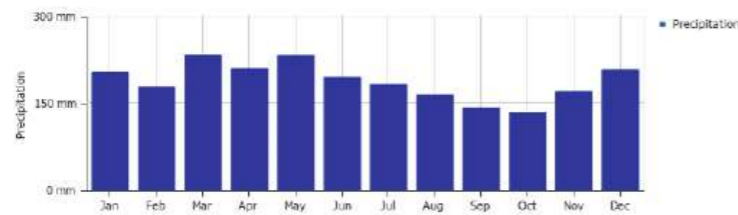


Fig.5 Average precipitation (rain/snow) in Balikpapan, Indonesia

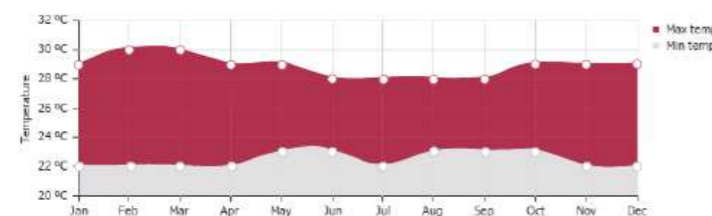


Fig.6 Average min and max temperatures in Balikpapan, Indonesia

Ethnic groups

Due to its size, complex history, and natural conditions, Kalimantan is very diverse in terms of ethnicity. In East Kalimantan the main ethnic groups include Javanese, i.e., the most populous ethnic group of the country, followed by Buginese, Banjarese, and Dayaks. These groups make up around 74% of the province's population¹⁸. Minor ethnicities are the Kutai, the Toroja, Pasir, Sundanese, Madurese, and Butonse. The remaining 10% of the population is of different ethnicities. As the names suggest, many of them are the indigenous inhabitants of different islands or regions of Indonesia such as Java or Madura and inhabited East Kalimantan as result of migrations. Out of the first five most populous ethnic groups, just the Dayaks and the Kutai are indigenous to the East Kalimantan province¹⁹. Buginese, on the contrary, are indigenous to South Sulawesi - a region separated from East Kalimantan only by the Makassar Strait. Meanwhile, the Banjarese have their origin in the bordering province of South Kalimantan. The ethnic group of the Dayaks, which makes nearly 10% of the East Kalimantan population, is instead native to the whole island of Borneo and is distributed evenly across it. In fact, it is just 10% of all Dayak people that live in the province of the future capital²⁰. Nonetheless, they are important members of the local community due to their rich cultural heritage. Another group that makes up a small percentage of the local population, i.e., 1,5 %, are the Pasir. Their presence is crucial to the planning of the new capital since they inhabit exactly the areas where the new capital city is planned to be built²¹.

Religion

Due to the cultural and ethnic diversity of the East Kalimantan province certain religious differences come along with it. Even though the vast majority of the province population practices Islam, East Kalimantan is still one of the provinces with the biggest percentage of non-Muslims. This is entirely due to the local ethnicities as the Dayaks tended to convert to Christianity rather than Islam, while few of them still practice their ancestors' beliefs²². The role that religion plays in determining cultural differences goes beyond the merely religious aspect. Since the biggest ethnic groups such as the Javanese, whose culture was also promoted as a dominant Indonesian model, were subject to transmigration programs, Islam has spread around the whole territory of Indonesia. Only the wildest or most remote provinces such as East Kalimantan tend to show slightly smaller numbers of Muslim population. Another exception to mention is Bali²³. The religious differences are reflected in the local cuisine and diet (Muslim abstinence to alcohol and lack of pork dishes), architecture (strong male and female roles may influence division of the traditional house interiors), as well as open space (e.g., the presence of different types of temples). Religious differences should then be carefully considered in urban planning due to the possibility of potential conflicts. Nonetheless, East Kalimantan has not experienced any big ethnic conflict based on the religious differences so far. Among the most populous ethnicities of East Kalimantan Dayaks are undoubtedly the most diverse in terms of religion. In case of this ethnic group, religion might be even a decisive factor when considering yourself a Dayak²⁴.

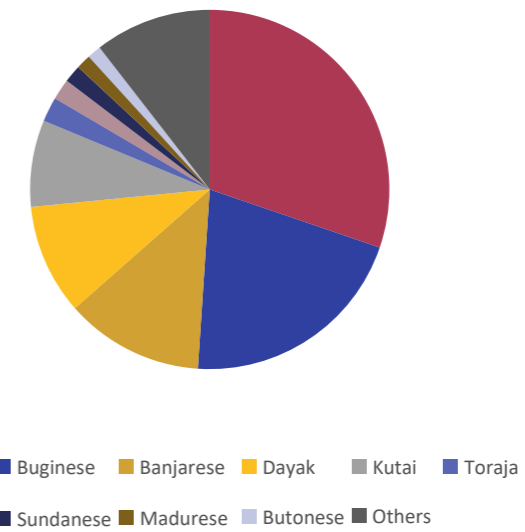


Fig.7 Ethnic composition in East Kalimantan

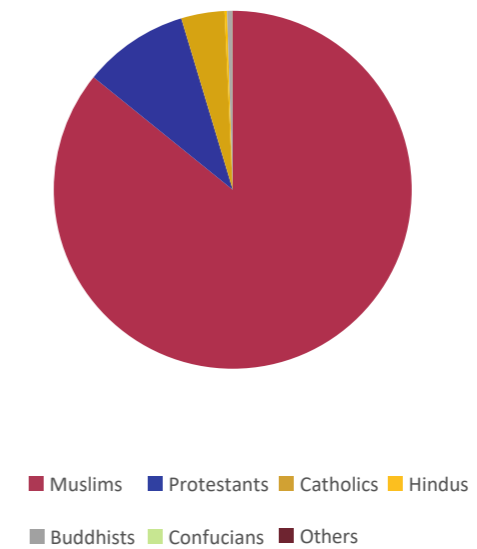


Fig.8 Religious composition in East Kalimantan



People of East Kalimantan

Fig.9

Javanese

The Javanese, as the name would suggest, come originally from the island of Java, which is the most populous and most densely populated island of Indonesia, being home to more than 150 million people. Java's inhabitants, the Javanese, are the biggest Indonesian ethnic group. According to the official census from 2010 they amounted to more than 95 million people and made up around 40% of the entire country's population²⁵. The overpopulation problem in the islands of Java (and Bali) has relatively old roots. In order to address it several transmigration programs were launched throughout the years. And as a result of such programs, scarcely populated regions of Sumatra, Kalimantan, Sulawesi or Papua became new homes to several Javanese. The first attempts of such processes were carried out already in the 1920s and 1930s by the Dutch authorities. Nonetheless, the biggest wave of Javanese people arrived in East Kalimantan in the 1970s and 1980s and only by 1984 roughly 150 thousand people settled in the area of East Borneo²⁶. The overall effect of such migration was establishing a Javanese population that makes up more than 30% of the East Kalimantan population. A further aim of the transmigration program was the promotion of the Javanese Muslim culture among the non-Muslim, also called the „outer in-landers“²⁷. However, the integration of Javanese with the local Dayak communities did not considerably succeed. Most of the Javanese who moved to East Kalimantan remained until today in the planned transmigration villages, separating themselves from the locals. Another typical characteristic of Java's inhabitants was their use of more advanced and modern cultivation techniques. Unlike the locals, who preferred shifting cultivation and a semi-nomadic lifestyle, they were intense cultivators who worked in the vicinity of their homes. In this way, new plantation enterprises were encouraged and created²⁸. East Kalimantan turned out to be one of the most important subjects of the Javanese transmigration program and until today experiences one of the highest concentrations of Javanese people outside the Java Island which nowadays mostly inhabit the Kutei district of the province²⁹.



Fig.10 Migration journey of the Javanese

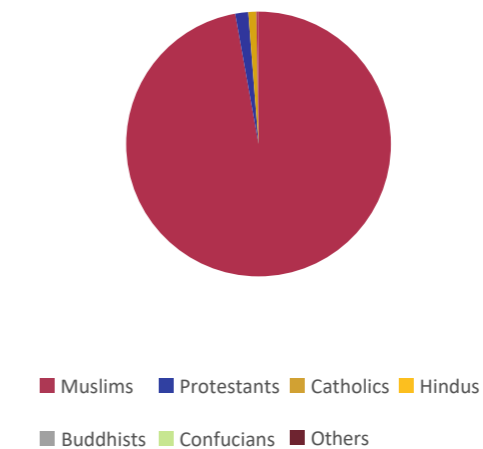


Fig.11 Religious composition among Javanese



Fig.12 Javanese people in traditional clothing

Javanese architecture

Javanese vernacular architecture is one of the most representative examples of traditional Indonesian architecture. It comprises three main types of houses: Kampung, Limasan and Joglo. The main distinction between the houses is based on the roof structure. Single sheet roof is typical for non-house forms like non-permanent housing (storage spaces etc.), while double-sheet and extended sheet are used for dwellings and religious buildings. Due to their complexity, Joglo and Limasan are more desired and used to be associated with the higher social status³⁰. Both are still to be found and utilized mostly in Java. On the contrary, the kampung type of house used to be associated with poorer and humbler neighborhoods. However, nowadays the kampung is commonly used in the contemporary architecture. Since the subject of this thesis are the Javanese communities living in East Kalimantan where the climate and economic conditions are slightly different than in their homeland, I will focus mostly on the kampung type of house. Despite the simplicity of its form, the kampung is extremely flexible. Indeed, the modular system of the kampung-style house offers a possibility of extension by adding both a back and front porch as well as to multiply and add the main core unit on the side. The basic Javanese house unit is called „omah” and is divided into two parts – an inner and outer part. The outer is a vernadach that is common to all main three types of houses. It usually functions as a space for some common or public activities³¹. Kampung type of house due to its relatively low-cost flexibility is quite common among the kampung settlements’ inhabitants. For instance, in case of family enlargement or shrinkage, the house can be modified to meet the new needs of its residents. Another typical feature is the use of the simplest double sheet roof which is necessary in the tropical climate with extremely high frequency of rainfalls.

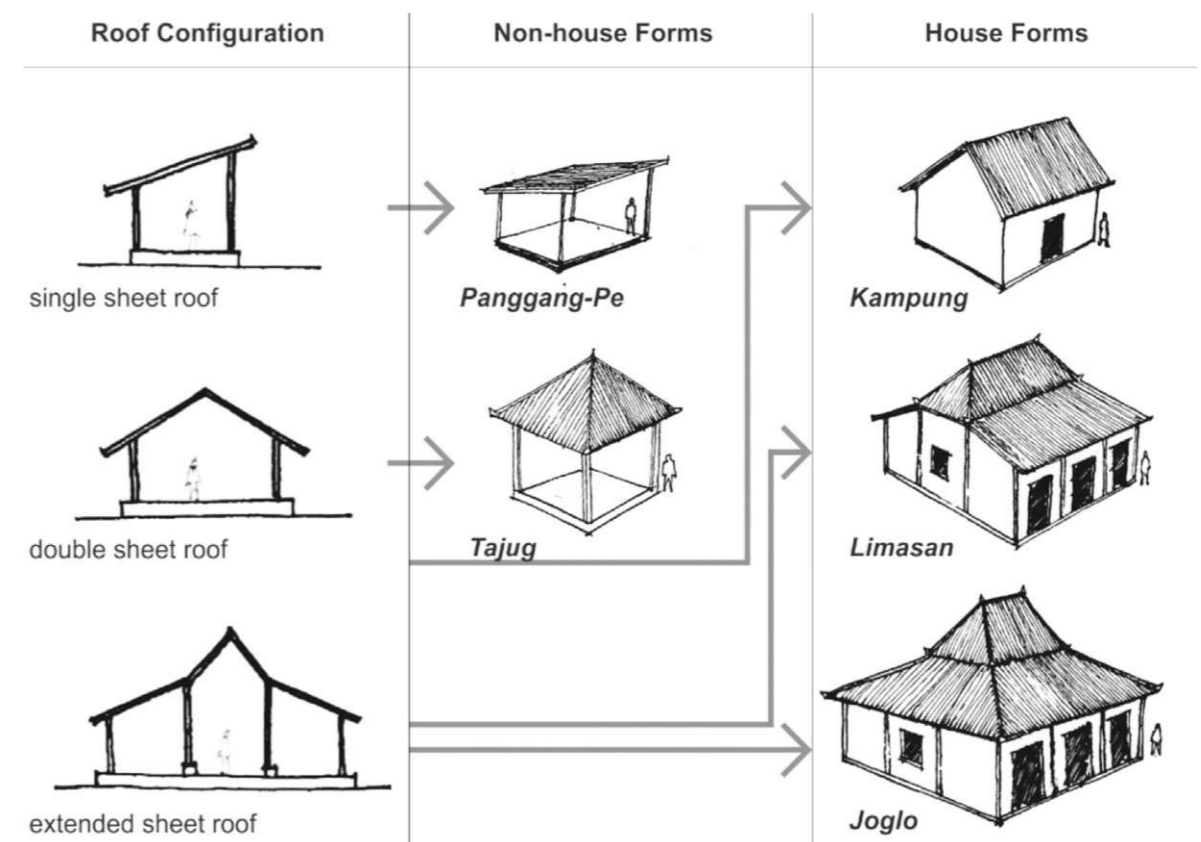


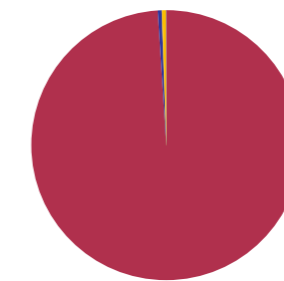
Fig.13 Primary traditional forms of Javanese buildings.

Buginese

The Buginese people are the second largest ethnic group in East Kalimantan. They make up around 20% of the local population. As it was mentioned earlier, they come originally from South Sulawesi, one of the provinces of the neighboring Sulawesi Island. They are also known under the name Uginese or Ugi. According to the 2010 census there are around 6,4 million Bugis people, but only around 55% of them live in their native province³². Due to the five hundred yearlong Islamic tradition in the island of Sulawesi, around 99% of the Bugis population is Muslim. Ever since then, religion became an especially important aspect of the Buginese identity. Buginese traditional professions were farming, trading and sailing, which they especially came to master, also due to the geographical location of their motherland. According to some sources they were sailing all around the Indonesian islands, which is why until today Buginese communities are present as far as in Surabaya or Jakarta³³. Buginese most important values are the so called “Siri” and “Pesse”. The first term refers to the virtue of honor in both personal and communal sense: the higher an individual’s position in the society is, the more the individual is obliged not to commit any action that could destroy her image. Pesse, on the other hand, means “painful feeling”. It refers to the idea of compassion for the ones who are in need. Both of those values strongly influence Buginese community life. Furthermore, those traditional principles have a lot in common with the Islamic faith and philosophy³⁴. Nonetheless, there exist still some pre-Islamic beliefs present in the modern Buginese way of living that often contradict more conservative Muslim dogmatism, as I will address in the following section.



Fig.14 Migration journey of the Buginese



■ Muslims ■ Protestants ■ Catholics ■ Hindus
■ Buddhists ■ Confucians ■ Others

Fig.15 Religious composition among Buginese



Fig.16 Buginese woman in traditional clothing

Buginese architecture

As mentioned before the Buginese tribe is a very spiritual society. Even though they are known for being devout Muslims, some of the elements of their traditional mythology are still present in the Buginese philosophy. One of the main components of the old traditional mythology is the old South Sulawesi legend according to which the universe has a tripartite character. It is divided into three main components: world top (space for the god), middle world (space for the humans) and underworld (the underwater world)³⁵. This cosmological division influences also Buginese traditional architecture. In particular, Bugis home originally consists of three levels: Rakkeang (the attic), Ale bola (the main house) and Wasaubola (Lower house). The ground floor area or lower house was usually used as a storage room or a place to keep the livestock, but some social interactions could take place there. The main home was a space reserved for the family and typical daily household activities. Finally, the attic was a storage for the cereals and rice and sometimes it could serve as a space for unmarried daughters or as a workshop to make sarong (type of clothing popular in the region)³⁶. In addition to the vertical division of the house there is also a horizontal one. The most common division consists of three so called „lontangs”. Each of those rectangular units has a different function and is based on the eight poles. Generally, the first one would function as space for the potential guests and a bedroom for the adult men, while the second and third one would be respectively a bedroom for the parents and their little children and the bedroom for the older daughters and the grandparents. Furthermore, the traditional Bugis house consists of the main house called „watangpola” and its extension “tamping”. Similarly, to the Javanese verandah it is a space to sit and relax, but its function was aimed at improving the air circulation³⁷. As Buginese originally would inhabit swampy lands, their houses are constructed on poles. Besides, the preferred direction of the home would be facing the east, i.e., the sunrise.

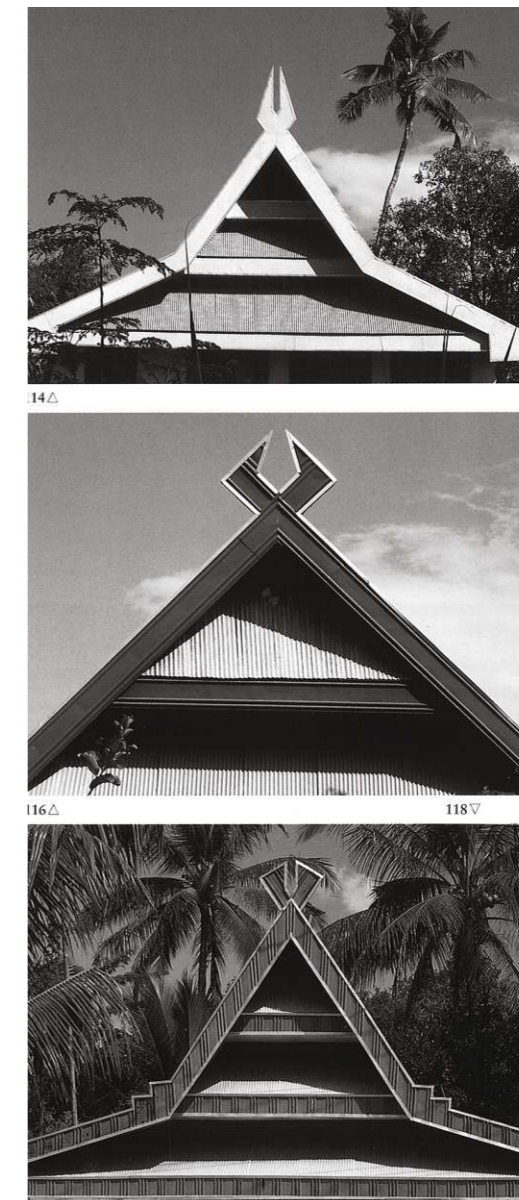


Fig.17 Buginese „buffalo horns” roof finishings

Banjarese

The Banjarese are the third biggest ethnic group in East Kalimantan making up nearly 15% of the local population.³⁸ They are native of the neighboring South Kalimantan. In total there are slightly more than 4 million of Banjarese people in the whole Indonesia and around 65% of them is based in their homeland, while the rest migrated mostly to the nearby provinces, like East and Central Kalimantan³⁹. The Banjarese people were known as good traders and sailors. Similarly, to their overseas neighbors, the Buginese, they also grounded their settlements on the other islands of the archipelago so that some of the Banjarese still live in Malaysian states such as Johor or Selangor. The ethnic group of Banjarese is strongly connected to the Barito River. However, it is highly possible that this ethnic group is a mixture of four other ethnicities: Javanese, Dayaks, Buginese and Malay⁴⁰. Since they originally come from the area of the Barito River, they have adapted well to living by the water and wetlands. In particular, thanks to excellent farmer skills, they have developed techniques for reclaiming the swampy land at which they live and transforming it into fertile land suitable for the cultivation of rice, coconut, coffee and bananas⁴¹. In terms of religion, Banjarese are very homogenous- nearly 100% of them declare themselves Muslim. Faith is an important factor in case of the Banjarese identity which goes as far as to call Urang Banjar which literally means "Banjar People" Dayaks who converted into Islam⁴².



Fig.18 Migration journey of the Banjarese

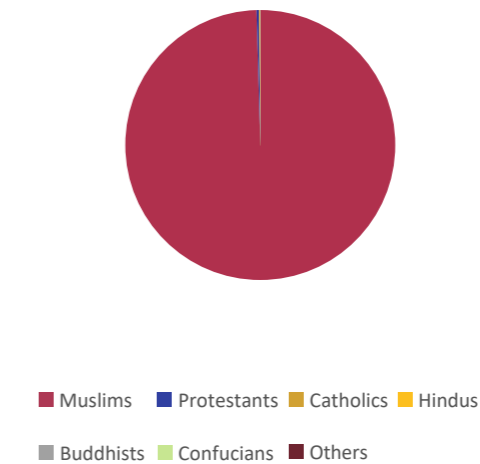


Fig.19 Religious composition among Banjarese



Fig.20 Banjarese woman with a baby in traditional clothing

Banjarese architecture

The custom of the Banjarese to originally inhabit swampy lands had naturally an influence on their traditional architecture. They are one of the few Indonesian ethnicities to have such strong relationship with the river. Accordingly, one of the key features of their vernacular houses is the construction on the pillars. The house is accessible by wooden stairs and has a verandah similarly to the traditional Buginese house. Of particular importance is the high-pitch roof, which serves as a landmark visible from the distance⁴³. The traditional Banjarese house layout is based on the axial distribution of the functions. Very often it is symmetric, with the wider core in the middle. As an effect, traditional Banjarese house plan resembles a cross. The entrance located on the verandah is followed by a series of middle and inner verandahs that serve as spaces to relax and welcome guests. Proceeding further into the interior of the building, one enters the pavilion spaces that are used for celebrations and special visitors. Further on, the core of the house is the private family sleeping area which is very often symmetrically divided into two bedrooms, so-called "anjungs", of which one is designed for the parents and one for the children. Family bedrooms were traditionally followed by the transitional room and the kitchen. Sometimes, a rear terrace was present in the back of the house. Since such a layout required a lot of space and resources, in the more recent Banjarese houses the number of verandahs was limited to one and the pavilion space drastically shrank. For the same reason, the transition space was turned into bedrooms or dining rooms and a toilet extension would occupy the former rear-terrace space or part of the kitchen⁴⁴.

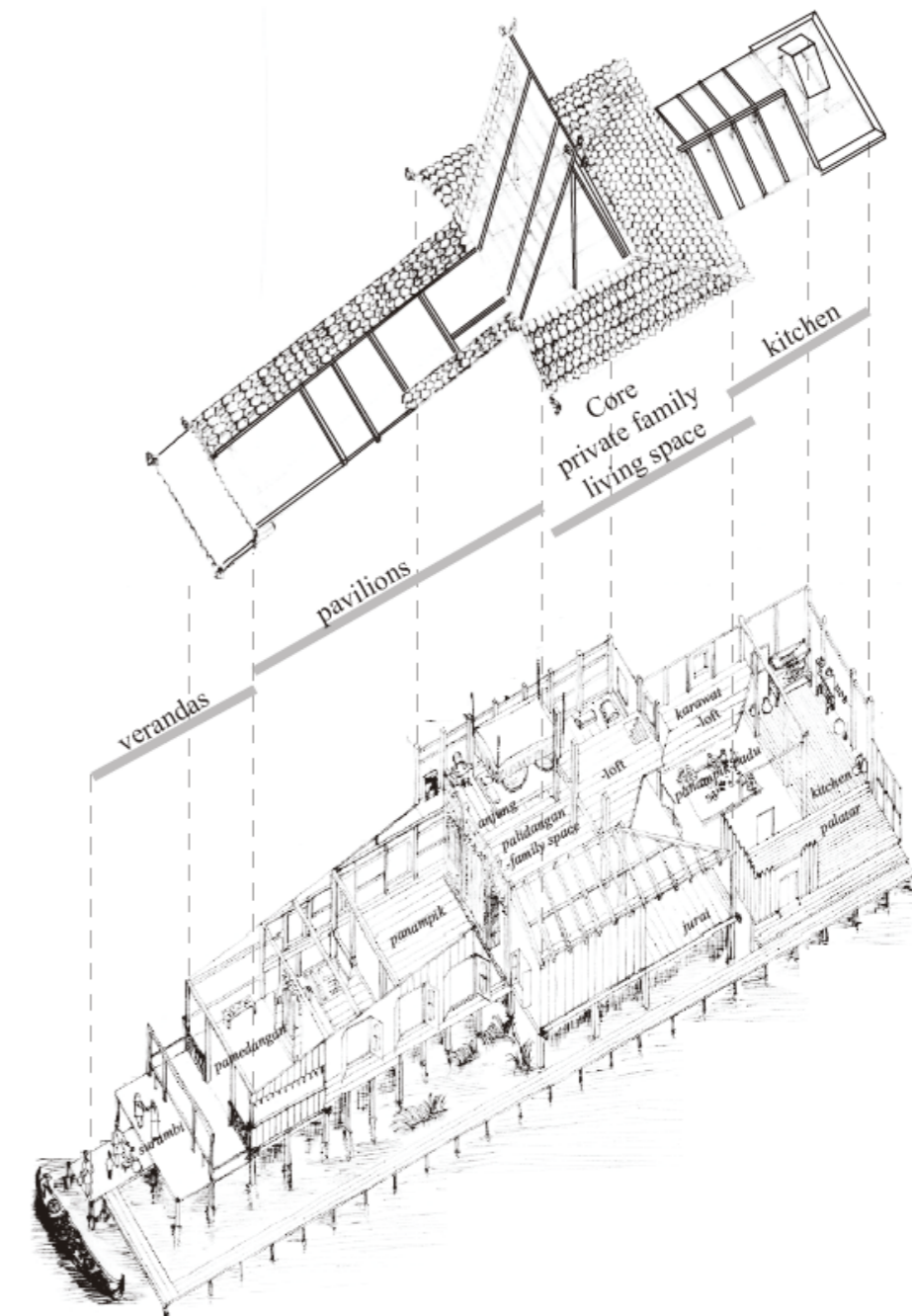


Fig.21 Traditional Banjarese high-rise house

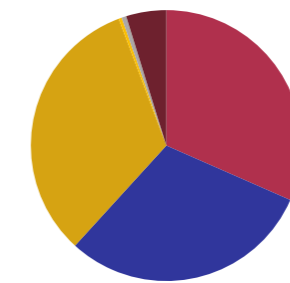
Dayaks

The Dayak are the fourth most populous ethnic group in the East Kalimantan province. Altogether they amount to around 3,2 million people in the whole Indonesia. Nowadays, most of the Dayaks live in the province of West Kalimantan (47,60%) and Central Kalimantan (32%), while about 350 thousand Dayaks reside in the East Kalimantan province (10,9%). South Kalimantan is inhabited only by around 80 000 of the native Kalimantan people⁴⁵. The name Dayak generally refers to the indigenous people of Borneo and means “human” in the Iban Dayak language. Supposedly the origins of the name Dayak date back to the 18th century when the term was used by the Dutch as a collective name for non-Muslim natives in the south of Borneo. Nowadays, the Dayak ethnic group consists of around 405 subtribes living all around the inland of Kalimantan⁴⁶, both in the Indonesian and Malaysian part. The names of the subtribes derive mostly from certain geographical locations where the tribe was based e.g., river or hill. In this regard, most of the Dayaks are closely connected to rivers and “follow a riverine lifestyle”⁴⁷ and cultural differences between certain subtribes tend to be very subtle.



■ 47,6% of Dayaks ■ 32% of Dayaks ■ 11% of Dayaks ■ 2,5% of Dayaks

Fig.22 Dayak distribution in Kalimantan



■ Muslims ■ Protestants ■ Catholics ■ Hindus
■ Buddhists ■ Confucians ■ Others

Fig.23 Religious composition among Dayaks



Fig.24 Dayak children in East Kalimantan

Dayak religion

In terms of religion, the Dayaks are a very complex ethnicity. As I mentioned before, the name Dayak originally referred to the non-Muslim indigenous people of Borneo. Victor King claims that the distinction between Muslim and non-Muslim is crucial in Kalimantan: many Dayaks who converted into Islam would no longer be called Dayaks but Malays⁴⁸. According to the official census from 2010 around 32% of Dayaks are Muslim, 30% Protestant and 32% Catholic. Hindu, Buddhists, Confucians, and “others” make up the remaining 5% of the society⁴⁹. However, many of the Dayaks are still faithful to their traditional beliefs. One of the examples is the so called “Kaharingan”- an animistic folk religion, practiced by the people of Kalimantan⁵⁰. Traditional rituals are usually performed for special purposes like for farming, as part of traditional medicine or during festivities⁵¹. Nevertheless, religion was a very important factor in the modernization and identity formation process of East Kalimantan. Despite the effort of the second half of the 20th century to promote the Javanese Muslim culture as a national Indonesian culture the native people of Borneo who were mostly neglected and disadvantaged by the Central Government politics were unwilling to convert to Islam. An alternative was offered by the Christian European missionaries who would invest in the educational and medical facilities in Kalimantan. In this way, since the 1960s, many Dayaks gradually became Christian and joined the believers of six officially recognized religions⁵².

Dayak history

Inhabiting remote and wild areas of Borneo, the Dayaks have been neglected for years by the central authorities. Since the colonial era on until the rest of the country was developing, the native people of Kalimantan did not have sufficient access to healthcare, schooling and public offices. Despite being largely neglected their autonomy and independence have been slowly taken away from them. In particular, due to the richness of the natural resources like timber and minerals present in Kalimantan and the purpose to eliminate shifting cultivation, Dayaks have been deprived of their lands and relocated into the so-called “resettlement areas”⁵³. In these settlements, they were often forbidden to build traditional long houses as well as to breed pigs. Such suppression of the indigenous people of Borneo especially intensified during the rule of President Suharto and his New Order that among the goals of his Five-year plan had „the socialization of the primitive peoples” and the “importance of living in an organized group”⁵⁴. The transmigration programs and promotion of Javanese and Islamic culture were clearly a part of this plan. It would come as no surprise however that a majority of the new Javanese settlers failed to properly integrate with the local communities since due to the general atmosphere of antipathy and indifference between the ethnic groups most of them remained in the resettlement villages. In the worst scenarios, there have also been reports of conflict and tensions with the locals⁵⁵. Only after the fall of the regime in 1998, the Dayak gained recognition and freedom from the central authorities.

Dayak architecture- longhouse

Even though the Dayak traditional house seems to have some common features with the aforementioned Buginese or Banjarese houses it is the only typology in the region that focuses on collective living. Traditional houses of the Dayaks are based on the concept of a row of single apartments connected with each other by one roof. All of the apartments share one big verandah. The whole structure is elevated and stands on piles similarly to the Banjarese or Buginese houses. There are a few theories argument in the presence of wooden pillars. Due to the close connection of Dayaks to the rivers, some scholars claim piles are supposed to counteract flooding. Additionally, it was a place to keep the domesticated animals. The other argument is a defensive function. Since the Dayaks tended to live in very secluded areas of the jungle, they had to minimize the risk of the potential attack of wild animals or a hostile tribe⁵⁶. Another interesting aspect of the longhouse is the strong division between the common verandah and the private interior of the apartment. This effect is stressed by the elevation of the doors to each apartment. The inside “lawang” and “sawah” the outside, are crucial elements of the longhouse. Even though there are many longhouse variations on the whole island of Kalimantan this distinction is a common denominator for all of them⁵⁷. While collective living seems to be a very important aspect of their community life there is still some general need for privacy and intimacy. What is more, this division does not directly refer to the “private” and “public” space, but as the names suggest “inside (of the longhouse)” and the “outside world”. For instance, in case of receiving Malay guests, they would be invited to the “sawah” space⁵⁸.



Fig.25 Long-house example



Fig.26 Longhouse sybtype Rumah Lamin in East Kalimantan

Longhouse and the community living

Longhouse typology creates a perfect environment for lively and harmonious community living. Except for receiving guests, the gallery usually serves as a meeting space for the members of the community in which they relax, gossip and smoke together. Moreover, rice is being pounded and cleared in such space⁵⁹.

The common gallery is not the only place that offers a space for social interaction, but also the walls between the apartments have a special function. Indeed, single units are not separated from each other by the solid thick wall, on the contrary, the wall is "made of flimsy pieces of bark and other materials propped up against each other in such a way as to leave gaps of varying sizes."⁶⁰ The gaps can be used for passage by household animals, or by people to pass things or chat with each other. In this way, all of the members of the longhouse community are night and day participating in the neighborhood life. This lack of privacy from the European point of view is justified in various ways, for example at nighttime: due to the transparency of the walls people can see the light in the neighboring apartments. Moreover, in case some member of the community falls sick and does not show signs of life, neighbors can intervene⁶¹.

CROSS SECTION

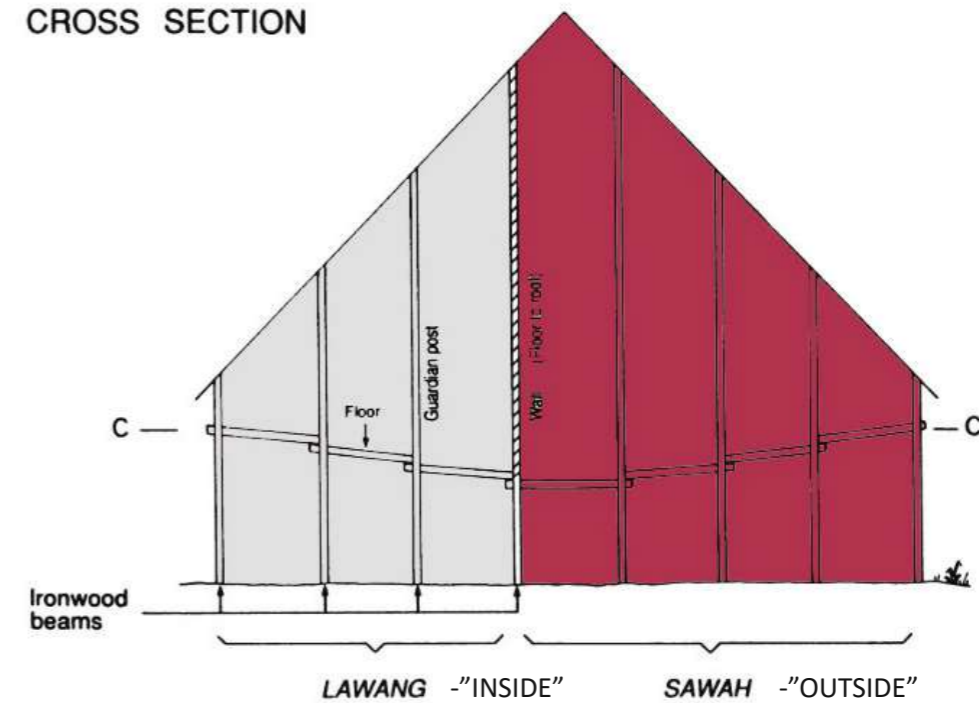
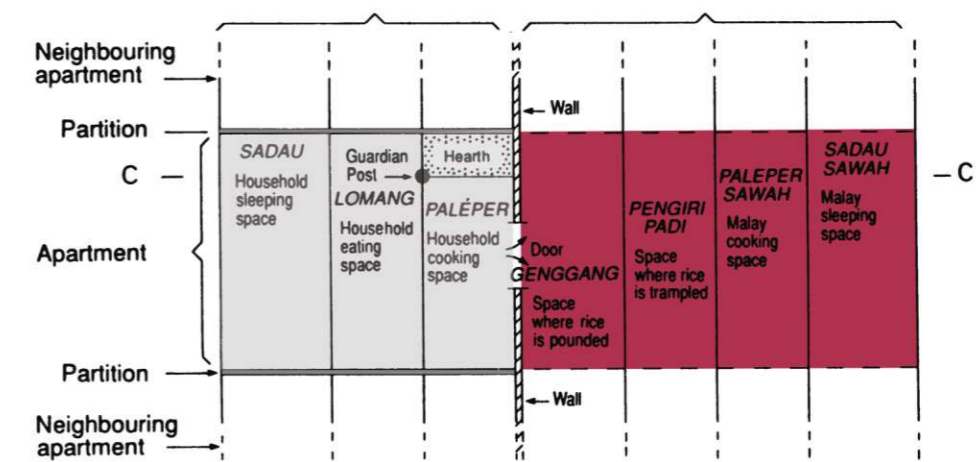


Fig.27 Longhouse cross-section



FLOOR PLAN

(Scale approximate)

Research C Hellwell, Ph D Thesis, A N U 1985 1990
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Fig.28 Longhouse floor plan

Dayaks and the daily life

The community plays an important role in all everyday activities and in particular, in a labor organization. The basic unit of their labor organization, so-called "tilung", usually consists of a stem family, i.e. parents with their unmarried children and a married daughter with her family. They are responsible for the daily maintenance of their vegetable garden and tobacco plants⁶². Meanwhile, the work on more significant agricultural activities, like rice or crop cultivation, is shared among the tilungs on the basis of "exchange labor i.e. a system in which each person (or another member of the same tilung, if unavailable) provides one day of labor for each team member who works on the tilung's land. Even when exchange labor is not essential, most of the agricultural activities among the Dayaks are performed as group work⁶³. Since the members of the tilung need to cooperate with each other on a daily basis, living together provides the most logical and straightforward solution. Hence, the basic apartment unit usually consists of the tilung. In case the of numerous families, extended households can occur in a temporary form. The term „tilung" can be used in its narrow sense to define the single living unit, but also to describe the labor unit and the social group⁶⁴. As Dayaks originally lived in the secluded rainforest areas, they were taking advantage of many goods their environment could offer. Dayaks were skilled hunters and used to collect honey, wax, scented woods and nuts. Besides agricultural labor, some of those activities have remained popular among them until today⁶⁵.

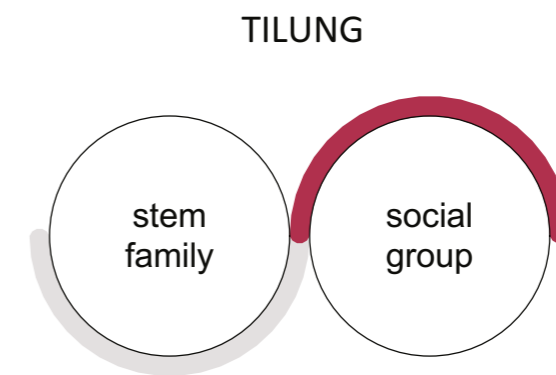


Fig.29 Tilung meaning

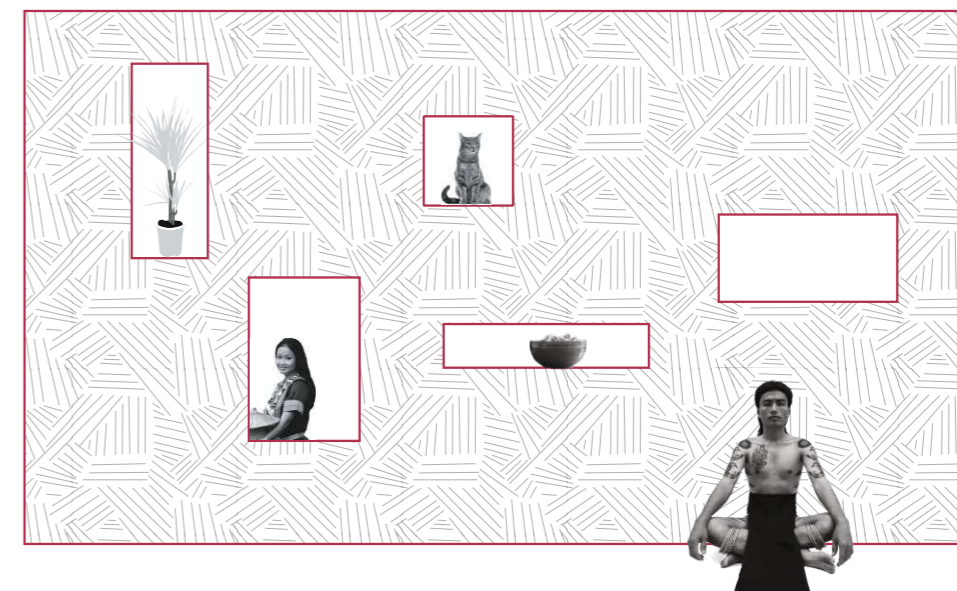


Fig.30 The role of the wall

Pasir

The Pasir ethnic group amounts only to about 1,9% of the East Kalimantan population which is around 67 000 people⁶⁶. Given their relatively small numbers, there are not many sources describing the Pasir. They are very often associated with Dayaks and particularly with the Dayak sub-tribe Dayak Pasir. Nonetheless, they are in reality a separate ethnic group with their own subtribes⁶⁷. Pasir Balik were originally inhabiting the city of Balikpapan. Nowadays they also inhabit the neighboring regencies of East Kalimantan, as well as the area where the future capital will be built. So far, some of the tribe representatives have been speaking to the journalists, worried about their future in the Penajam Paser Utara Regency⁶⁸. Their traditional identity has been increasingly endangered by the custom of the tribe's members to marry among other ethnic groups. Furthermore, many of them would abandon their traditional beliefs, a clearly important part of their tribal identity, and convert to Islam or Christianity. However, some of the Pasir Balik people still practice traditional rituals, which differentiate them from other local communities⁶⁹. Another important identity factor, the Paser Balik language, is also slowly disappearing and nowadays very few people actually speak Paser Balik. Some of the members of the community hope that it could be introduced at the local schools together with other cultural elements like songs and dances. So far, Pasir Balik culture was promoted at the local exhibitions and festivals⁷⁰.



Fig.31 Pasir Balik people during a traditional festival



Fig.32 „Jubaen, cultural chief of Pemaluan, a village in the development zone, fears the loss of community feeling”

“In town people will kill their best friends, but here we have a strong sense of community. If we have to move, all of that will be lost,” - Jubaen (53) cultural chief of Pemaluan village and a member of the indigenous Paser Balik tribe

“When I was younger we could go into the nearby forest and collect honey and fruit, but then the area was taken over by ITCI (International Timber Corporation) ” said Jubaen.⁷²



Fig.33 „Sugio in his beloved orchard, which sits on land designated for the new capital.”

“We have everything we need here,” he says. “Our family can’t even eat everything before it spoils, so we sell it at the market. Our life is already perfect.”- Sugio (79. y.o.) local farmer⁷¹



Fig.34 „Current resident Wiwit was shocked at the announcement, but says that one positive aspect is the possibility of expanding her business”

“I saw the announcement about the new capital on TV and I was so shocked [...]What will become of people like us? If they bulldoze our homes to build a new capital, where will we go?” - Wiwit, Sugio’s niece

“This is our home,” she said. “This is my birthplace. We have brought up our children and grandchildren here. We don’t want to leave and we will fight if we have to.”⁷³



Fig.35 „Head of the local Paser Balik tribe Mr Sikbukdin”

“They don’t pay attention to us. They would rather worry about the orangutans, where the orangutans should be placed, and allocating land for one (orangutan). Perhaps they think we are inferior to those animals”- Mr Sikbukdin said.⁷⁴

The local people



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Fig.36

New capital competition

Three pillars of the new design

At the end of 2019, the Ministry of Public Works and Public Housing announced a competition for the new capital. Governmental guidelines had to be considered in the design. The new national capital is planned to become a smart metropolis that represents modern Indonesian society. Consequently, the winning design has to fulfill three main basic criteria :1) reflecting the identity of the nation 2) ensuring social, economic and environmental sustainability and 3) creating a smart, modern and international standard city⁷⁵. The first criterion conceptually focuses then on the Indonesian civilization. Accordingly, the idea of justice and Indonesian constitutional values should be chiefly taken into consideration while, the new capital should be an inspirational and cultural city that would attract visitors from all over the world. Meanwhile, the second criterion refers mostly to the idea of sustainable urban development. The new metropolis should be a vibrant, cultured and comfortable space that focuses on individuals and their needs, provides good public transportation system and is easily accessible by pedestrians and cyclists. Additionally, the design should be oriented towards a human scale and prioritize green open spaces. The settlement is supposed to be designed as “city in the forest” and focus on preservation of the local rainforest environment. The third criterion refers mostly to the idea of implementing new technologies in fields such as information, communication and industrial engineering. Consequently, the new design of the housing and public facilities should correspond to good international levels. In a more abstract sense, the design should also convey good governance and democratic values⁷⁶.



Fig.37 Main criteria for the new capital's competition

Governmental Agenda

The site chosen by the government for the new capital is located in the Penajam Paser Utara Regency and in the Kutai Kartanegara Regency in East Kalimantan Province. The new metropolis is thought to be based on the radial hierarchy. The core of the IKN (Ibu Kota Negara – New National Capital) is supposed to be occupied by a Central Government Core Area (RI) with a radius of 2,5 km. Secondly, the second ring (RII, or State Capital Region), with a radius of roughly 11,5 km, will cover around 400 km². Finally, the third ring (RIII or State Capital Expansion area) is supposed to have an area of 1800 km². RI will include the most important public buildings such as State Palace, the House of Representatives and People’s representative council and is going to prospectively be developed until 2024⁷⁷. Initially, an infrastructure for around 500.000 inhabitants will be built and in the following decade, the government is going to be fully transferred to IKN. In addition, innovation and economic centers are supposed to be constructed. The government’s subsequent plans are ambitious: until 2045 Ibu Kota Negara is going to become the “Number 1 destination for foreign direct investments” as well as the top 5 tourist destinations in South-East Asia. The ultimate goal is to become a “Global city for all” and get to the Top 10 world’s most livable cities. Furthermore, the city is planned to become the first one in the world to have more than 1 million inhabitants and be supplied by 100% renewable energy⁷⁸. Moreover, IKN will form together with the nearby cities of Samarinda and Balikpapan the so-called “Three Cities Ecosystem”, namely a connected economic, administrative and cultural entity. The New Capital will serve as the “nerve center” due to its administrative function. Thanks to its rich history and renewable energy sector, Samarinda will work as the “heart” of the system, whereas Balikpapan will be the “muscle” due to its function as East Kalimantan’s crucial upstream point for oil and gas⁷⁹.



Fig.38 Location of the new capital

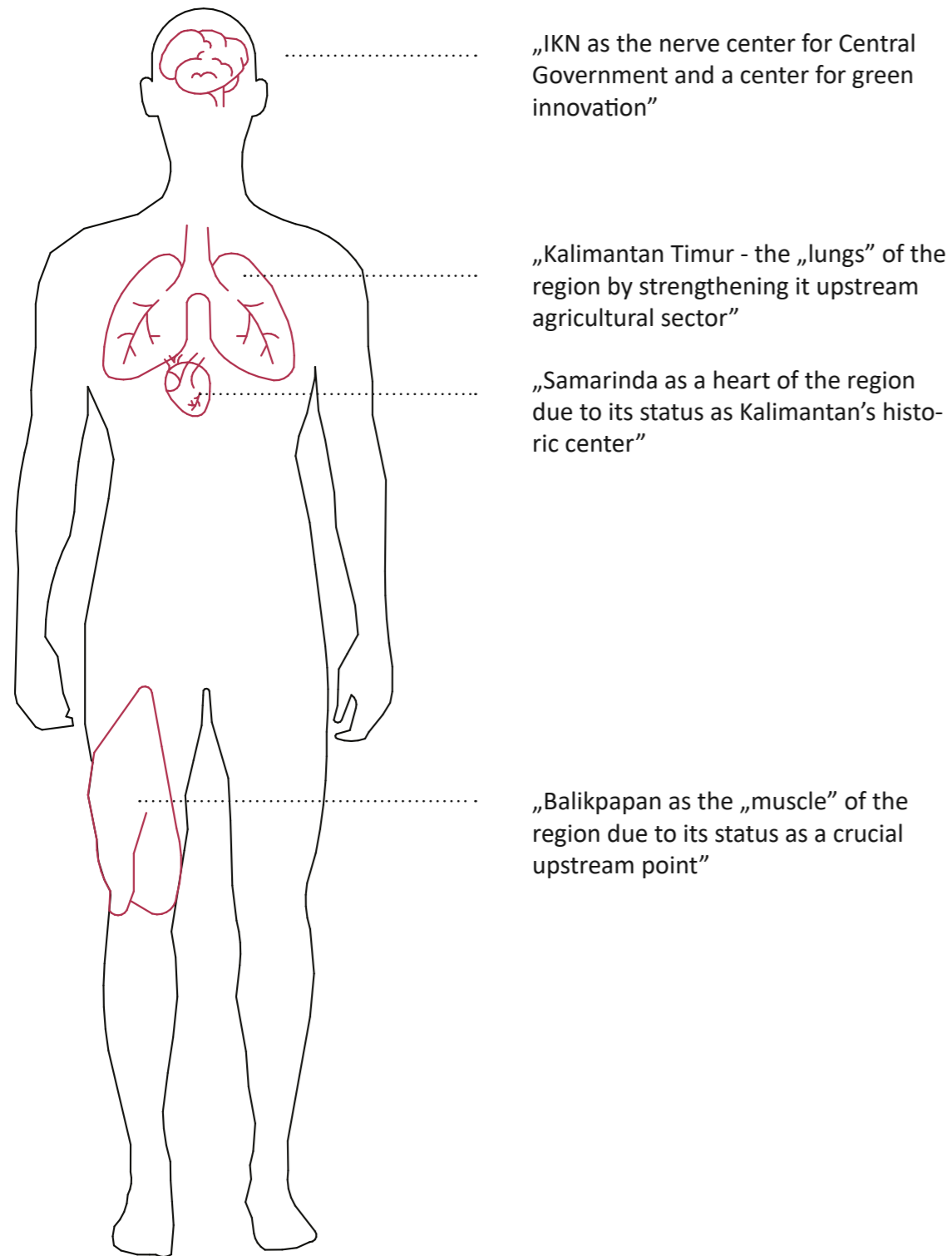


Fig.39 New capital region as a human organism

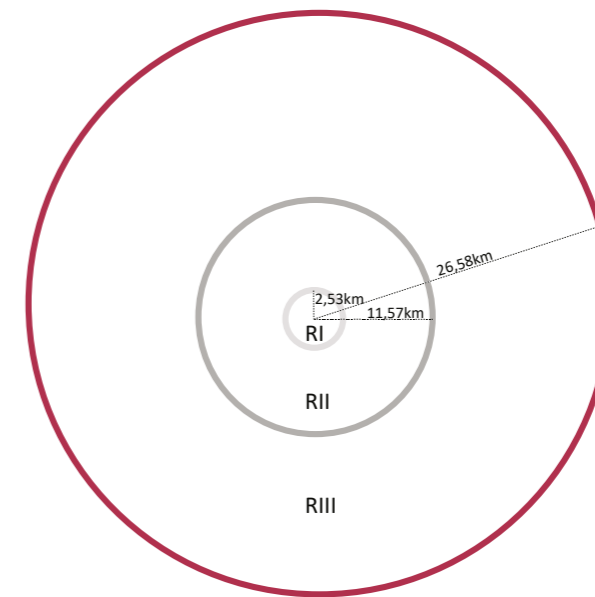


Fig.40 Radial structure of the new state capital

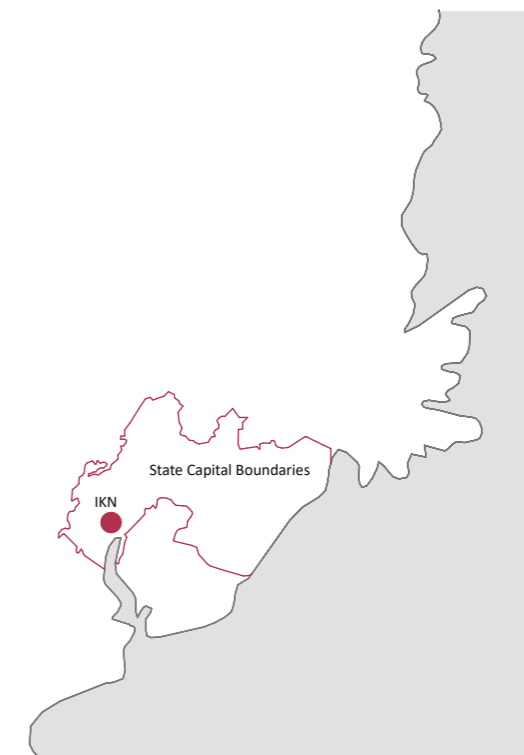


Fig.41 New state capital boundaries

Design criteria

Except for the general guidelines that I described earlier the Ministry of Public Works and Public Housing prepared a special booklet with the analysis of the infrastructural needs and design criteria for the purpose of the competition⁸⁰ to be taken into consideration by urban planners and architects during the design of IKN. According to this document, the area for the Capital State Region (RI) is planned to host around 1,5 million residents. In this chapter I will cover only the most important guidelines that are relevant for this thesis. As I mentioned before, pedestrian and bicycle traffic should be one of the most important factors in the masterplan of the new capital. In order to encourage new residents to pedestrian mobility maximum travel distance should reach 400 m. Besides, pedestrian paths and public spaces should be suitable for people with disabilities. Furthermore, a web of bicycle pathways is to be developed. As far as the public transportation system is concerned, a Rapid Transit system based on a bus and fast train system will be provided in order to reduce motor traffic. Car lanes will predominantly serve carbon emission-free vehicles. Moreover, green lines and street furniture is planned in the open space areas. In order to avoid flooding due to the vicinity of the rivers, certain special flood control channels should be implemented. Additionally, retention ponds should be planned and used as temporary water storage in case of high water. Among the building design criteria, one of the first points is the incorporation of commercial functions in the public space as an alternative to creating separate parcels like shopping malls. Hence, the concept of “commercial corridors” is desirable. Examples of educational and cultural architecture are to become focal points of the area and attract visitors and tourists from the whole country.

On the other side, the government criteria require housing for public workers as well as social housing for low-income households to be planned in the IKN area. More generally, the buildings should be designed according to the green building concept and at the same time, the architecture should incorporate and reflect the national Indonesian identity. Additional criteria mirror the particular conditions of the environment. For starters, the building proportions need to be suitable for the local density and city skyline. Generally, many environmentally friendly factors must be considered in the building design: a target temperature inside of about 25 °C in order to avoid artificial ventilation, building materials and colours of high solar reflectance, the use of local and environmentally friendly materials, and the introduction of big openings in the buildings to improve the air circulation. Public spaces, on the other hand, should provide shadow, comfort, and, safety. At the same time, they should also evoke citizen pride, as well as collective responsibility. Dark and closed public spaces, are to be avoided. A quantitative objective for green spaces is introduced and set at minimum of 50% of the area. A lot of attention should be paid to public spaces in order to encourage community and cultural activities that can particularly serve as a tourist magnet. All of the necessary educational, religious, cultural, and public service facilities should be provided. Moreover, some special natural protection areas for fauna and flora are to be planned with the purpose to serve as recreational and educational spaces⁸¹. The general guidelines suggest that the new capital’s masterplan should be based on the „multiple concentric system” concept with the government core in the middle. In this way, future expansion of districts does not occur in the center of the capital and a potential concentrated overpopulation problem is avoided.

Competition winner

In December 2019, the results of the competition for Indonesia's new capital were announced. The first prize went to the architecture and urban design studio URBAN+ and their project "Negara Rimba Nusa" which could be translated into "forest and island hilltop"⁸². According to the press, they beat 755 other contestants⁸³. Clearly, the patriotic Indonesian aspects and "reflecting the identity of the nation" have played an important role while designing the masterplan. Some of the highlights of the design shown in the visualizations are "Indonesia Raya" (Great Indonesia) presidential palace as well as Bhineka Tunggal Ika (Unity in Diversity) plaza⁸⁴. The Negara Rimba Nusa masterplan is based on the concept of thematic sub-cities connected with the government city core. These sub-cities comprise a city of technology, a city of creativity and innovation, a city of sports, a city of media and healthcare research and a city of education. The new capital's structure is described as a "cluster of urban islands among the forest"⁸⁵. The visualizations provided by the architects focused mostly on the governmental core of the metropolis. Apart from the aforementioned presidential palace and plaza, facilities like national religious complex, the museum of Indonesian civilization, the Indonesian unity monument and Democracy square are planned on the shore of central Pancasila lake. Moreover, the use of advanced technologies in the transportation system meets the ministerial guidelines. Furthermore, pedestrian paths, electric scooters, and bicycle lanes are major parts of the masterplan. The ecological aspects included in the masterplan are taken into account: huge rainforest areas around the city clusters are supposed to become a part of the design and facilities like botanic gardens and orangutan eco-tourism facility as well as a green energy research city are planned⁸⁶.

However, despite the fact that URBAN+ won the competition, the final design of the capital was supposed to be revised and consulted with the winners of the second and the third prizes as well as international urban planners⁸⁷. So far, we know that the city clusters have changed their functions. According to the official website of the new capital, IKN is supposed to become a superhub and consist of six economic clusters such as: clean technology industry clusters, integrated pharmaceutical industry cluster, sustainable agriculture industry, ecotourism and health tourism cluster, chemical products and byproducts cluster and low carbon energy cluster. Additionally, two supporting clusters are planned: a 21st-century Education cluster as well as Smart City and Industry 4.0 Centre⁸⁸. For now, the updated masterplan has not been published in the official governmental sources. Nevertheless, the construction works have started and according to Bambang Susantono, chairman of the new capital authority, "at this point, no delays. We are on track, more than before [...]"⁸⁹.

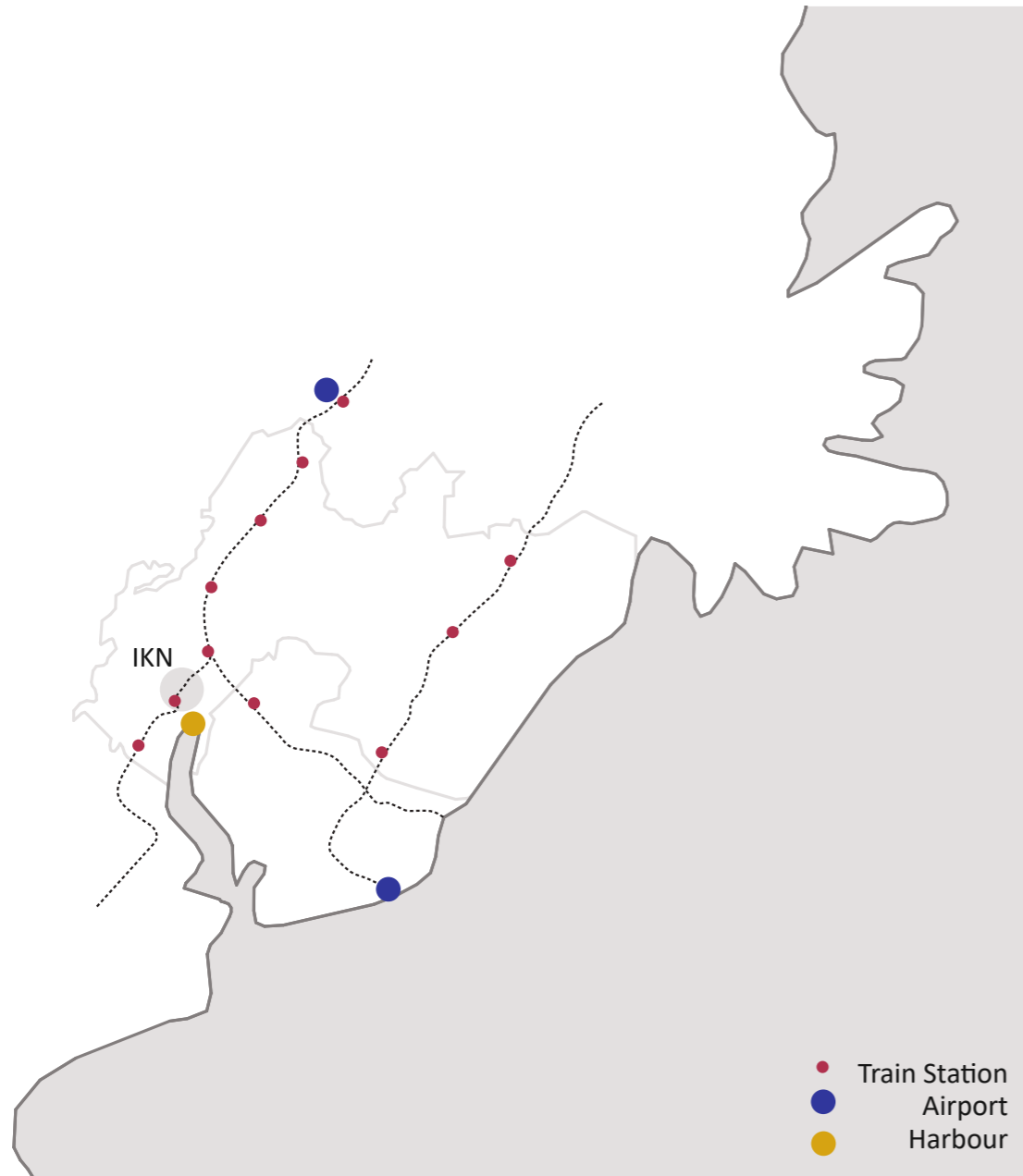


Fig.42 Planned transportation system in the state capital region



Fig.43 Visualisation of the capital city core

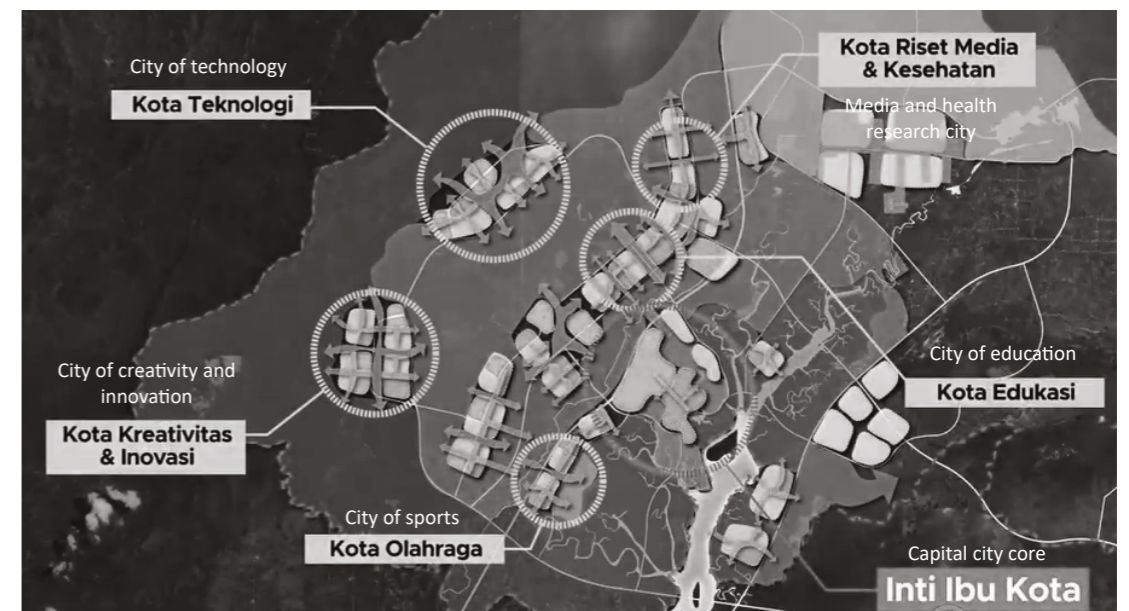


Fig.44 Capital city concept based on thematic economic clusters

New capital- new target group

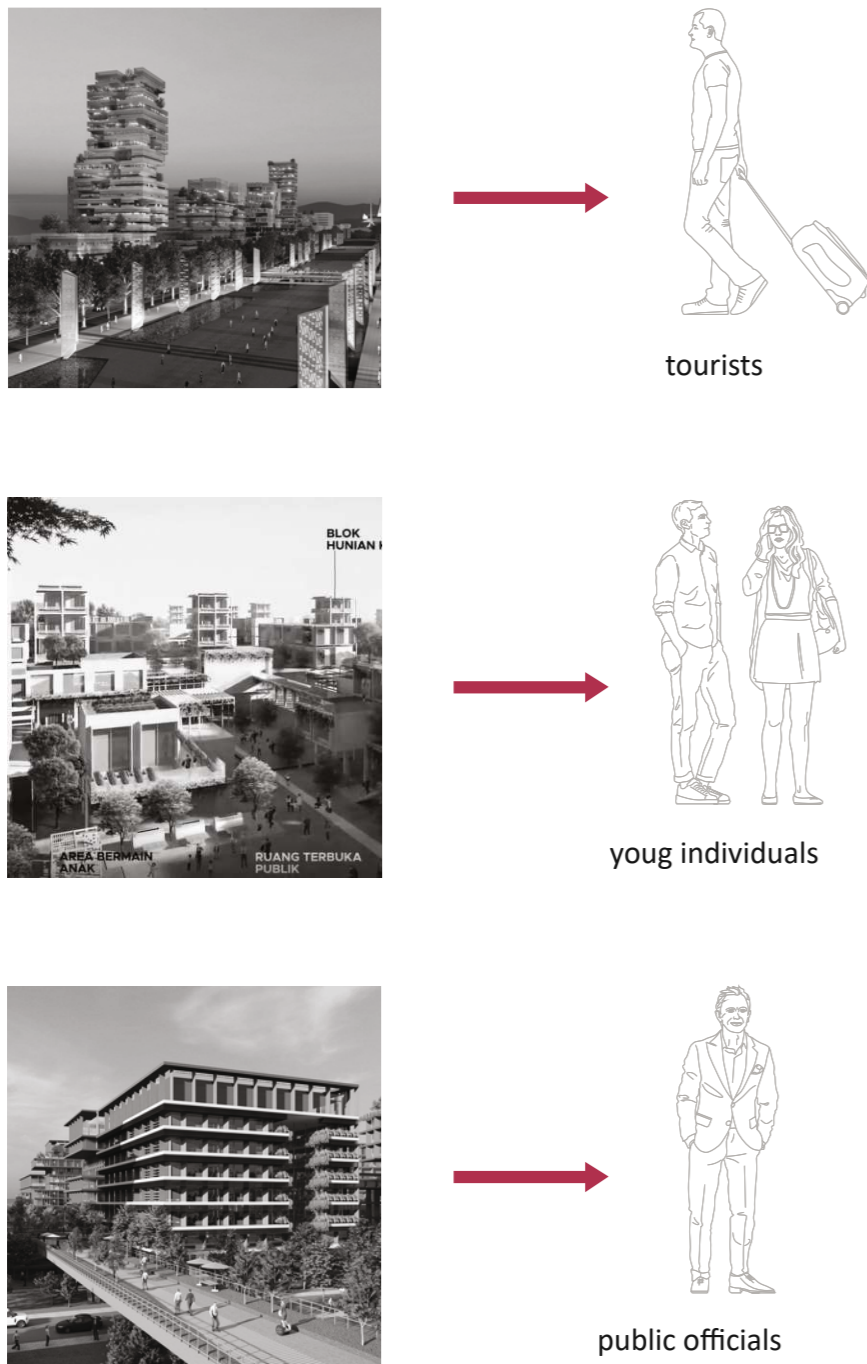


Fig.45 New capital city target groups

Needs of the locals

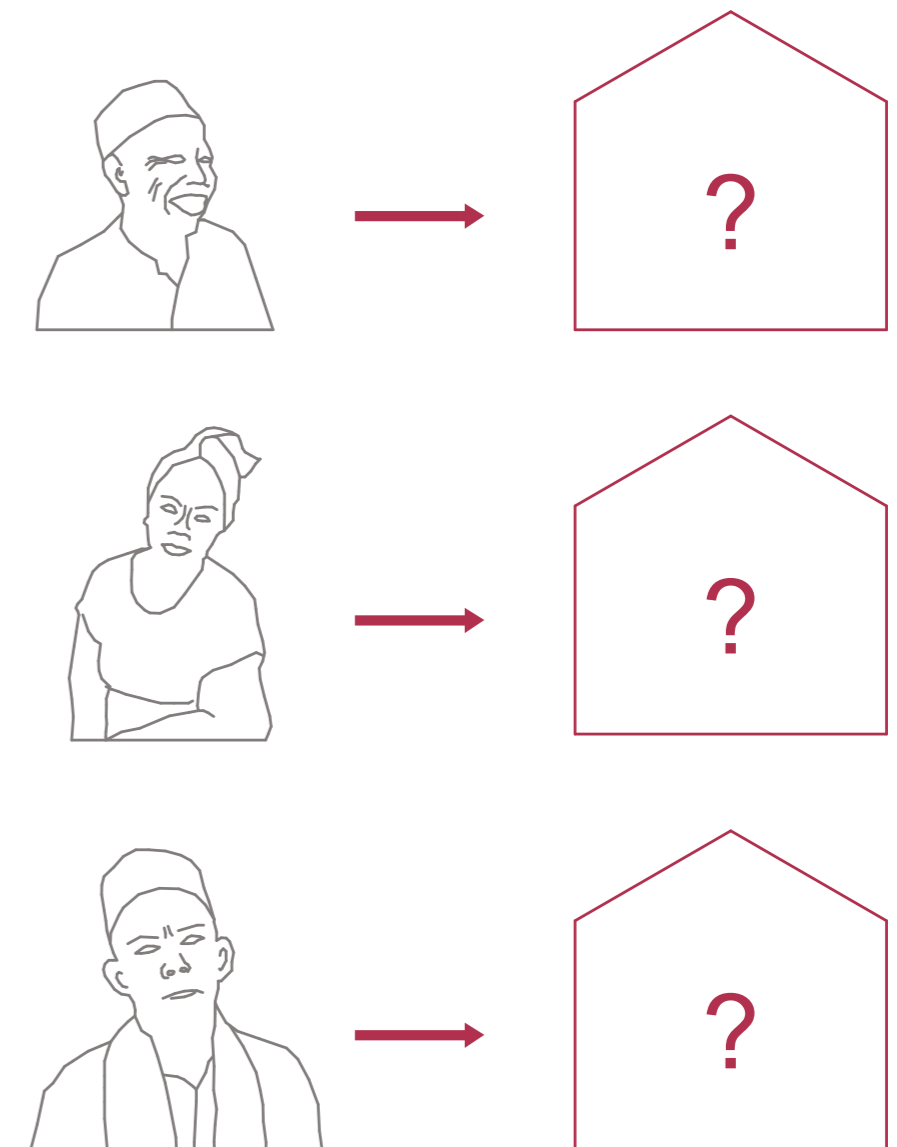
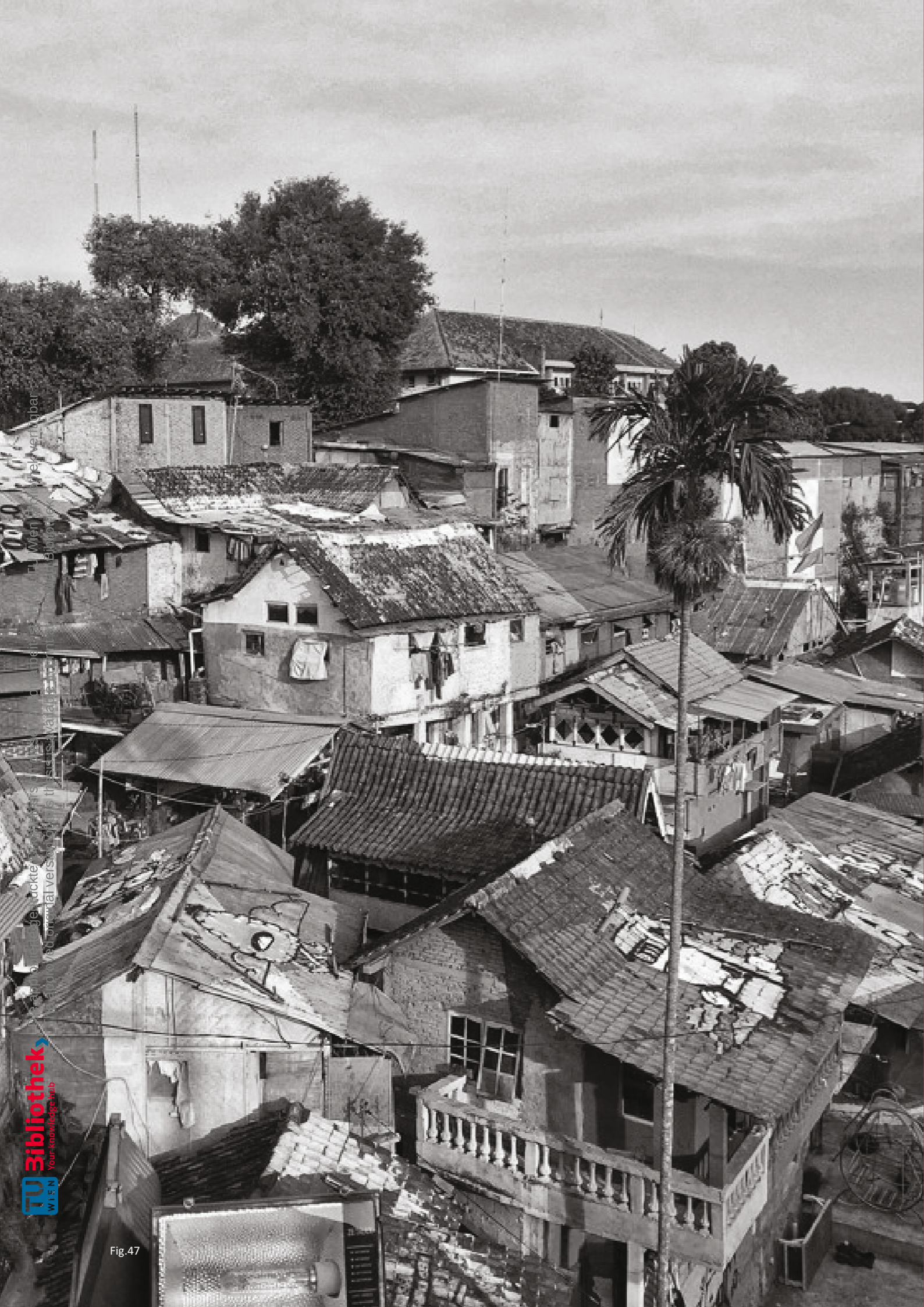


Fig.46 Housing for the local people



Kampung typology

„An organic city is usually more workable, more efficient, more equitable, and more democratic than a planned city⁹⁰”

What is a kampung?

It is difficult to find a substantive and clear definition of the term Kampung. Kusno calls kampung a “densely populated irregular urban neighborhood, where its residents, for the most part, are not rich if not relatively poor, although occasionally some have become wealthy, but lived in the kampung. The houses and the people tend to be crowded together, thus giving an atmosphere of ramai (a sense of doing many things)”⁹¹. On the other hand, Silas describes Kampung as an: “indigenous concept of housing and community, which caters for mostly low and middle to lower income families”⁹². Meanwhile, van der Molen claims that in Batavia (current Jakarta) kampungs were originally “unplanned and haphazard settlements, inhabited mainly by indigenous residents and non-Europeans”⁹³. Flieringa states that kampungs were initially villages (desa) that slowly transformed into urban communities, despite the fact that the main difference with “desa” was that the new kampungs would barely have any connections with agriculture. Most of their territory would be used for residential purposes and in East Dutch Indies kampungs would be mostly inhabited by the indigenous people, foreigners from the surrounding countries and poor Europeans⁹⁴. Housing in kampungs is usually made out of bad-quality materials. That is why these settlements are particularly exposed to natural disasters such as flooding, earthquakes, or fires. Additionally, houses in kampungs are very often illegally built, due to the unregulated land ownership status⁹⁵. Due to its rural heritage kampungs are usually homes to the fresh migrants who travel to the city in search of a new occupation, and a better life. The reasons that lead these people to look for an initial accommodation in kampung settlements are not only purely economic as kampung communities are characterized

by much stronger social bonds and by a more developed community life than typical urban neighborhoods. Kusno claims that kampungs play an important role as buffers between the city and the countryside in the highly polarized urban-rural system of Indonesia. At the same time, the kampung environment has strong economic, political, and cultural links to both the public and the private sectors⁹⁶. In terms of classifications, Kampungs can be divided into three categories: woodland kampungs, peripheral kampungs, and inner-city kampungs⁹⁷. However, the ones that are researched the most are the inner-city kampungs.

Mega city and the kampung

As I mentioned before, kampung is a very important intermediate space between the city and the countryside. In the case of mega-cities where many kampungs are located the contrast between modern business or commercial districts and the dense informal settlements can appear brutal. Nonetheless, there is a special form of relationship between the city and the kampung. Since most of the kampung households are rather low-income households its inhabitants usually perform simple occupations as vendors, cleaning or security personnel, gardeners, or physical workers. Most of them are employed in the city and outside the kampung settlement. Complementary to that kampungs provide services such as food stalls, street stands, and other basic services that are mostly targeted at low-income “city-workers”⁹⁸. After all, we can speak about some sort of symbiosis between the city and the kampung.

The informality of kampung

The significant characteristic of informal settlements like kampungs consists in the fact that they do not have merely a strict residential function, but they embrace a mix of land use: residential, economic, and social⁹⁹. As the city and the kampung keep on existing in their uneven but mutually beneficial relationship, one should focus more on the kampungs economic role. According to the Soetjipto Wirosardjono, the Deputy Chairman of the Central Bureau of Statistics, Jakarta’s market at the end of the 20th century was based on the “internal dynamics” of its metropolitan community, which is the exchange between the formal and informal sector, or the exchange between the kota and the kampung, as well as the “external dynamics” of the economy¹⁰⁰. According to Guinness, the informal sector is characterized by “small scale, family-type operations, with low capital, maximizing family labor, operating in illegal or unregulated areas, marked sometimes by illicit operations and with ease of entry and low skills”¹⁰¹. Such an informal sector is however fundamental for the formal sector of a city to carry out its primary activities, such as manufacturing, export-import activities and trading. As an example, we may imagine street food vendors that provide a service to wage laborers or informal mechanics that maintain cars even though they are not involved in the manufacturing of cars¹⁰². The internal dynamics enable the performance of the external dynamics meant Wirosardjono¹⁰³. Without the informal sector, low-wage workers would not be able to make a living given their low salaries. At the same time, the level of their pay is strictly connected to the low prices offered by the informal sector. In this way, a vicious circle is created, in which the informal sector “will never be able to uplift their condition toward entering the formal sector”¹⁰⁴.

Kampung informal architecture

Informal settlements are also strongholds of informal architecture. However, even though kampung houses seem to be constructed in a very haphazard manner out of arbitrarily chosen material there is a well-founded system behind it. According to Funo and coauthors from Kyoto University and Institut Teknologi Sepuluh Nopember who studied house typologies in Kampung Sawahan in Surabaya, a common dwelling type is not difficult to be recognized. Generally, the majority of the houses face the street and are much longer than wider. The basic unit (A1) in this kampung has around 15m² and consists of one flexible room that is used both as a living room and a bedroom. This house hosts on average around 4,3 people¹⁰⁵. The second type (A2) has roughly 25m² and 2 rooms – a living room and a bedroom - and the average family size is 4,6 people. Meanwhile, type A3 consists of A2 and additional kitchen space, while type A4 extends type A3 with the dining room. Both of those units have usually a terrace or a verandah. The average area of these dwellings varies between 46,9m² and 56,18m² and hosts up to 6 people. Hence, in general, most of the houses in kampungs are transformed from the basic unit by enlarging it gradually room by room. A similar process is followed by the choice of the building materials. At the beginning, dwellings are made temporarily out of wood and bamboo. Once the household's material standing gets better, the house turns into a permanent structure out of bricks or concrete. On the other hand, the roof is usually made out of prefabricated elements that are available in local material shops. Such house extensions do not follow a singular model, but there exist many variations. Nevertheless, the general process starts with expanding the building in the back, followed by side extensions. Once there is no more space on the ground, a vertical extension may be implemented¹⁰⁶.

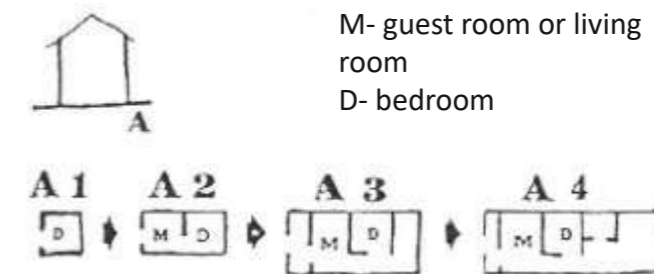


Fig.48 The transformation process of kampung house

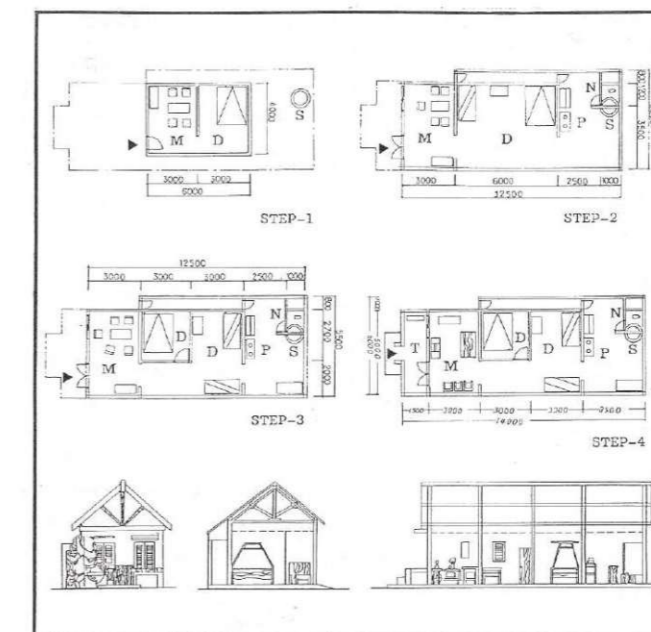


Fig.49 The transformation process of the house of X in Kampung Sawahan

Kampung versus Slum

Very often kampungs are compared to slums due to the bad living conditions in many inner-city kampungs. However, the official UN-habitat definition restricts the definition of slum households only to housing conditions that do not fulfill the following requirements: durable housing of a permanent nature that protects against extreme climate conditions, sufficient living space (not more than three people sharing the same room), easy access to safe water in sufficient amounts and at an affordable price, access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people and security of tenure that prevents forced evictions¹⁰⁷. Therefore, by definition, kampung as a settlement form should not in most cases be classified as a slum as such. It is merely due to external factors and gradual degradation that many kampungs turn into slums after years of neglect and lack of economic support. Nonetheless, as Archer points out, many of the new houses are not provided with a sufficient road network as well as fresh water supply and sanitation system, which may eventually increase the risk of epidemic and result in bad environmental conditions¹⁰⁸. Unfortunately, at the beginning of the New Order rule, kampungs were also perceived as slums. During the preparation of the Asian Games, which took place in 1962 in Jakarta, 47 thousand Kampung inhabitants were evicted and their land was used for new sports infrastructure¹⁰⁹. Ever since then evictions of kampung dwellers are commonly enforced and some of them do not even guarantee compensation. Despite these discouraging events, Indonesia was also the first country in the world to introduce a slum upgrading project i.e., the Kampung Improvement Programme which was launched in 1969. This focused mostly on providing or refurbishing necessary infrastructures such as footpaths, drainage, water supply, and electricity. However, dwelling renovations were not part of the program¹¹⁰.



Fig.50 Community initiatives in kampungs

Kampung community

Kampung is not only to be seen as an urban typology. It is so much more than that, namely a community. Generally, kampungs are very often associated with traditional and conservative values, probably due to their rural heritage and low economic status. Yet, Fachrian Nabil Fauzi and Herlily describe kampungs as a "sanctuary for working class from across Indonesia"¹¹¹. As I mentioned before, kampungs are usually homes for migrants searching for a better life in the city. This implies that kampung societies are open and welcoming in contrast to most of conservative communities. Nevertheless, many of such qualities are in fact embedded in traditional Indonesian values. An example of such virtue is the so-called "gotong royong" a system of mutual help and support which is also a basic principle and driving force for most of the kampung's community practices. As a result, community programs like arisan or ronda were introduced and became crucial elements of kampungs' everyday life¹¹². Arisan is a principle of rotational collective saving in which each participant pays a fixed amount every month. Each month a sort of lottery takes place, and the winner of the lottery receives a sum of all subscriptions and can spend it according to his or her personal purposes (such as repairing the roof or for small house renovations, etc.). After winning, the participant is excluded from participating in the lottery again but is still compelled to pay the subscription until the end of the cycle¹¹³. Ronda, on the other hand, is a kampung night watch custom in which all adult men have to participate. Other programs include Kelurahan, which is in the context of kampung, a form of district organization, karang Taruna, a type of youth organization for the kampung youngsters and Bersih kampung, i.e., a group activity of cleaning the settlement together¹¹⁴.

Besides, some of the kampungs have also a family planning division. Women, who took state preparatory courses, give advice to the local community members about family planning and contraception methods. Moreover, in some communities, an activity of Pengajian is a common custom. This consists in is a Koran study group that helps to improve and deepen one's knowledge about Islam. Pengajian is usually divided by gender¹¹⁵. All of these practices are extremely important for the functioning of the local community. Furthermore, there are also many celebrations and festivals that are important events in kampungs. Some of them are Independence Day festivals that take place on August 17th or Islamic New Year¹¹⁶. Independence Day is a national holiday in Indonesia and is celebrated in the whole country. However, in kampungs, this festivity tends to have a particularly special meaning and many attractions such as festive food stalls, games, and children's theater shows are prepared for this occasion. The importance of Independence Day for the kampung communities is given by opportunity to present their ideas and plans as well as to display their identity¹¹⁷. Another important Kampung feature is the level of closeness among the immediate neighbors. While in most urban societies daily life activities and duties are shared with the closest household members, kampung inhabitants create clusters of five to six dwellings that function as basic units of the kampung society. Members of such units share daily chores, errands, and taking care of the kids, the sick or the elderly. Material goods are also subjects of continuous exchange¹¹⁸. Having taken into consideration all of these qualities it appears clear that kampungs are not only urban settlements but also self-organized bodies that function within larger urban structures.

Kampung elements

Due to their informal and organic character, kampungs vary strongly from one another. Rules and regulations are not really respected when the settlement develops. However, there is a certain range of common elements that can be found in every kampung. The first and most representative one is the “gapura” or the gate¹¹⁹. Besides emphasizing the borders of the settlement, the entrance of the kampung is an identification mark of the community and an element that reminds about the kampung’s rural heritage. Mosques or “musholla”¹²⁰ (prayer hall) are another repetitive element typical of every kampung. As most of the Indonesians are Muslim and kampung communities tend to be very traditional, temples are mandatory elements of every settlement. As I addressed earlier, some of the typical kampung activities are related to religion or religious practices. Therefore, buildings with a religious functions have dual character: they are not only places of worship, but also meeting points for the community. Another feature typical for all kampungs is the alley, whose importance in informal settlements is given by the fact that “it is not only working as a physical element [...] but also as social and economic investment for ensuring community survival through good connection and communication¹²¹.” Alley can be used for informal activities such as house extensions, parking or street vending. It is also a place for gathering and meeting as people tend to place seats in the alley in front of their homes to engage in conversation with their neighbors and observe the quarter. Sometimes, the alley is enriched by new architectural elements such as bridges or stairs¹²². For instance, some neighbors after years of living next to each other build bridges between their houses while others, who are lacking space inside their house, expand their houses in the alley by building private stairs. The Alley is then a tiny yet flexible space where the whole community life happens. As long as the path is not obstructed the kampung inhabitants are happy to take advantage of it.

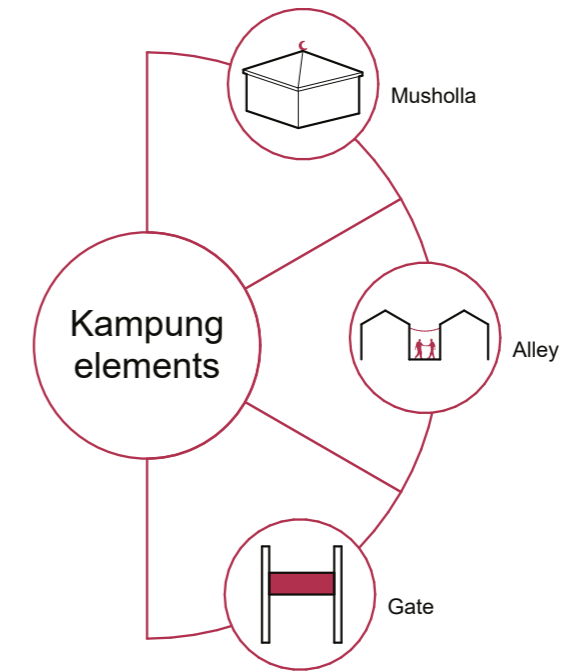


Fig.51 Kampung physical elements

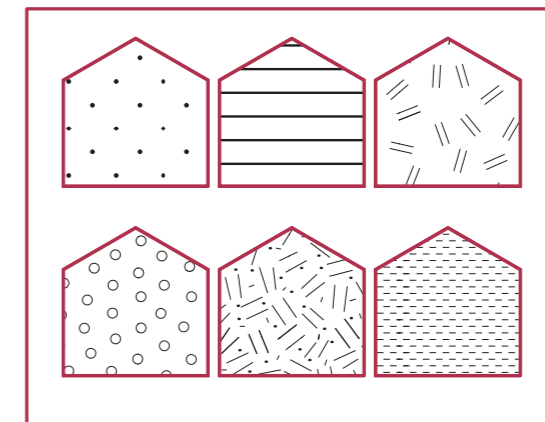


Fig.52 Kampung cluster system

Kampung Flory Case study

Kampung Flory is located in Sleman, Yogyakarta on the Java Island. Due to its historical heritage, Yogyakarta is an important center of culture on the map of Indonesia. It is also a popular tourist destination. Additionally, due to the presence of the volcano Mount Merapi the region of Yogyakarta has very fertile soils which provide optimal conditions for agriculture. The community of Kampung Flory took advantage of these factors and established an agritourism center in their kampung¹²³. They were hoping that creating such a center will not only attract more tourists but also create new working places and awaken the interest of the local youth in environmental issues. The facility is managed mostly by the community with the support of the local authorities. Agritourism covers an area of around 4 ha and is divided into various thematic zones. Some of them are Taruna Tani Zone which focuses mostly on decorative plants and fruit trees as well culinary experience. The Dewi Flory zone offers lodging for agritourism visitors, while the Agro Buah zone focuses on educational tours and offers an experience of fruit picking directly from the trees. Besides, Kampung Flory has multiple attractions such as playgrounds, bicycle routes, and even a pond with fish therapy¹²⁴. All of the attractions are very affordable for visitors. In 2019 Kampung Flory received an Anugerah Pesona Indonesia price from the Ministry of Tourism and Creative Economy¹²⁵. All in all, Kampung Flory is a big pride of the local residents and shows how successful community initiatives can be.



Fig.53 Agritourism in Kampung Flory



Fig.54 Pond in the Kampung Flory village

Kampung Madras case study

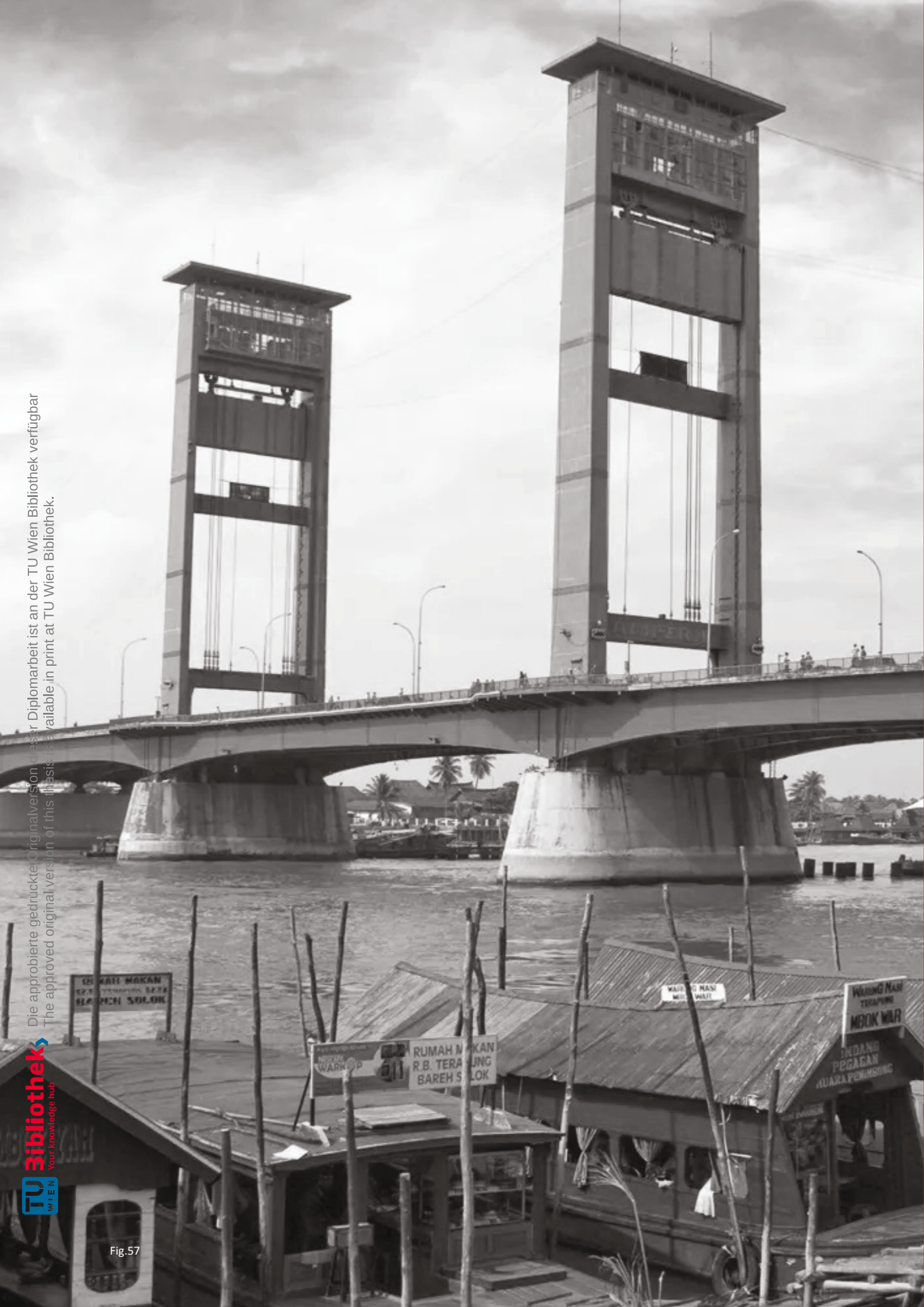
Kampung Madras is located in the city of Medan in the northern part of Sumatra. Apart from being inhabited by Indonesians, it is also home to the local Indian (mostly Tamil) community. It is an inner-city kampung with a lot of facilities like Shri Mariamman Hindu temple or a culinary hot spot-Pagaruyung Street. Despite the attractions that this district has to offer, the walking infrastructure available in the kampung is not satisfactory, hence people tend to drive instead of walking. However, as Southworth states “walkability is a foundation for a sustainable city”¹²⁶. Based on the Kampung Madras negative example, I will explore which factors tend to cause problems in kampungs and what should be considered while designing a sustainable walking space. Generally, many Indonesian cities are a difficult environment for pedestrians. Sidewalks are usually used as a multipurpose space for street vendors, parking, or, storage. Furthermore, in case of kampung Madras, pedestrians complain about the scarcity of crossing which results in risk of collisions with the motorcyclists. Furthermore, facilities like public toilets as well as benches are missing. Moreover, walking space is only partially adapted for the disabled people. Even though, tactile paving is present, there are no ramps enabling wheelchair users to cross the street (the walkway is elevated by 25 cm in relation to the road). Additionally, some of the pedestrians complain about the low quality of city lighting, which causes the feeling of danger. Affif suggests several improvement ideas that could be implemented in kampung Madras, such as creating separate parking areas for the motorbikes, introducing special street vendor zones, adding street furniture such as benches and more greenery in the walkway space as well as improvement of the city lightning. Besides, public spaces should be accessible for to the disabled, and more attention has to be paid to the public transportation in order to reduce the motor traffic ¹²⁷.



Fig.55 Problems with parking in Kampung Madras



Fig.56 Obstructions in the streets of Kampung Madras



Point of reference

Die approbierte gedruckte Originalversion dieser Diplomarbeit ist an der TU Wien Bibliothek verfügbar.
The approved original version of this thesis is available in print at TU Wien Bibliothek.

Fig.57

Palembang

In 2019, at the 55th ISOCARP World Planning Congress a presentation named „IAP’s Indonesia Most Livable City Index: A Perception-Based Survey to Measure City Livability Index” was handled. According to the survey, the most liveable city in 2017 was Solo, and the least liveable was Makassar¹²⁸. Having analyzed the study results, I decided to use the example of the second most liveable city, Palembang, as a point of reference for my design. The reason for that is the size and geographic location of both of the cities. Not only is Palembang much bigger than Solo but also located by the river. Palembang has around 1,66 million inhabitants, which makes it comparable with the target population of the future capital in Kalimantan. According to the official statistical records the municipality of Palembang had an area of 400km²¹²⁹. The expected size of the State Capital Region (IKN) is also 400km². Palembang is divided into 18 subdistricts, with the densest being Kec Ilir Satu I (10180 ppl/km²), and the least densely populated - Sematang Borang with 1470 ppl/km²¹³⁰. Therefore, on the following pages I created several graphical comparisons based on the statistical records from the city of Palembang and the Sepaku district in order to understand, which infrastructure needs to be improved in the area of the future capital.



Fig.58 MLCI Summary Result



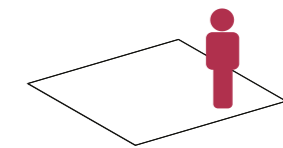
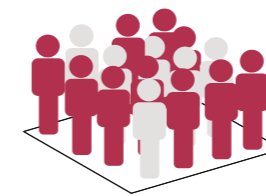
Palembang
Top 3 Indonesian most liveable cities

Sepaku- Subdistrict of Penajam Paser Utara
Regency - future capital



Area: 400,61 km²

Area: 1172,36 km²



Population: 1 619 533
Population density 4043 ppl/km²

Population: 35 592
Population density 26,84 ppl/km²



Per capita expenditure:
15 087 000 Rupiah
app. 1015 \$

Per capita expenditure:
11 075 000 Rupiah
app 745 \$

Fig.59 Palembang vs Sepaku basic information

Access to education

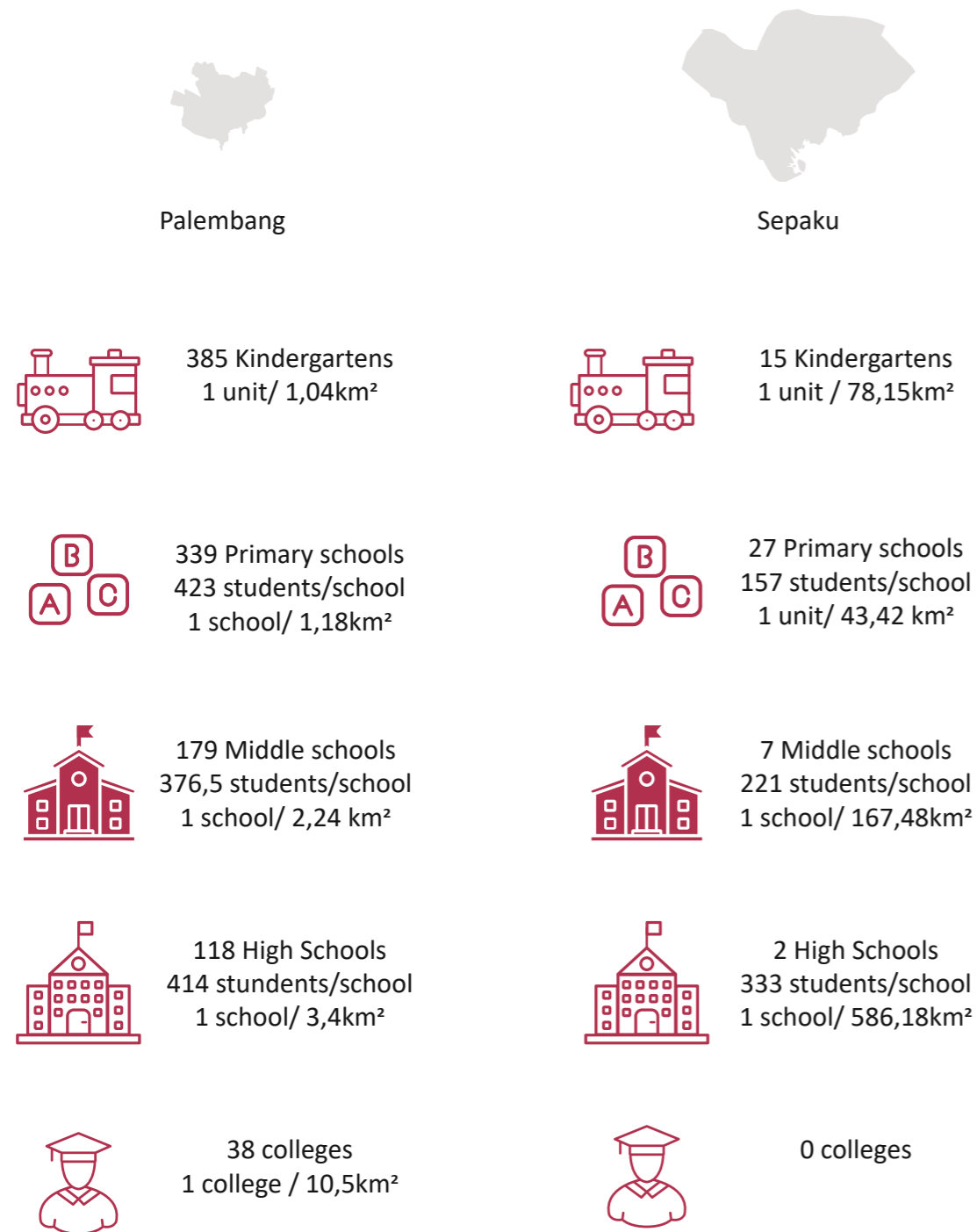


Fig.60 Access to education in Palembang and Sepaku

Trade and tourism

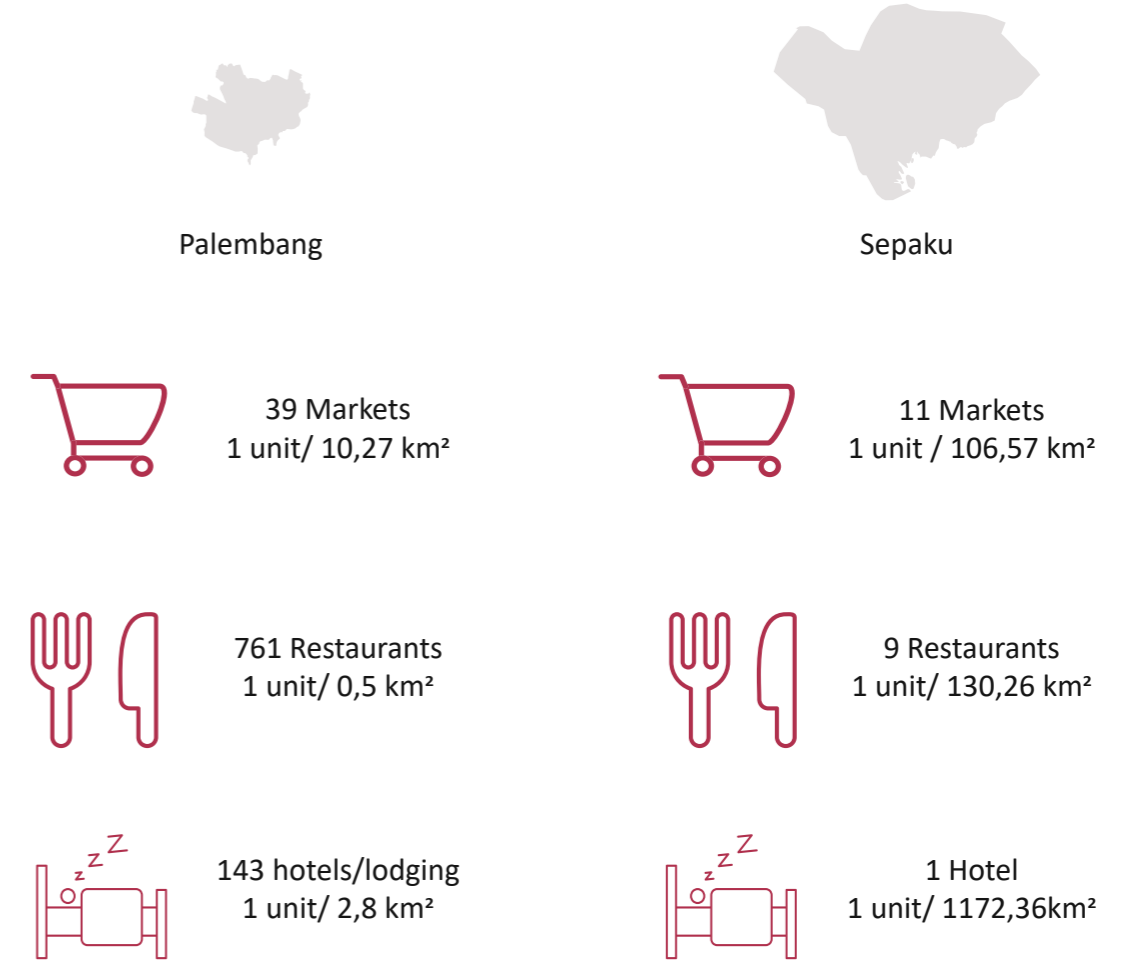


Fig.61 Trade and tourism in Palembang and Sepaku

Access to healthcare

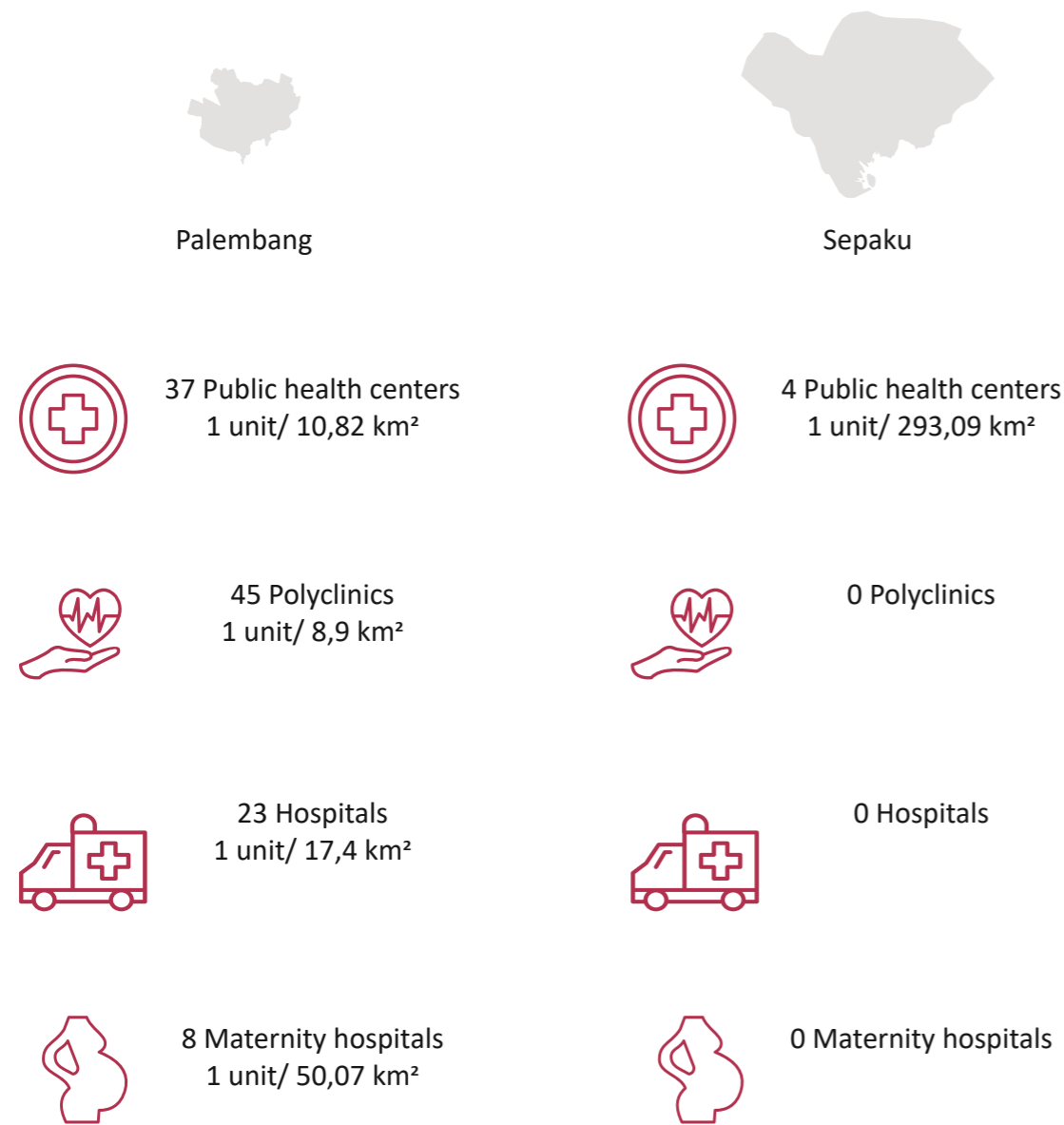


Fig.62 Access to healthcare in Palembang and Sepaku

Access to religious facilities

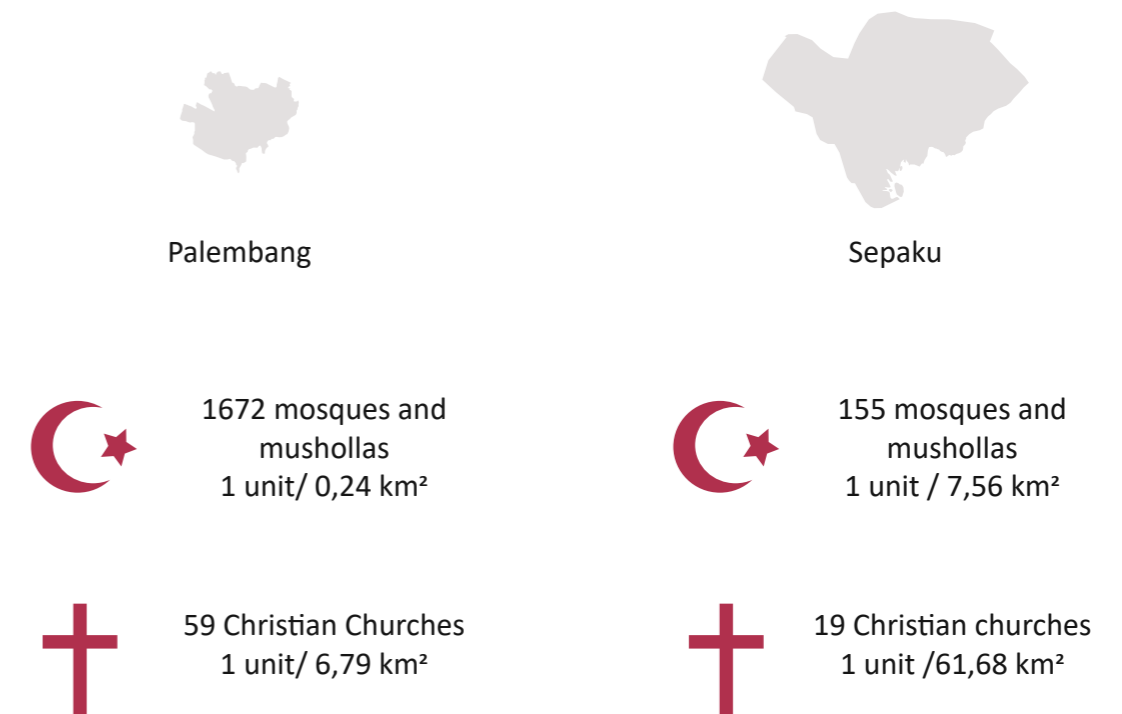
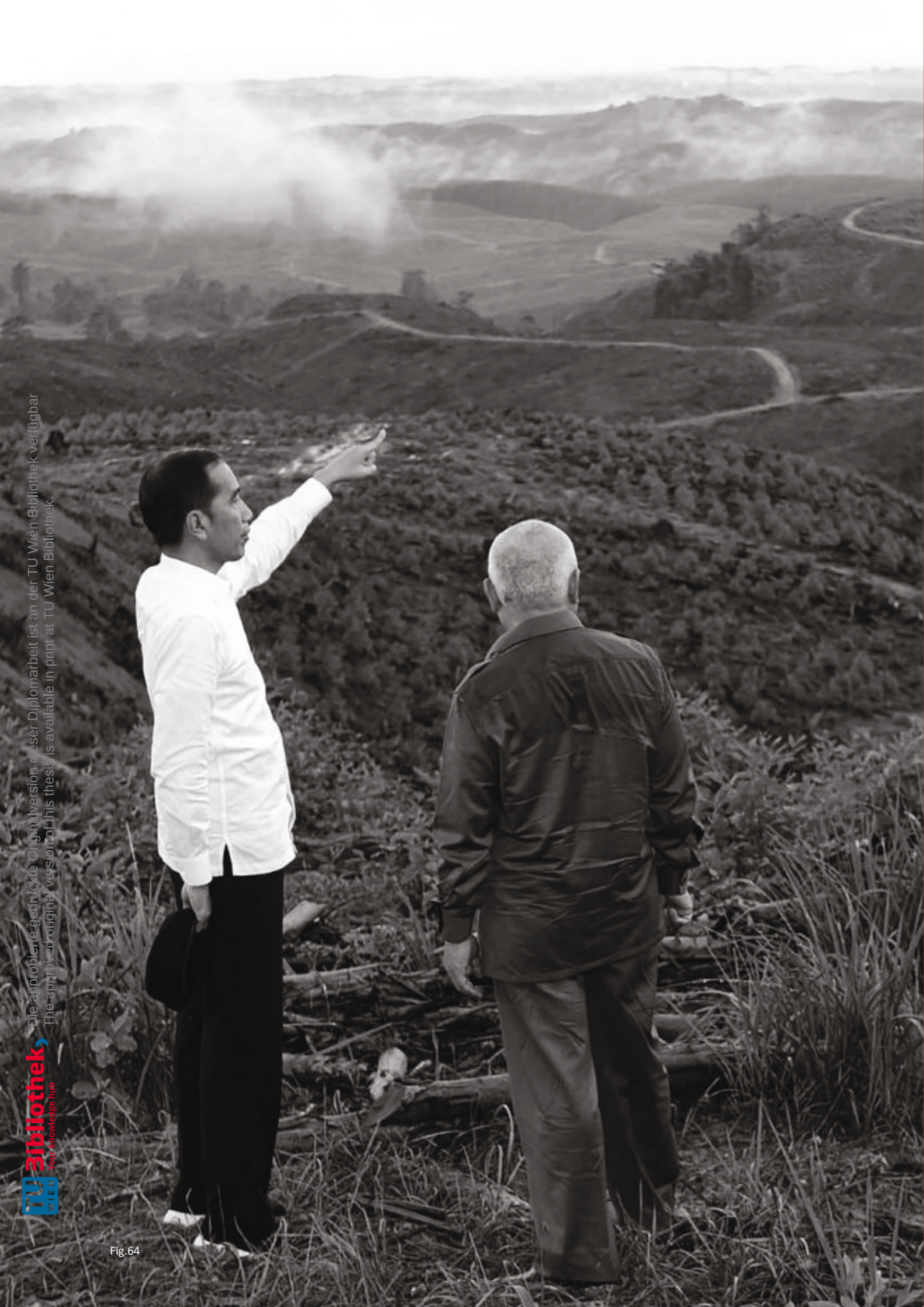


Fig.63 Access to religious facilities in Palembang and Sepaku



Site analysis

Fig. 64

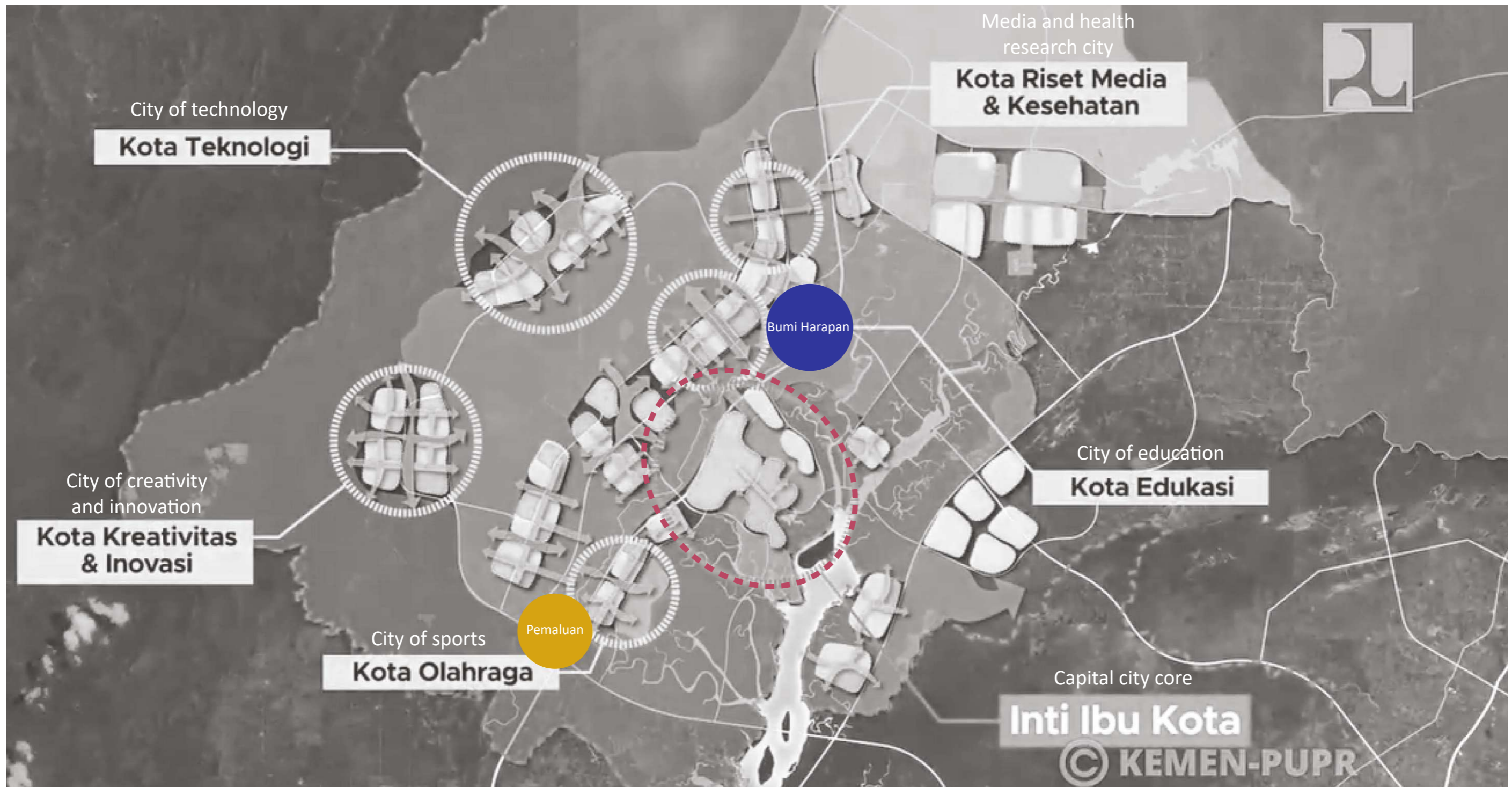


Fig.65 Pemaluan village and Bumi Harapan in the future capital masterplan

Pemaluan



Fig.66 Pemaluan village , plan 1:10000

Bumi Harapan



Fig.67 Bumi Harapan village , plan 1:10000

Village locations

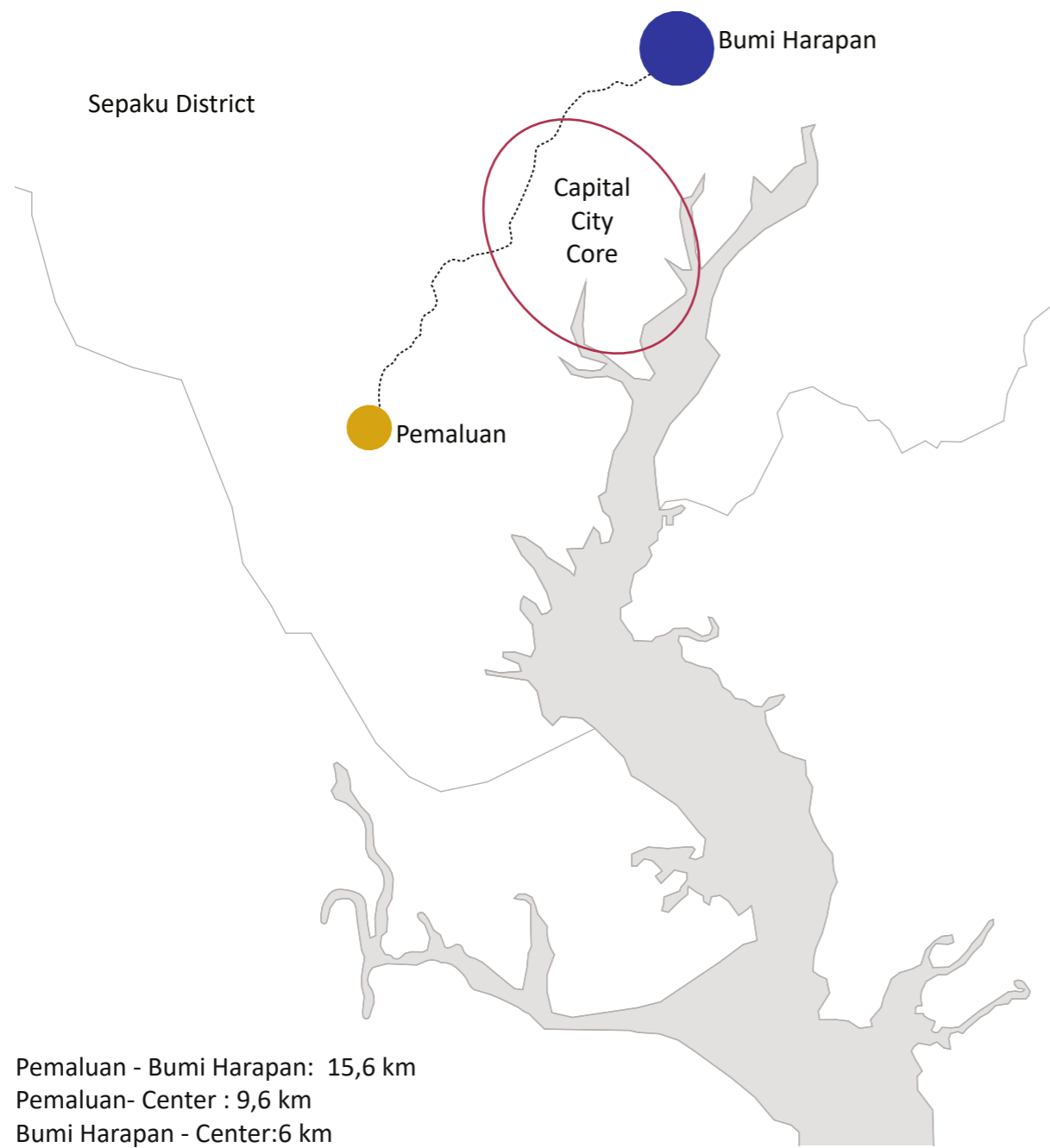


Fig.68 Distances from the new capital city center

Location in the region

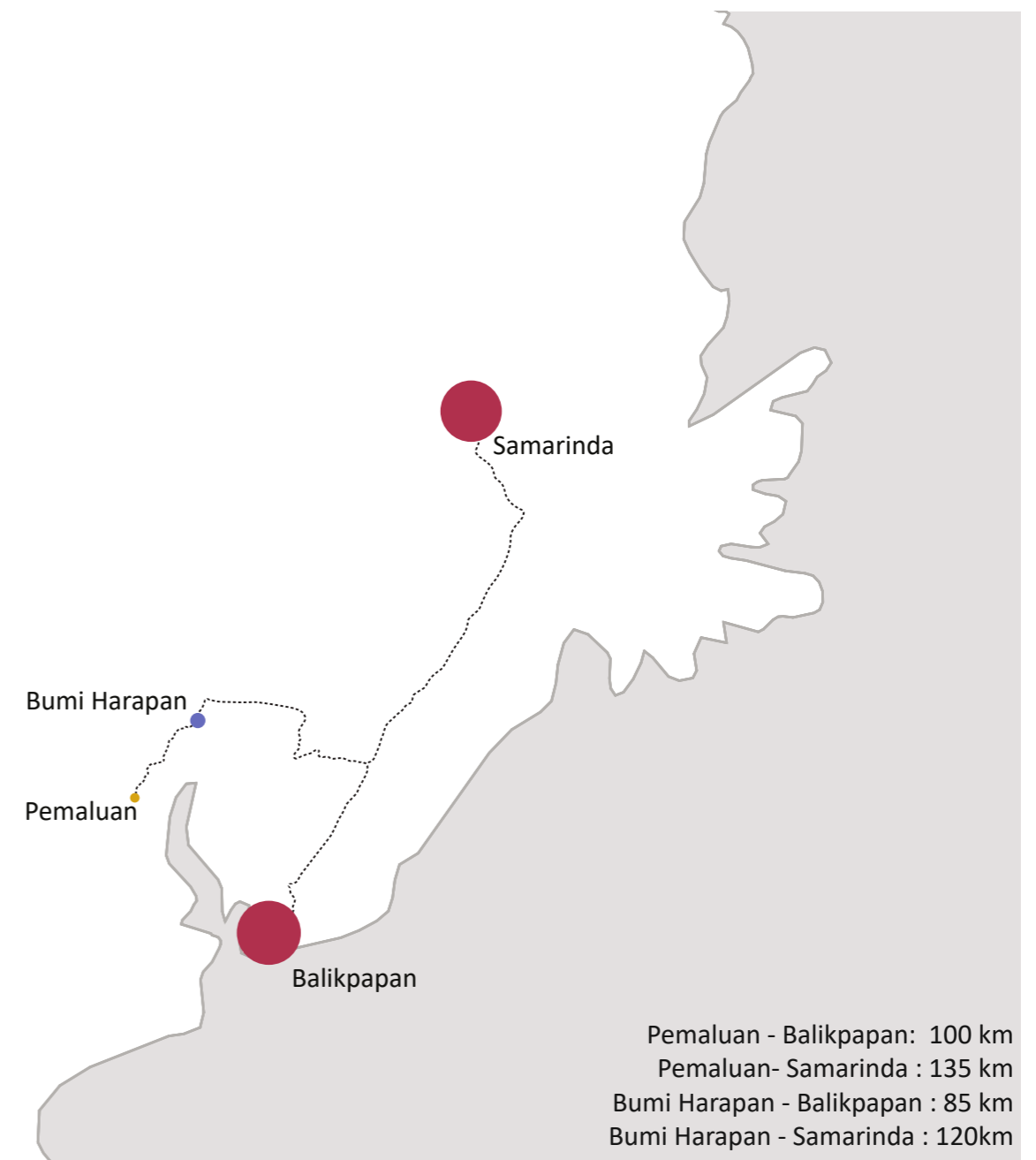


Fig.69 Distances from the neighbouring cities

Pemaluan in pictures



Fig.70 Pemaluan village in the pictures



1 Bugis roof finishing



2 Bugis Roof finishing



3 Small business in groundfloor



4 Bugis roof finishing



5 Presence of verandah



6 Side house extensions



7 Presence of verandah



8 Javanese style mosque



9 Stilt house

Fig.71 Pemaluan village in the pictures

Bumi Harapan in pictures



Fig.72 Bumi Harapan village in the pictures



1 Longhouse



2 Presence of verandah



3 Javanese single sheet roof



4 Javanese style mosque



5 Elementary school



6 Javanese style mosque



7 Workshop in ground floor



8 Presence of verandah



9 Javanese Joglo roof

Fig.73 Bumi Harapan village in the pictures

Pemaluan ethnic presence



DOUBLE ROOF VERANDAH



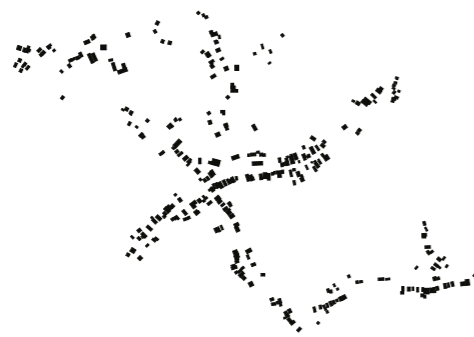
PASIR



JAVANESE MOSQUE



BUGINESE



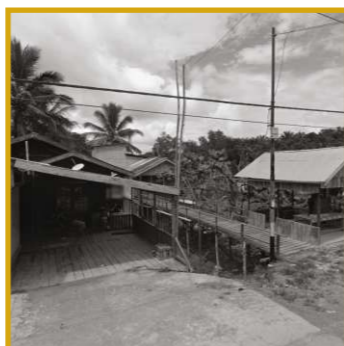
JAVANESE



„BUFFALO HORNS”



BANJARESE



STILTHOUSE TYPOLOGY



JAVANESE JOGLO ROOF



JAVANESE

Bumi Harapan ethnic presence



LONGHOUSE TYPOLOGY



DAYAK

Fig.74 Ethnic presence in Pemaluan Village

Fig.75 Ethnic presence in Bumi Harapan

Pemaluan function distribution

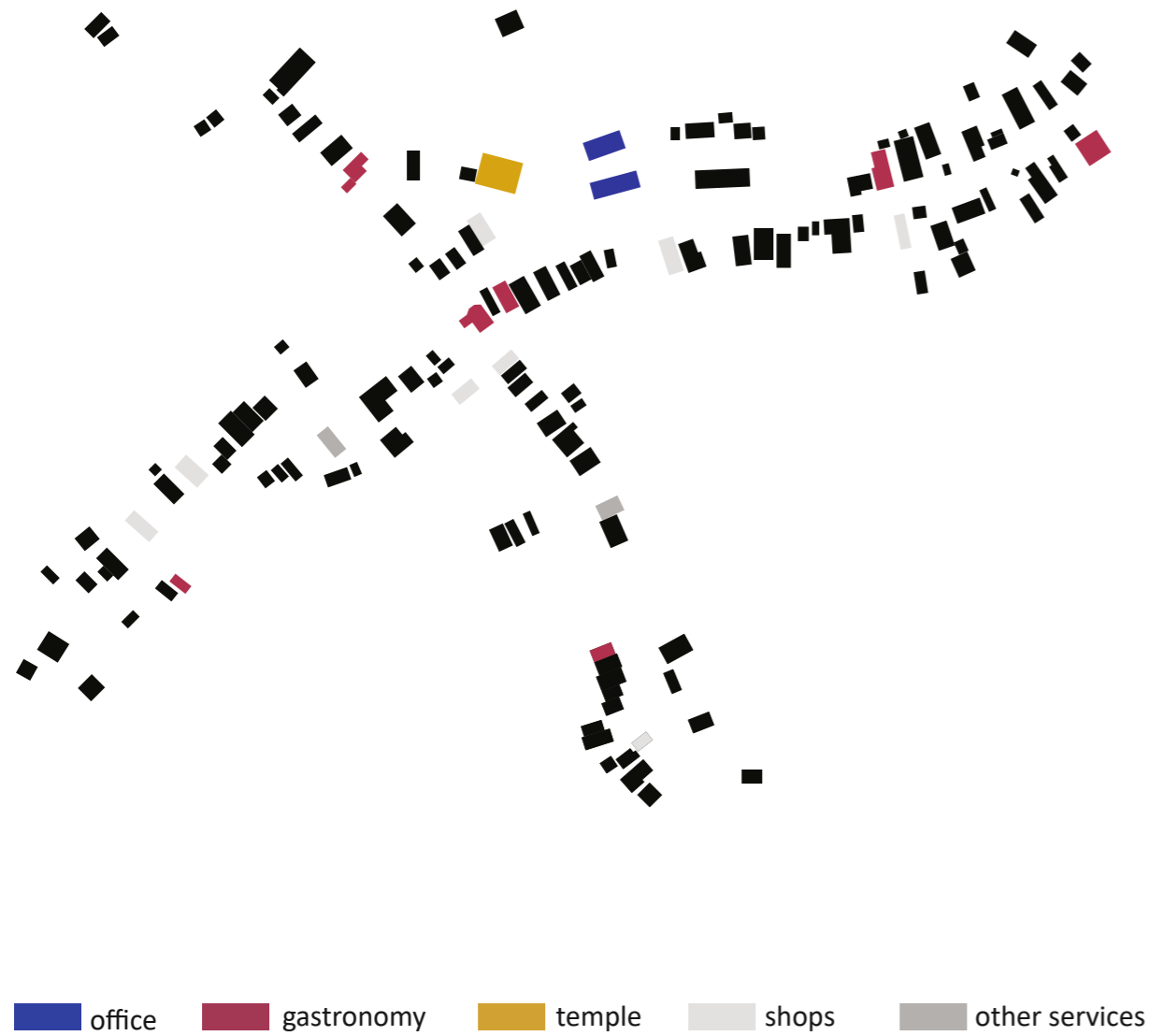


Fig.76 Functions distribution in Pemaluan village

Bumi Harapan function distribution

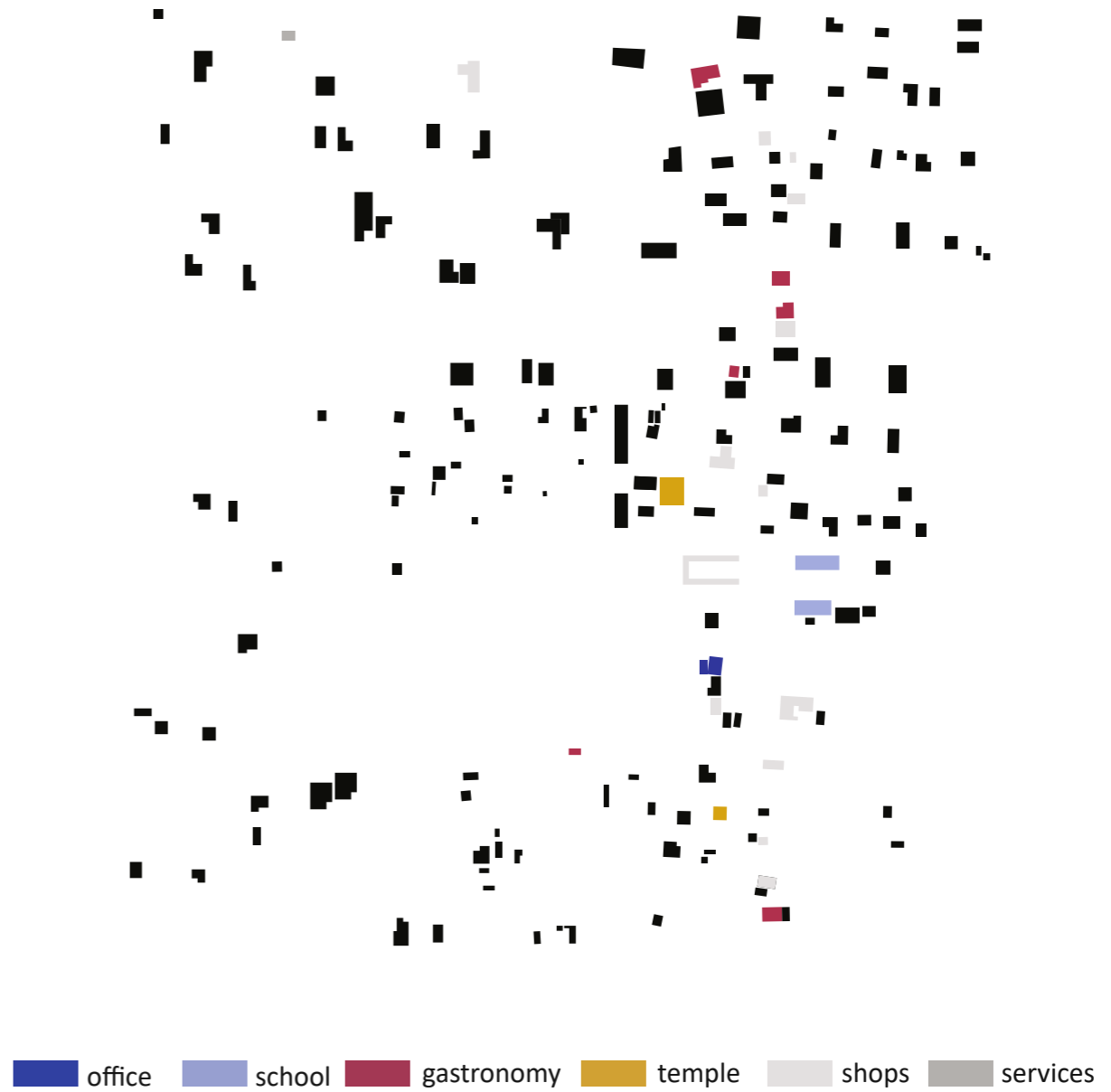


Fig.77 Functions distribution in Bumi Harapan

Conclusion

Having analyzed thoroughly characteristics of the local ethnic groups, their customs, culture, and habits as well as the available information about the winning project of Ibu Kota Negara and the governmental guidelines for the competition it seems clear to me that the local communities are not taken into consideration in the future capital masterplan. The official directive referring to the „identity of the nation” is most visible in the design of the public spaces and landmarks in the center, but not on the level of residential settlements. The target groups of the future capital are public officials and potential entrepreneurs, researchers, or tourists, but not ordinary local people who have been living in East Kalimantan for generations. Hence, the idea of creating an estate that is designed for the locals that are to become future capital citizens. Since the settlement form should be also deeply rooted in the Indonesian culture, kampung was the most intuitive typology to think about. Its most important characteristics such as the informal and organic character could fit well in the structure of existing villages. Additionally, its crucial quality - the intermediate form between the city and the countryside would be a good basis for the locals to adapt to the new environment. Moreover, the traditional kampung values and the community spirit have a lot in common with the culture of the rural communities living in the villages of the Sepaku district. In my view, the kampung environment would help the people of East Kalimantan to settle in in the new mega-city reality. I am sure that using this typology in the context of the new capital would be the right answer to the needs of the local citizens.

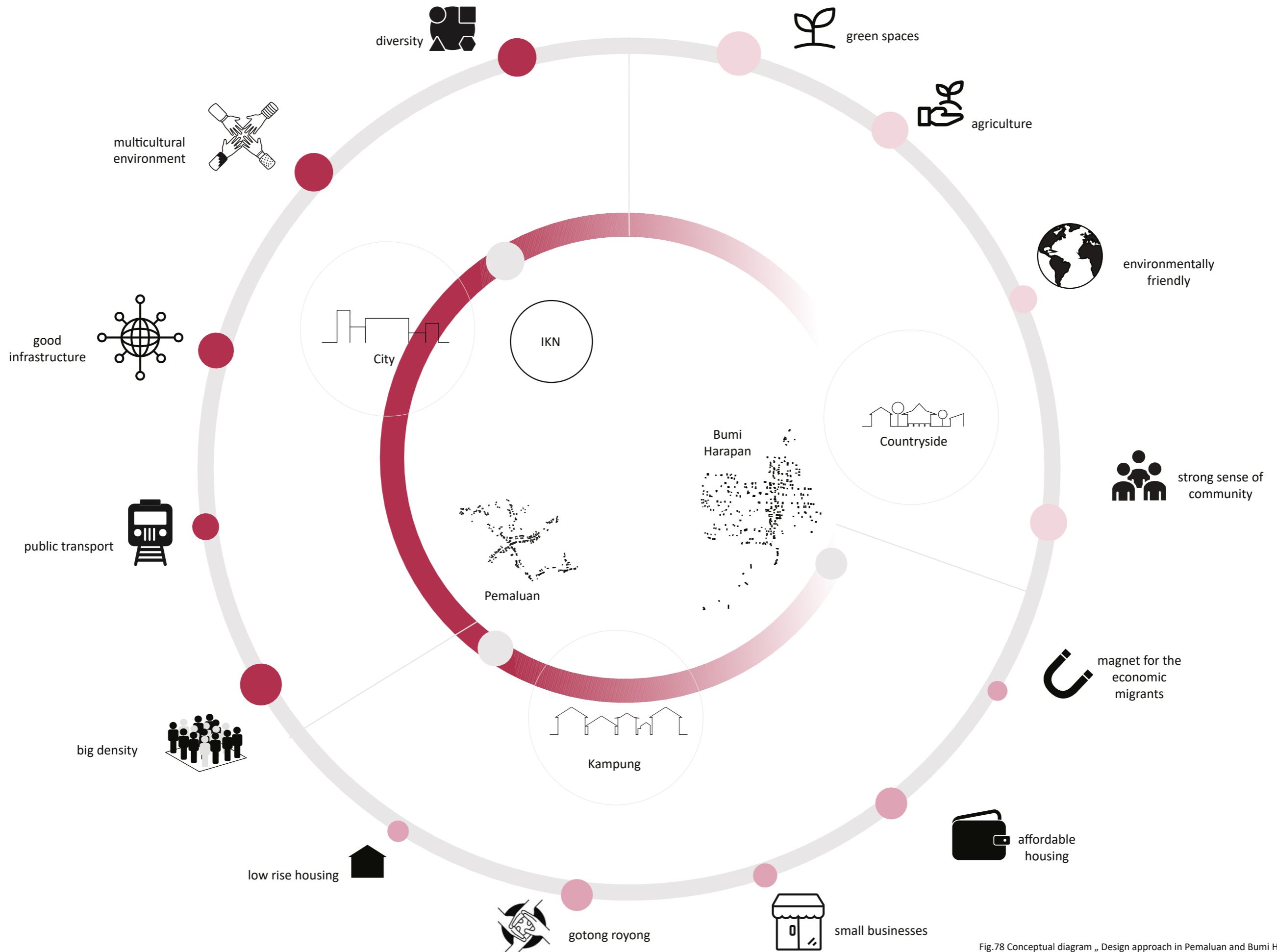


Fig.78 Conceptual diagram „ Design approach in Pemaluan and Bumi Harapan”

Pemaluan

Pemaluan village intervention area

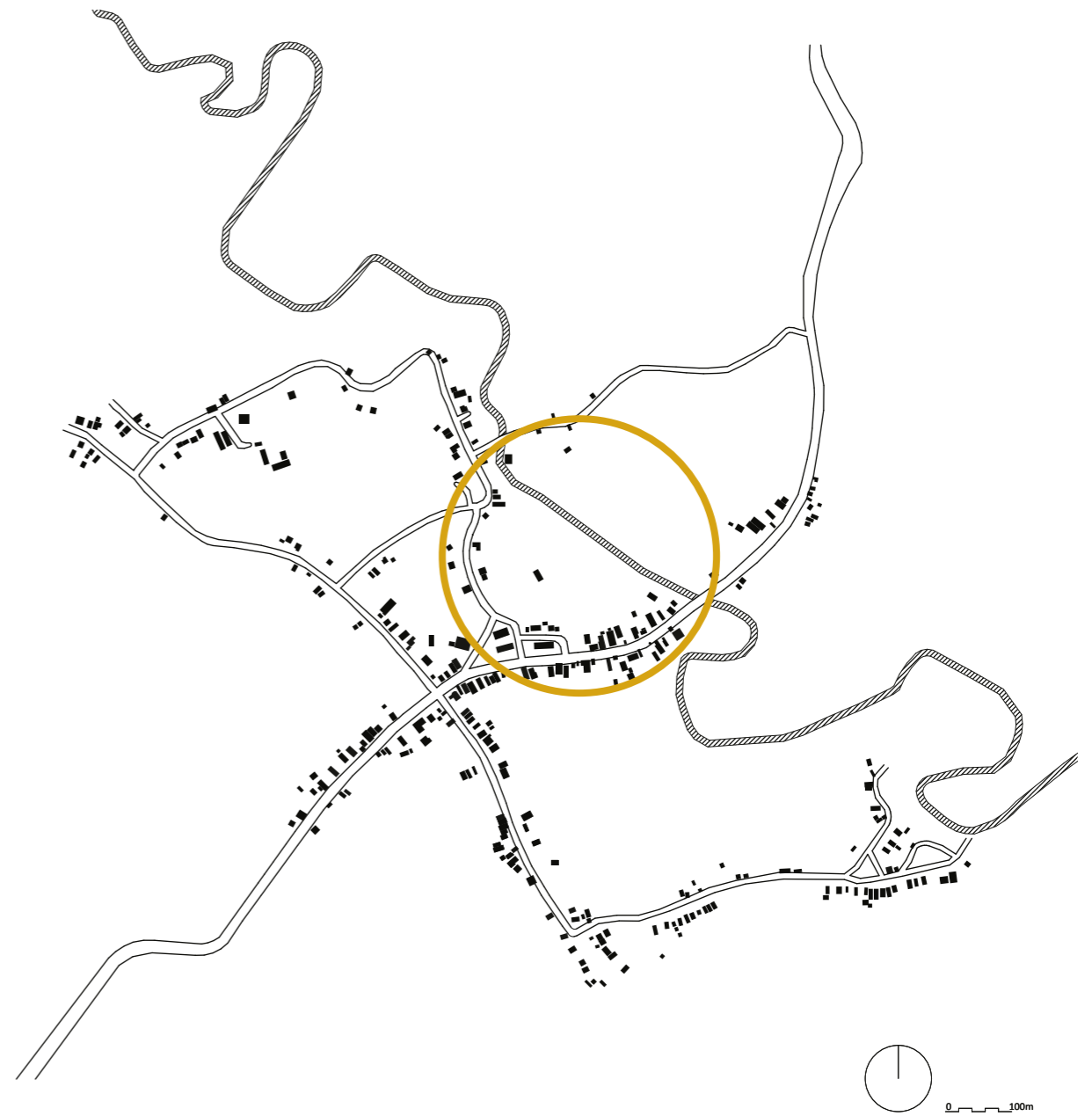


Fig.79 Location of the intervention in Pemaluan village

About the intervention

Due to the clear center with the public institutions and mosque in the middle as well as more heterogeneous ethnic diversity Pemaluan village seemed to be a better place to design dense, more urban kampung while the intervention in Bumi Harapan would be based on the opposite approach. The presence of the existing streets as well as the river gave a good frame for the settlement. The whole kampung structure is based on the grid of clusters that are separated from each other by the alleys. The network of main streets is directly connected to the public green spaces. Additionally, all the necessary infrastructure is also located along the main circulation routes. The settlement is designed strictly for pedestrians, with parking lots for the cars and scooters on the kampung borders. Moreover, a pedestrian promenade is planned on the riverbank. The main target groups for this settlement are Javanese, Buginese, Banjarese, and the Pasir. Based on their traditional architecture several house types have been designed to accommodate all ethnic groups. As the houses are rather compact and are used mostly as a sleeping spaces most of the family and community life is supposed to happen outdoors. Hence, various facilities such as sports facilities, green spaces, study spaces, prayer rooms, and childcare are a part of the plan. Additionally, I tried to create all the necessary institutions such as community center, youth center, musholla, etc which are crucial for the functioning of the kampung. I aimed to create a dense, but green, human-scale oriented, and vibrant neighborhood that could become a part of the future capital in the next decades.

Kampung cluster system



The settlement's structure is based on a grid of clusters. Each of the clusters consists of four to five households that share a common kitchen and common garden. Every block has dimensions of 9x9 m and the alleys between them are 1,5m wide. The clusters are shared between the ethnic groups to avoid the creation of closed homogenous neighborhoods.

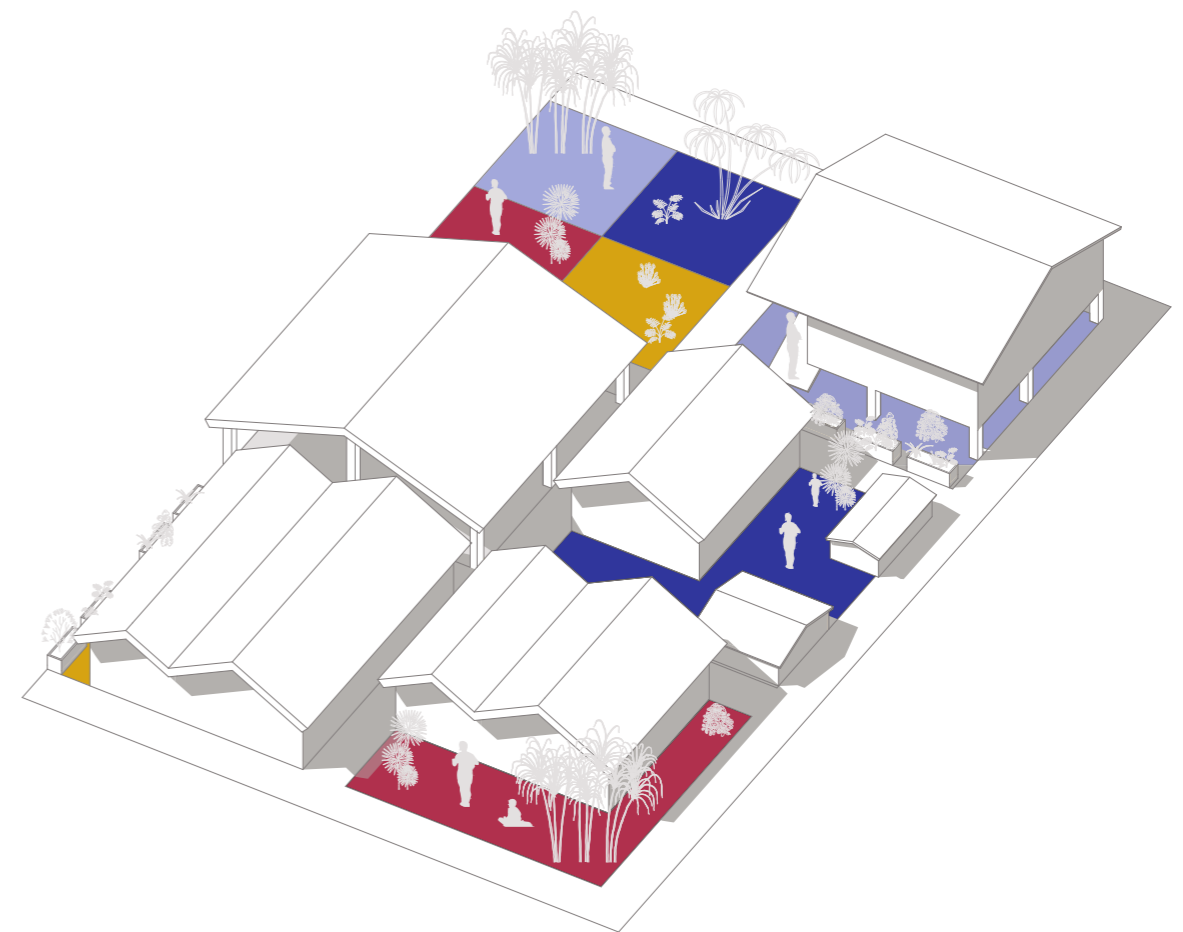


Fig.80 Basic cluster conceptual diagram

Exemplary Javanese House

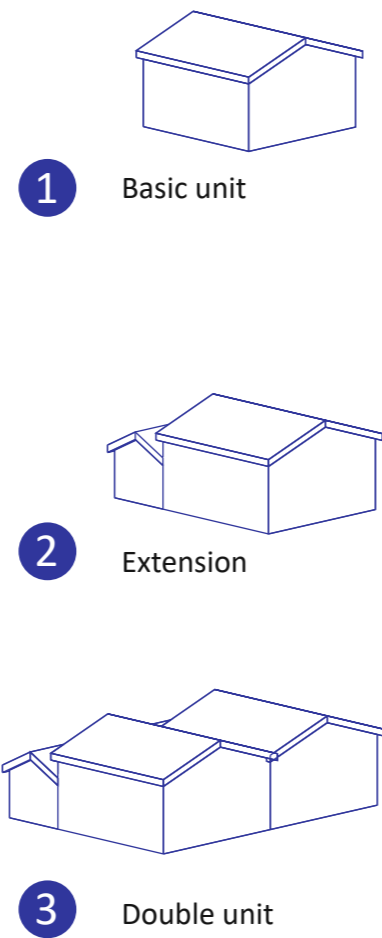
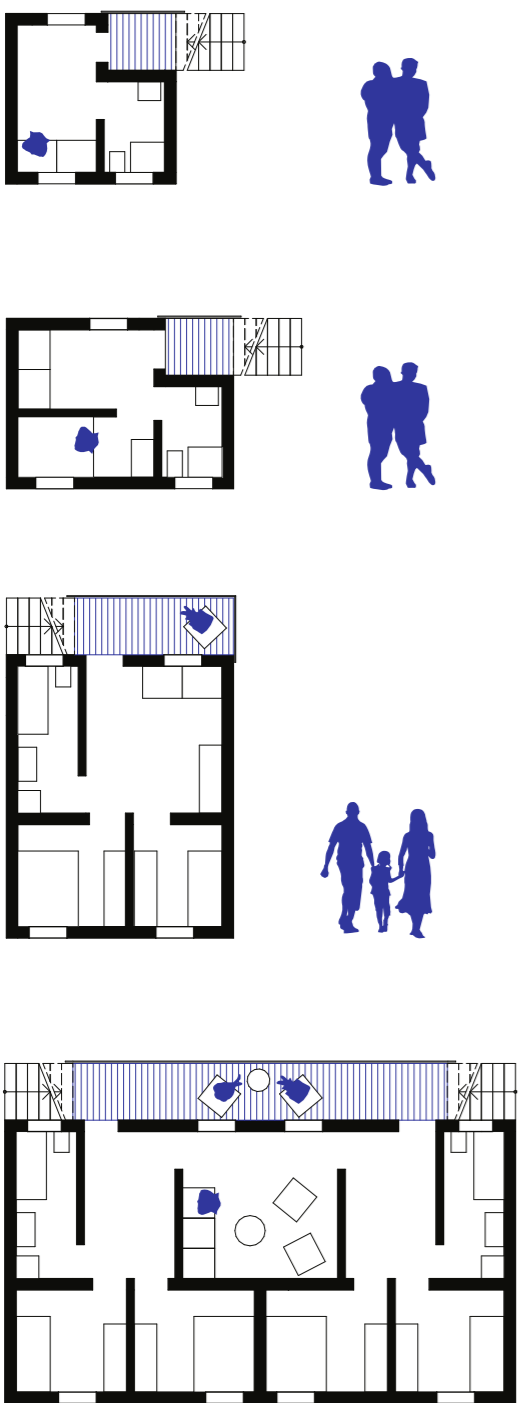
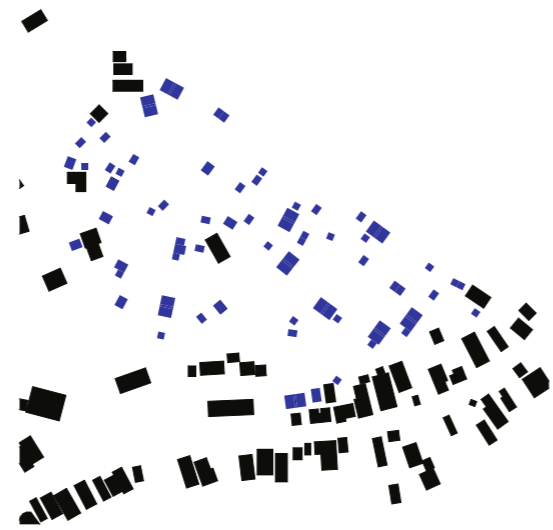


Fig.81 Exemplary Javanese Houses, plan 1:200

Exemplary Bugis House

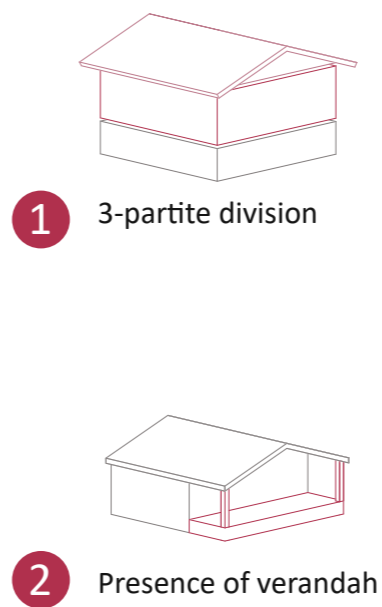
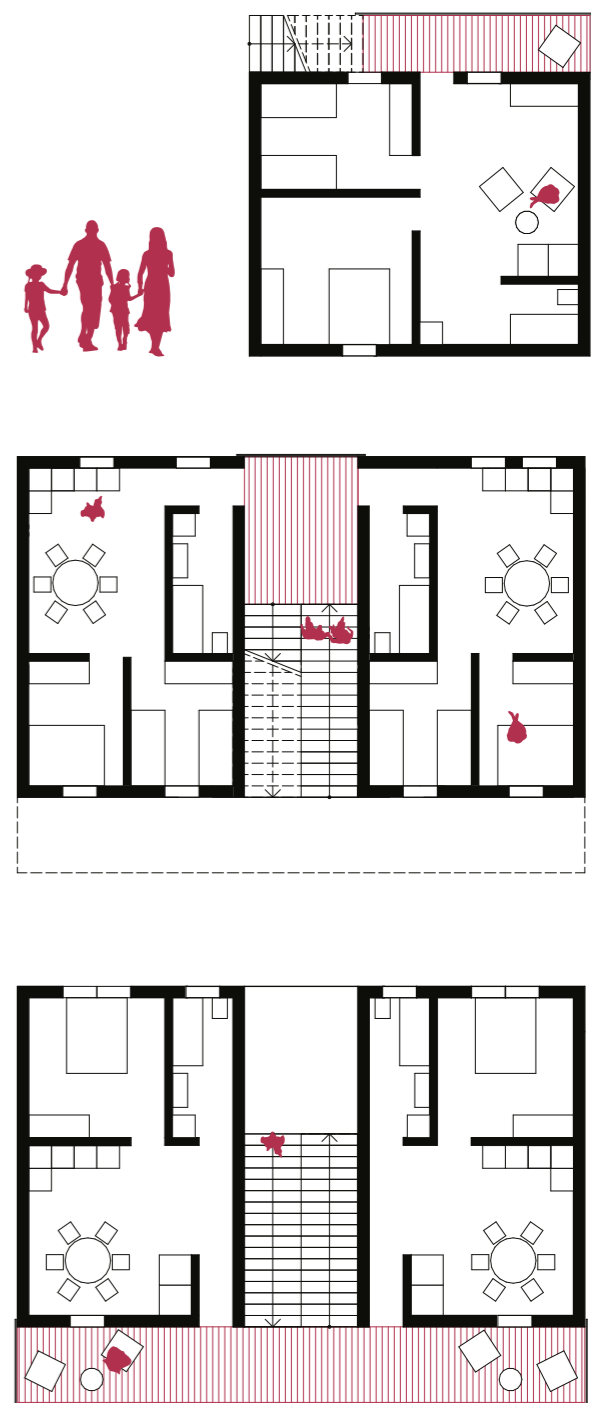
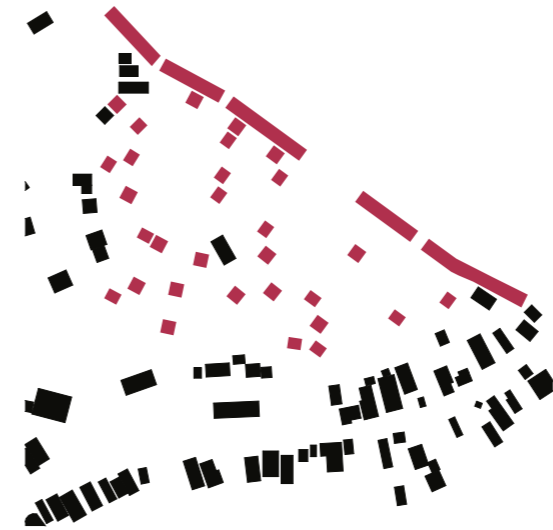
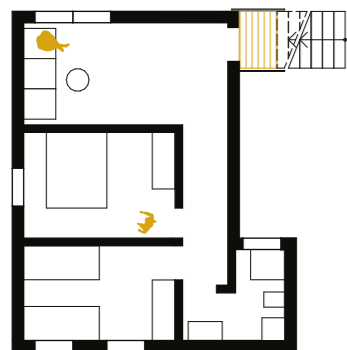
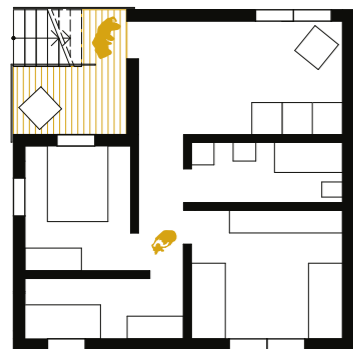
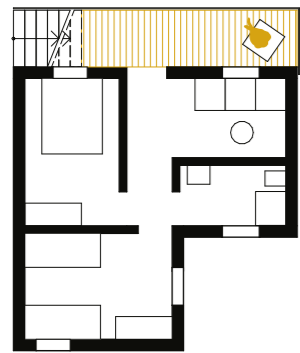


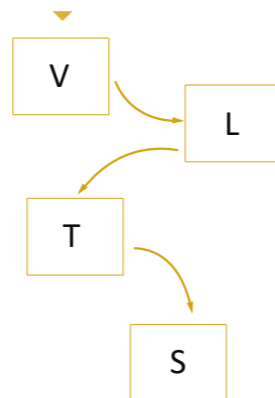
Fig.82 Exemplary Buginese Houses, plan 1:200

Exemplary Banjarese House

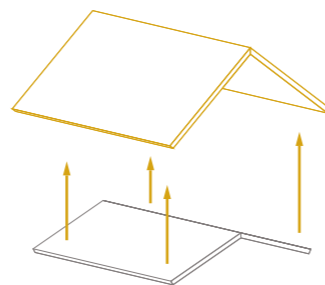


- V erandah
- L iving
- T ransit
- S leeping

1 Traditional division

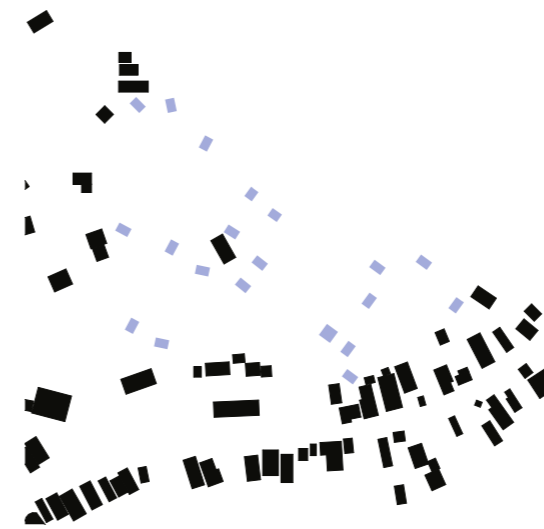
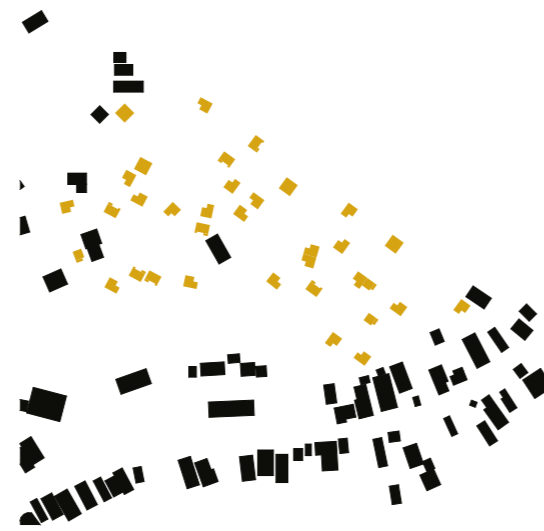


2 Similar system

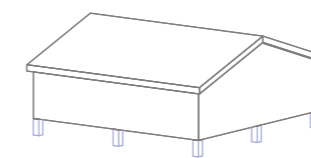
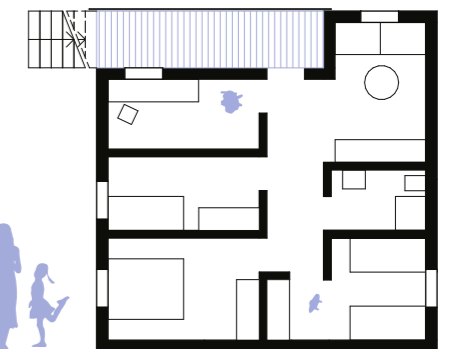
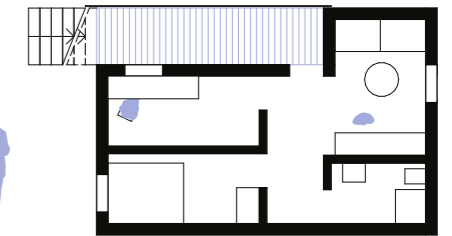


3 Steep roof

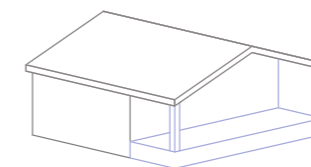
Fig.83 Exemplary Banjarese Houses, plan 1:200



Exemplary Pasir House



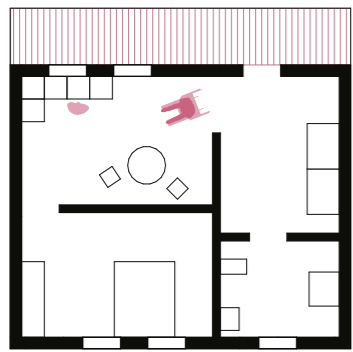
1 Stilt house



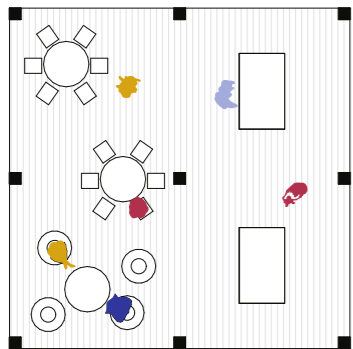
2 Presence of verandah

Fig.84 Exemplary Pasir Houses, plan 1:200

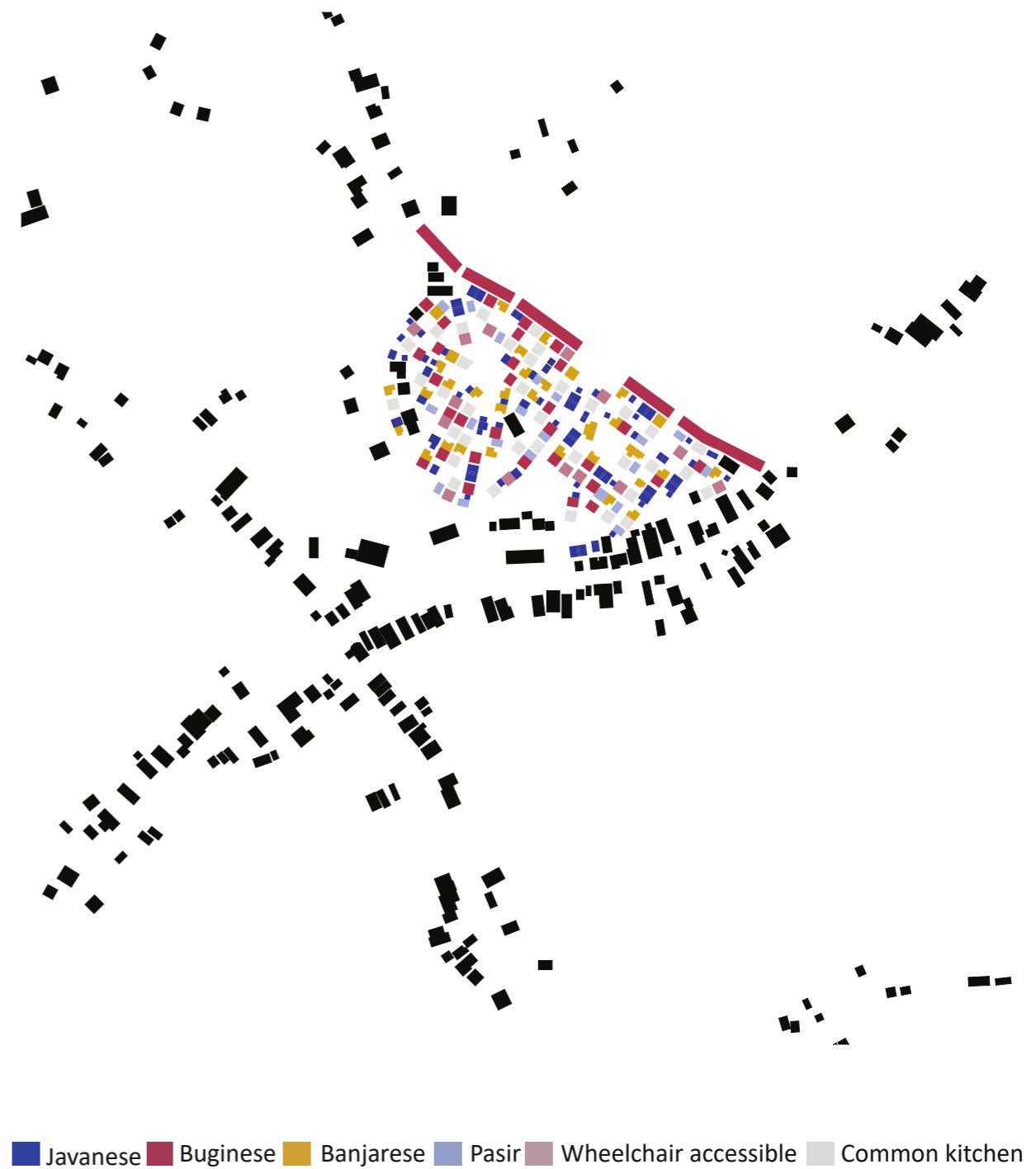
Wheelchair-accessible House



Common kitchen



Ethnic groups presence



■ Javanese
 ■ Buginese
 ■ Banjarese
 ■ Pasir
 ■ Wheelchair accessible
 ■ Common kitchen

Fig.85 Wheelchair accessible House and Common kitchen, plan 1:200

Fig.86 Ethnic groups presence in the intervention

Exemplary cluster plan



Fig.87 Exemplary cluster plan 1:200

Exemplary cluster axonometric view

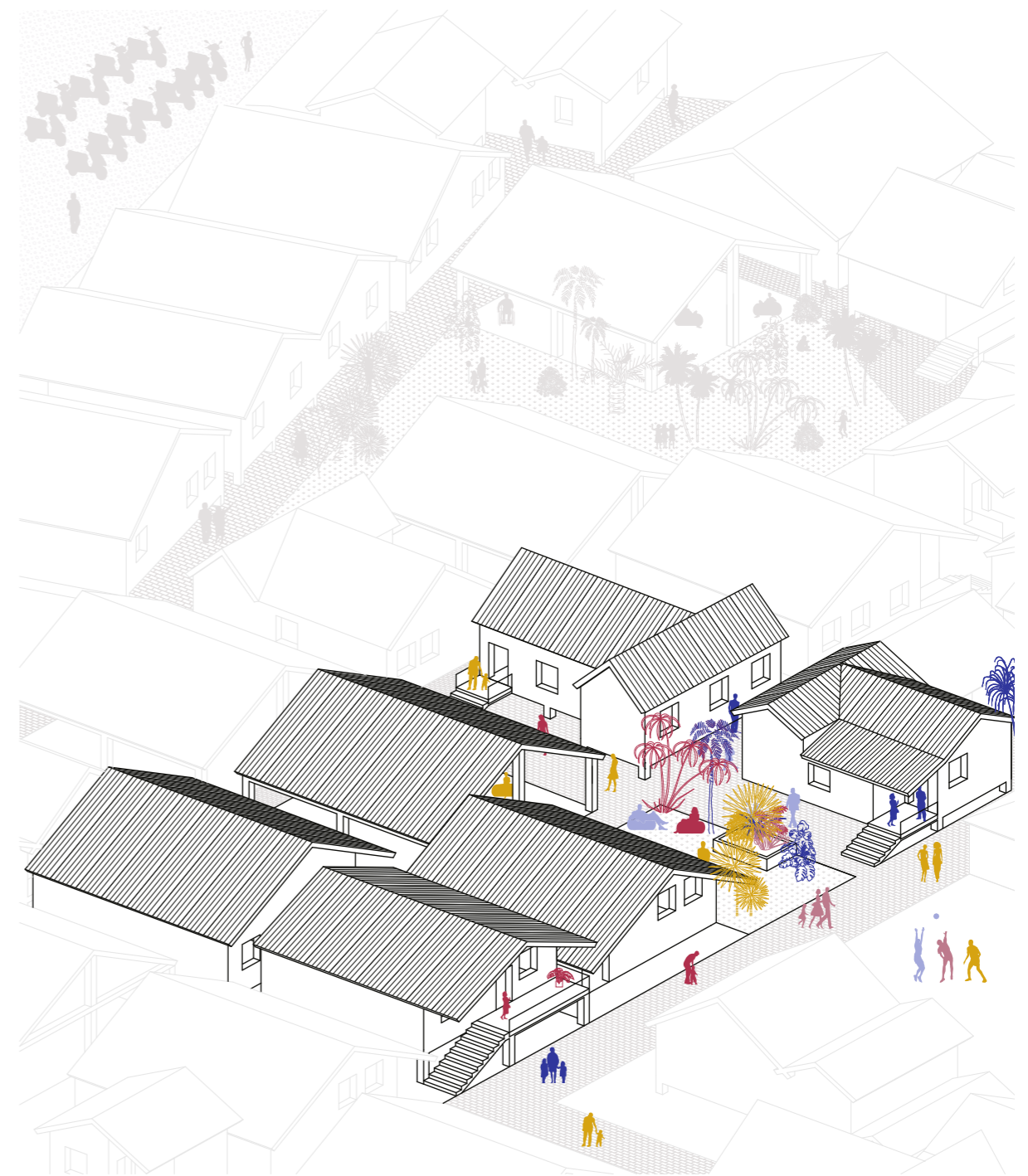


Fig.88 Exemplary cluster axonometric view

Schematic section riverbank

The presence of the river passing through the village offers an opportunity to create a promenade with service spaces and gastronomy along the bank. Moreover, three-storey residential buildings provide necessary shadow for the pedestrians and the locals resting in front of the water as well as a sort of noise barrier for the residents of the internal part of the kampung.

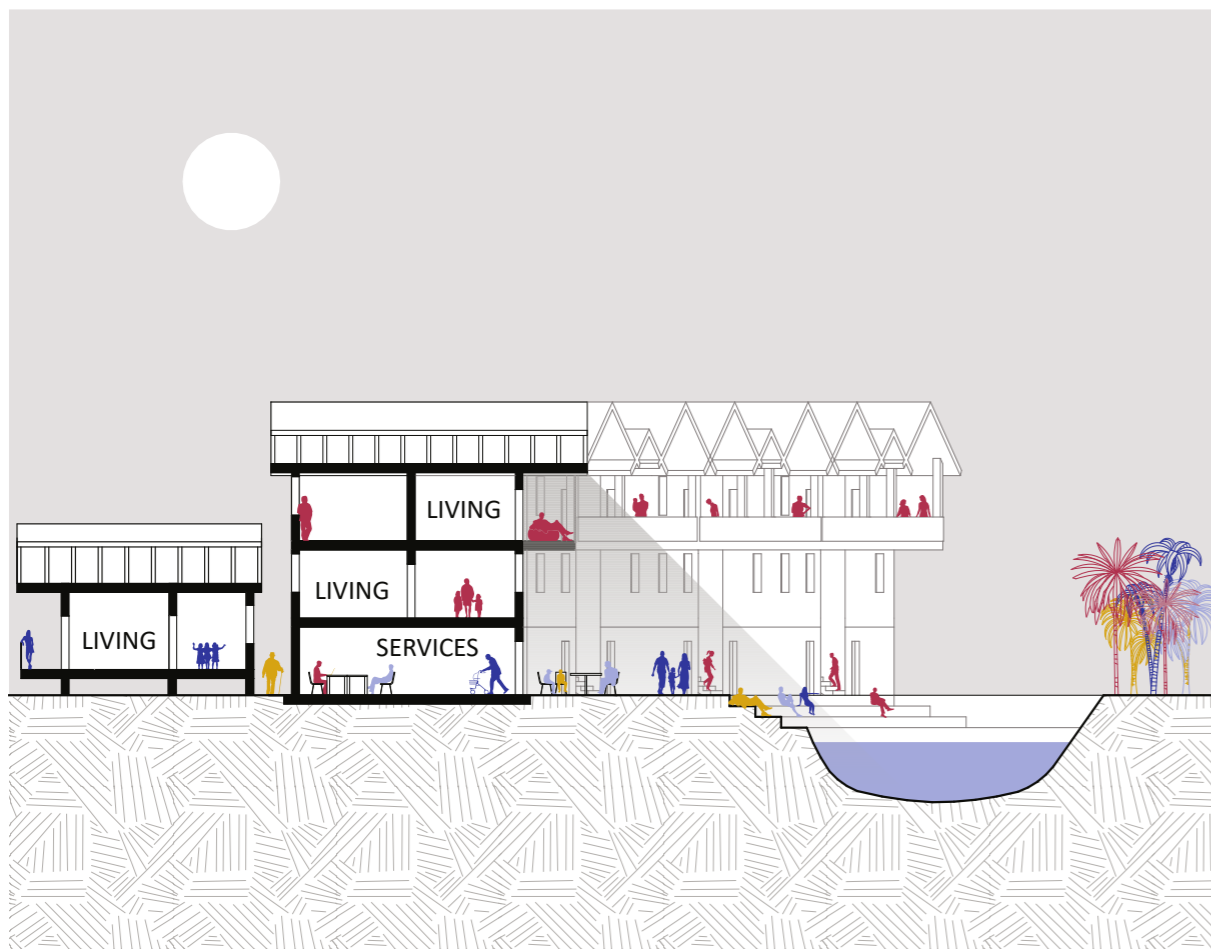


Fig.89 Schematic section of the kampung by the river

Network of streets and clusters

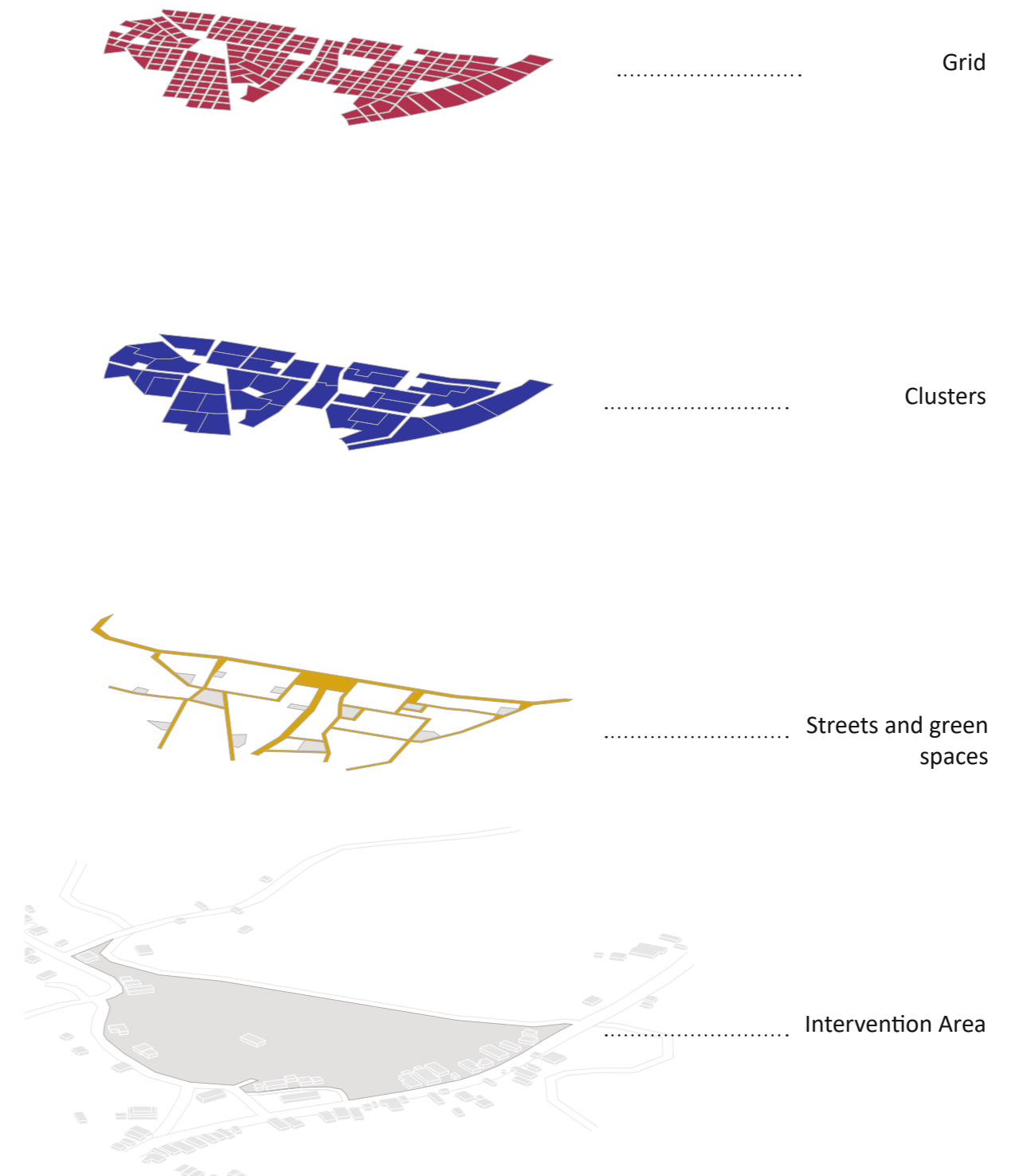
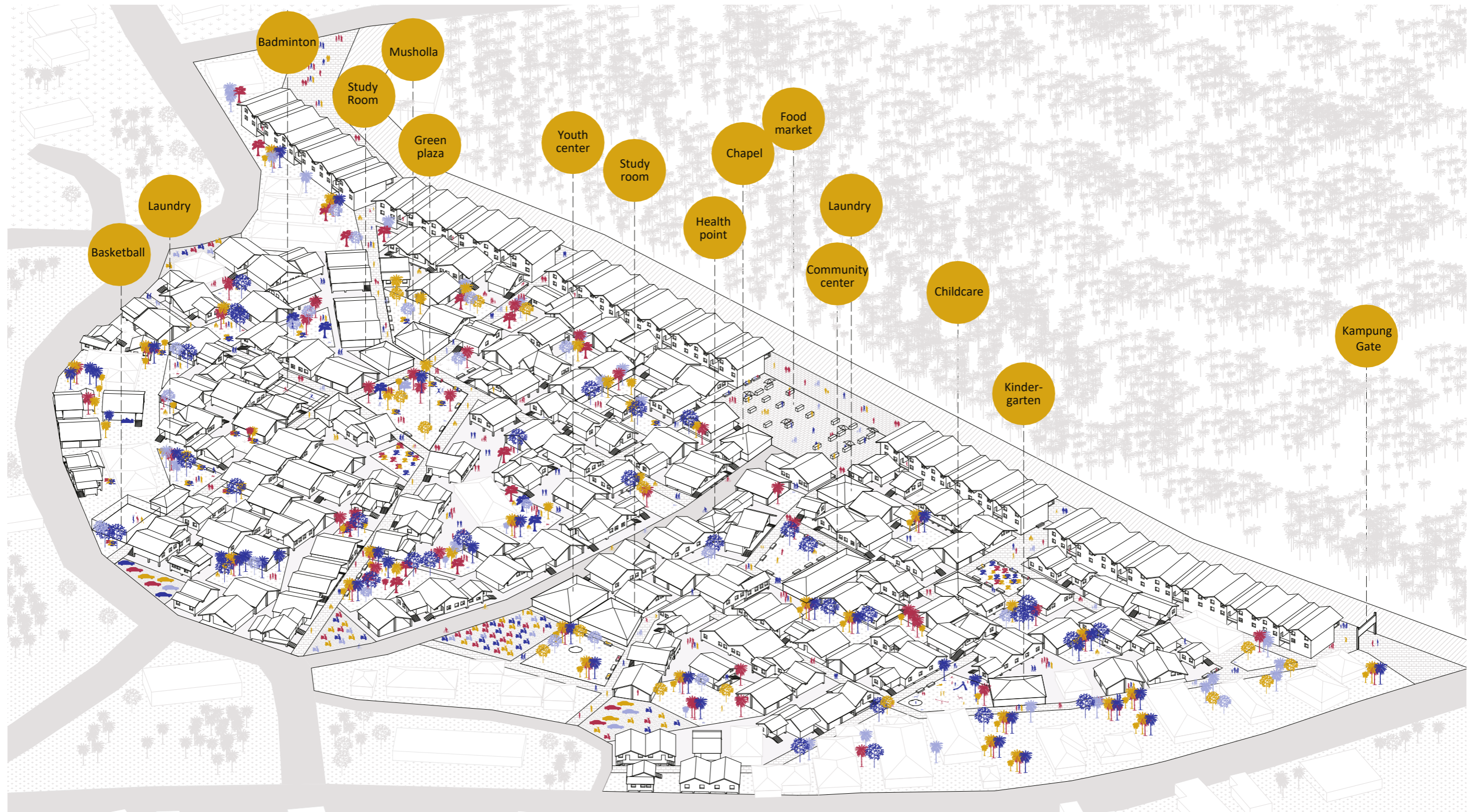


Fig.90 Network of streets and clusters in the kampung

New kampung in Pemaluan



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The approved original version of this thesis is available in print at TU Wien Bibliothek.

Living in the alleys



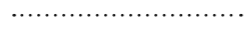
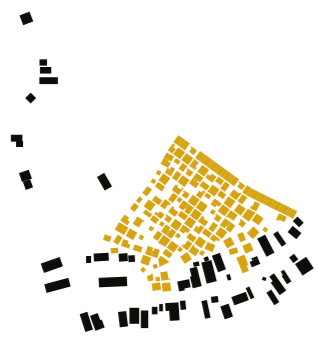
Fig.92 Living in the alleys, perspective view

Green oasis

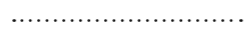


Fig.93 Green oasis, perspective view

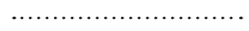
How it developed



Small intervention area



Larger intervention



More flexible final
intervention

Fig.94 Project development

Plan with the new kampung



Fig.95 Pemaluan village with the kampung intervention, plan 1:10000

Bumi Harapan

Bumi Harapan intervention area

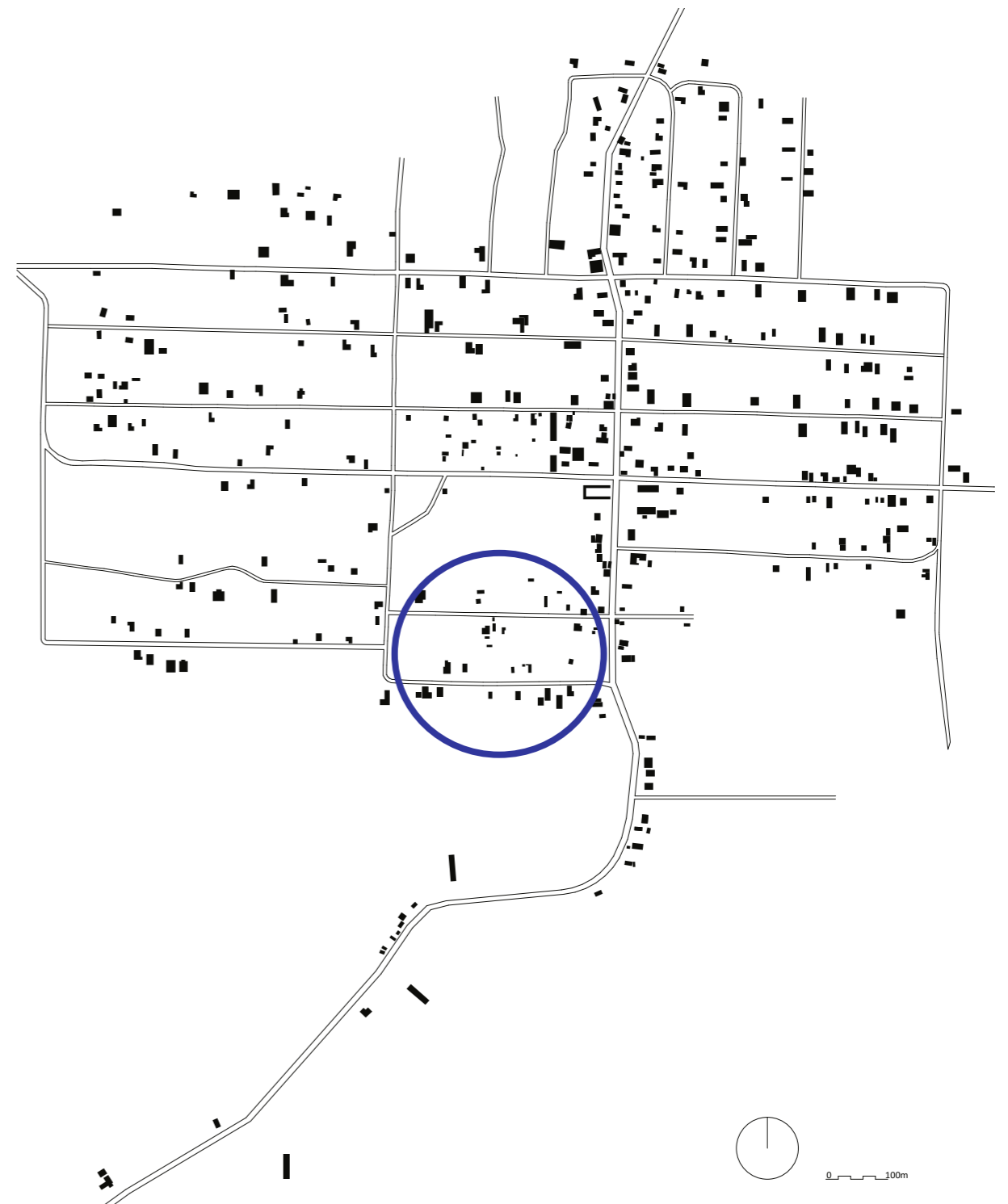


Fig.96 Location of the intervention in Bumi Harapan

About the intervention

The intervention in Bumi Harapan aimed to create a settlement for the Dayak ethnic group. Due to their importance in the region of Kalimantan as well as examples of longhouses in the aerial pictures of the village I decided that the focus of this district will be the longhouse typology. As the structure of Bumi Harapan is based on longitudinal blocks, Dayak houses fit well in the surrounding. The inspiration for the settlement's structure was the painting by Theo van Doesburg called "Rhythm of a Russian Dance". Based on the research about the longhouse typology as well as the painting five types of longhouses have been designed. The smallest longhouse unit consists of just two apartments, while the biggest one can accommodate up to 8 families. In each of the buildings, every two apartments share a loggia. Ideally, it is shared between the tilung (stem family) members, who become direct neighbors. Additionally, covered community rooms are available for all the residents of the house. The house is elevated by one meter and accessible by the ramp (wheelchair accessible). In this way, each of the apartments gets a bit of privacy and the traditional stilt house is reinterpreted. Moreover, Dayak heritage, as well as the lifestyle, were also considered in the project. Since most of the tribe members are farmers, private gardens have been placed in the direct vicinity of their homes. Depending on the size of the longhouse, the area of the garden differs (each of the households gets around 200m²). Big agricultural fields are kept out of the settlement, within the distance of 5km. Additionally, the settlement has a lot of facilities such as a hostel with gastronomic points and sports infrastructure with badminton and basketball court in the center of the neighborhood. Moreover, the Dayak cultural center located in the longhouse by the street should work as a magnet for tourists. Finally, mandatory features such as the settlement gate as well as the church and market space are also a part of the plan.

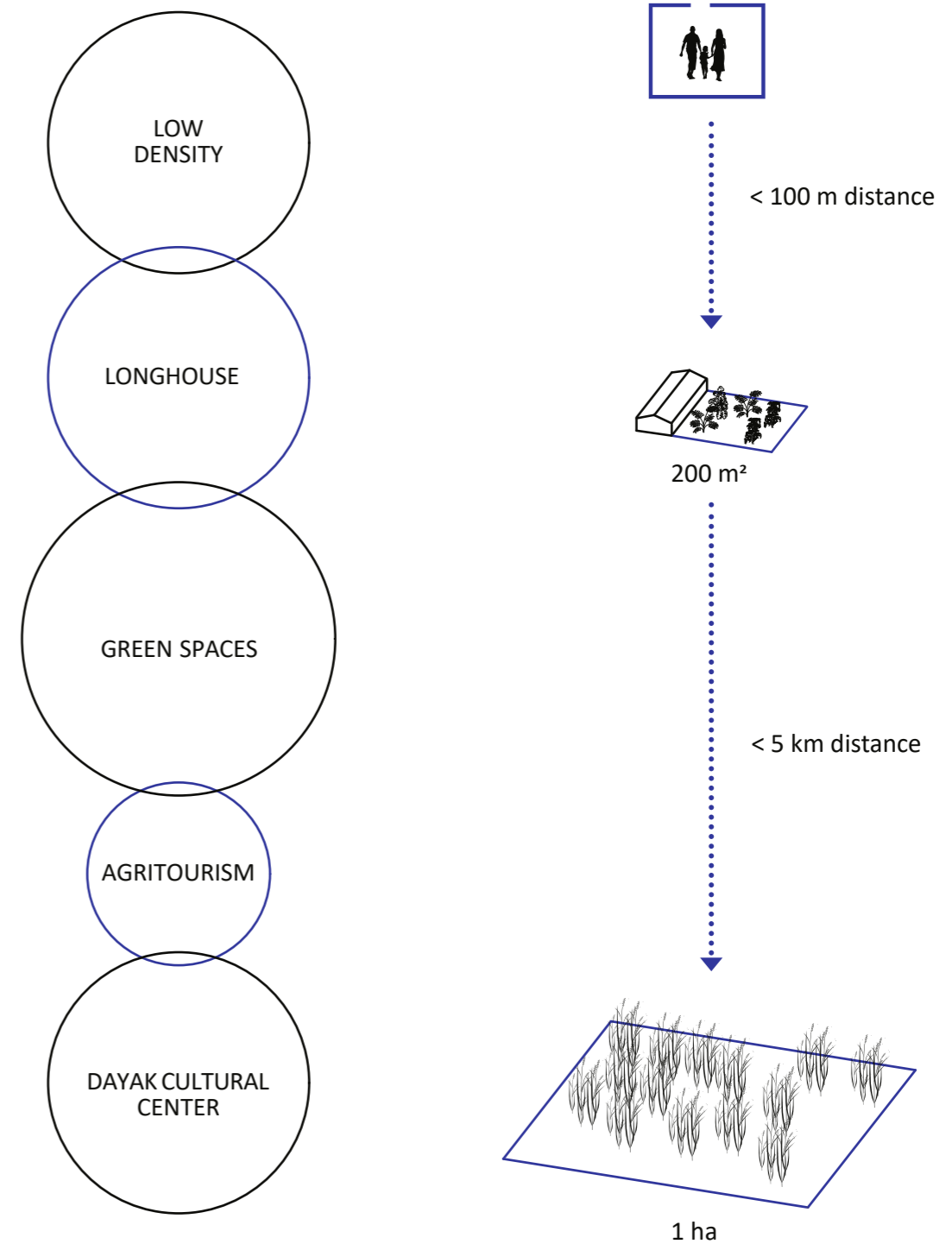


Fig.97 Bumi Harapan - conceptual diagram

Project inspration

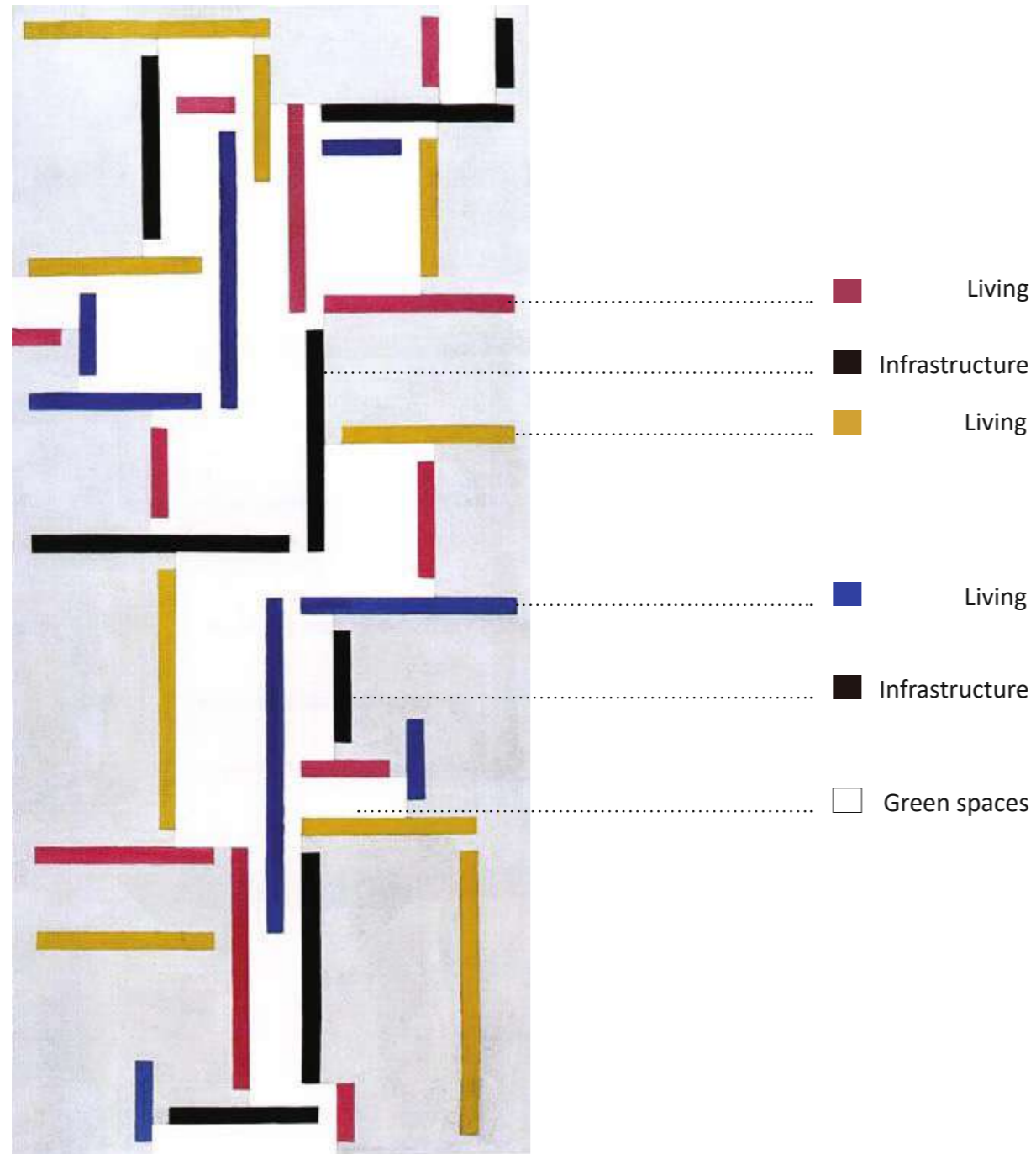


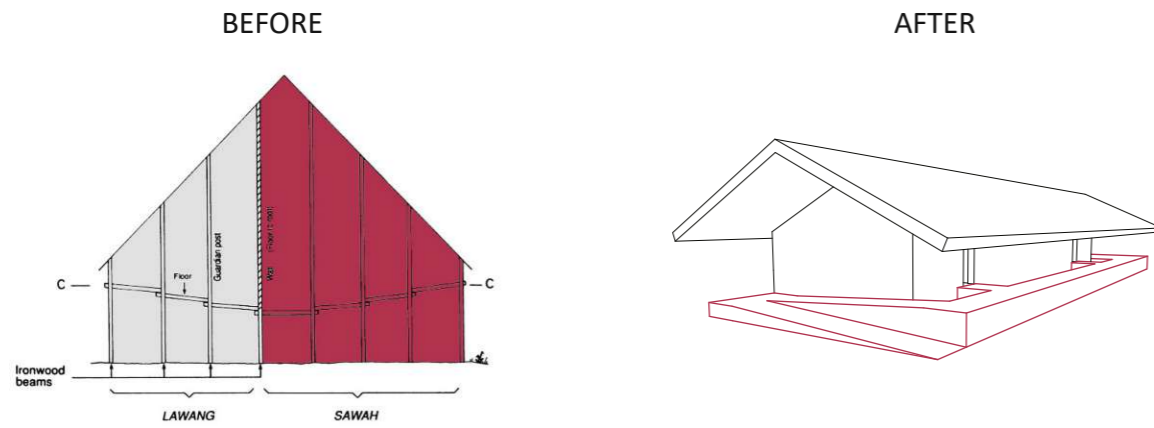
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Plan of the new settlement

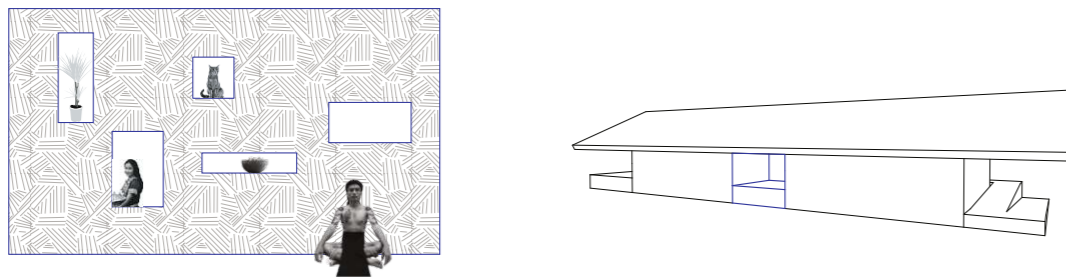


Fig.99 New settlement conceptual diagram

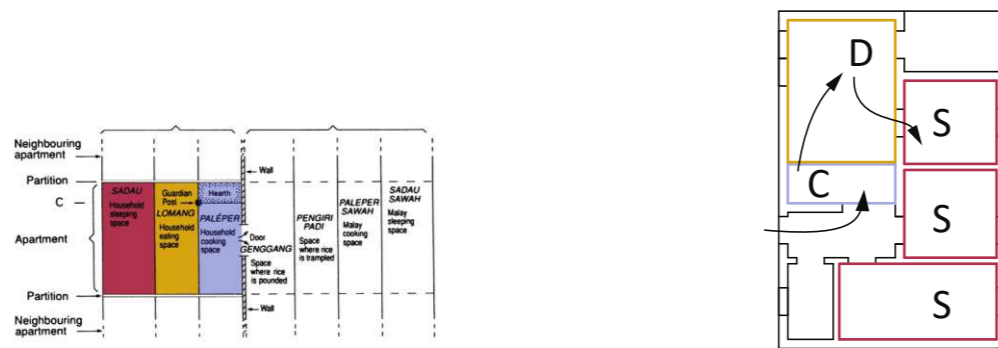
Longhouse typology - concept



- 1 Original gallery is transformed into external corridor



- 2 Original wall is transformed into shared loggia



- 3 Original space division is reinterpreted

Longhouse types

Number of persons per unit

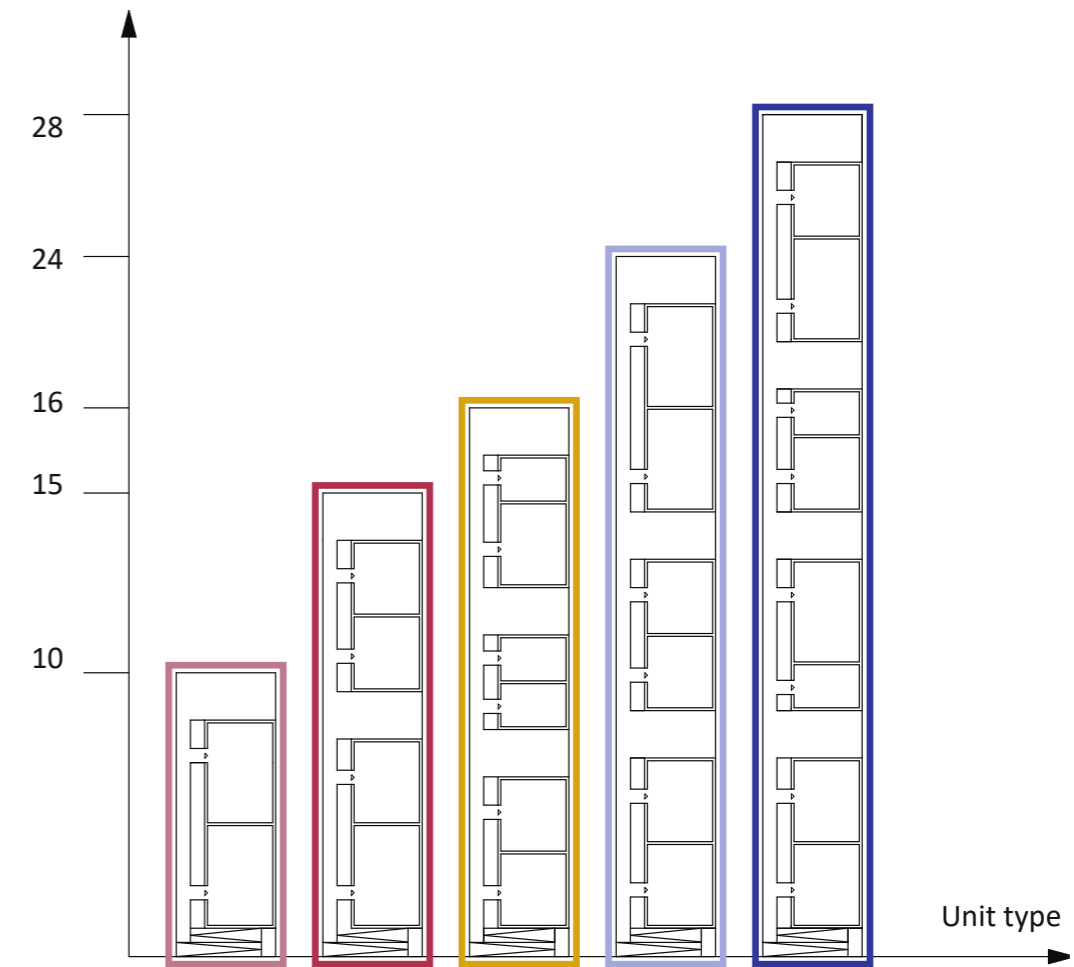


Fig.100 Longhouse typology, conceptual diagram

Fig.101 Longhouse types

Exploded axonometric view

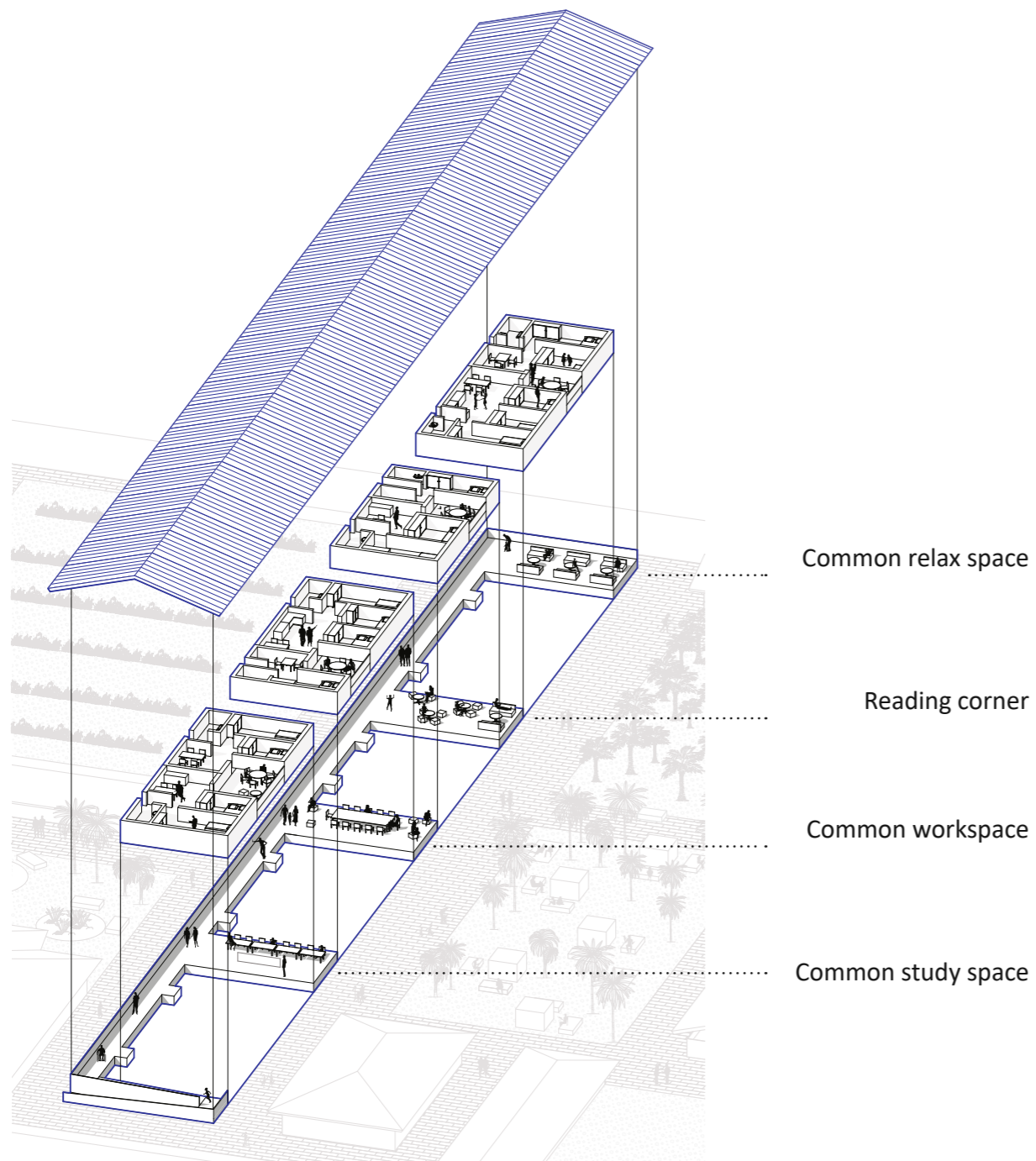


Fig.102 Longhouse axonometric view

Network of streets and green spaces

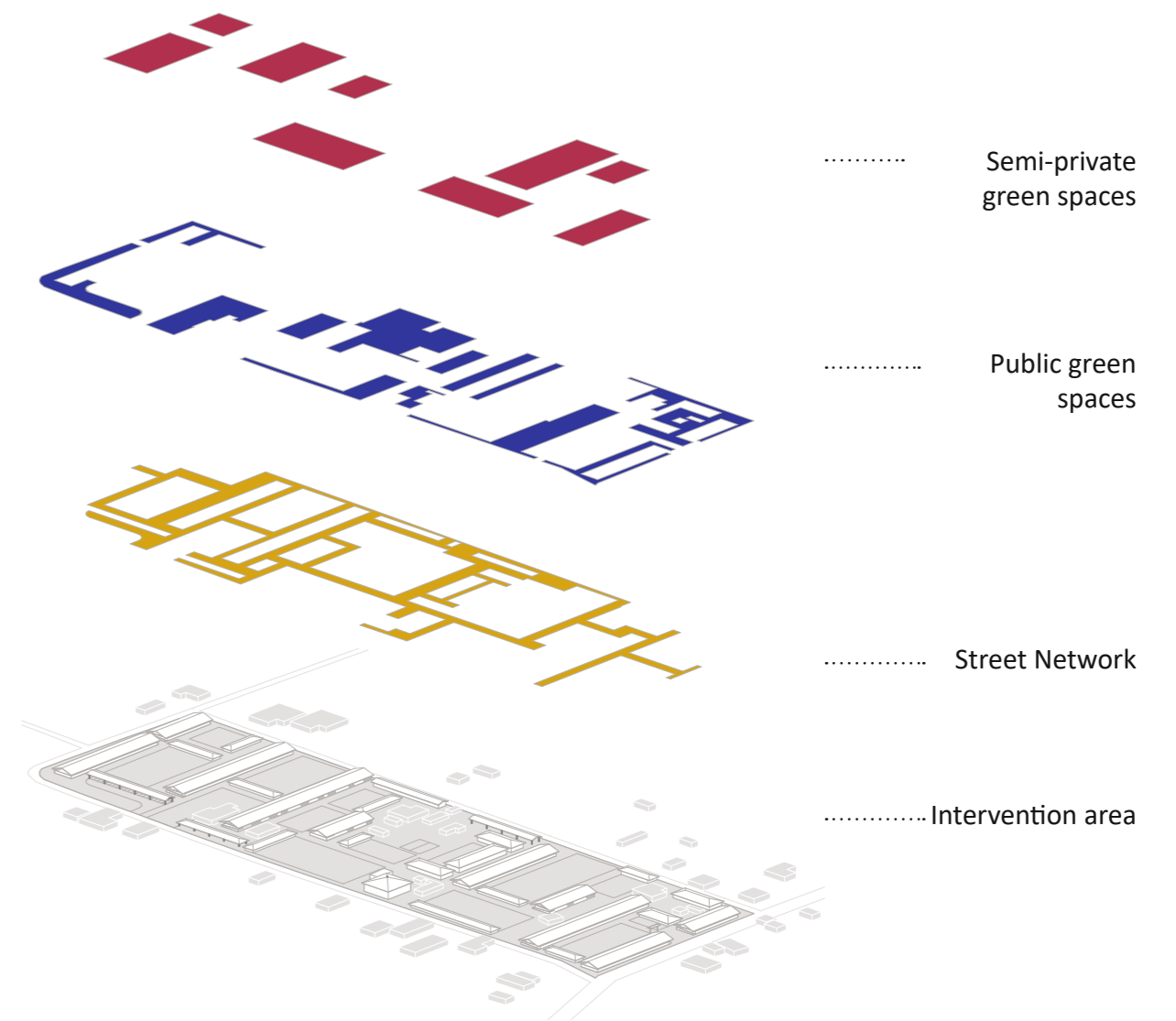


Fig.103 Network of streets and green spaces in Bumi Harapan

New settlement in Bumi Harapan

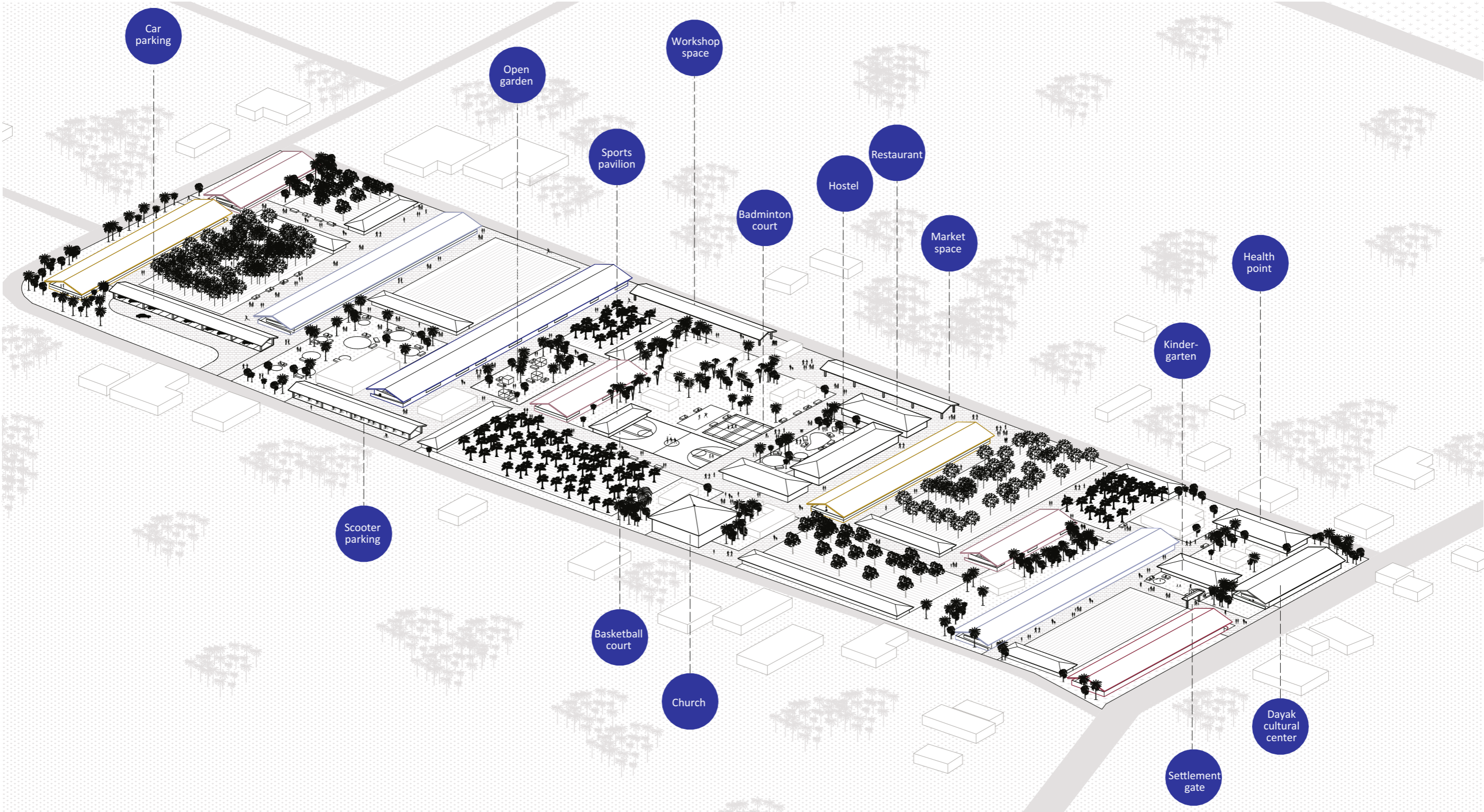


Fig.104 New settlement axonometric view

Living in the longhouse



Fig.105 Living in the longhouse, perspective view

Outdoor activities

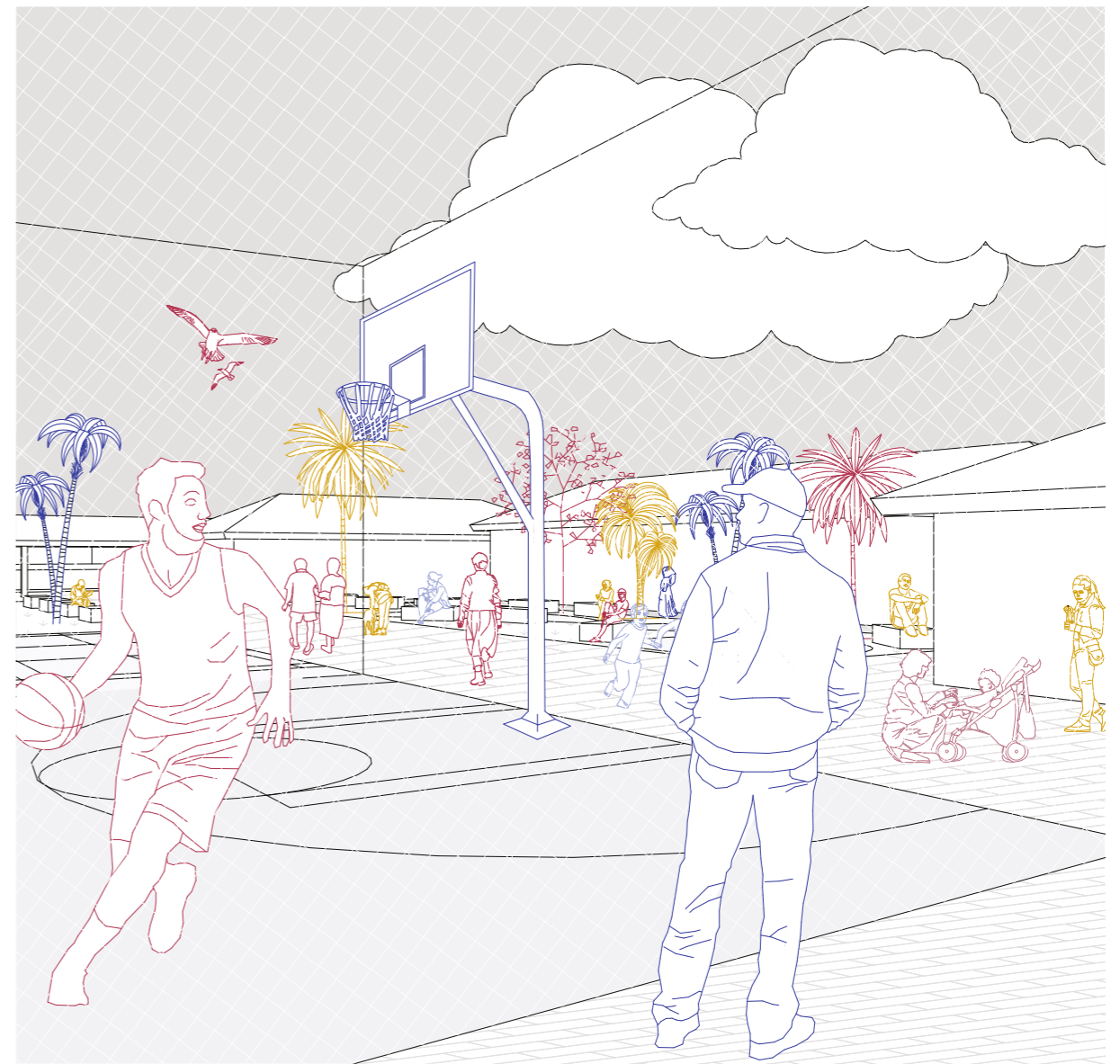
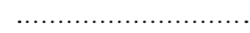
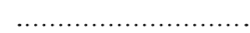
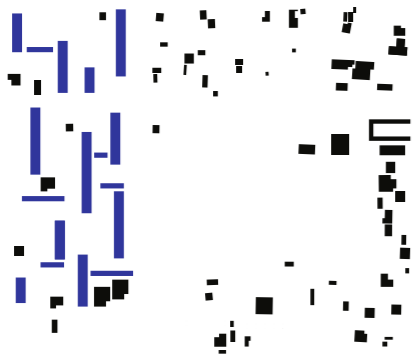


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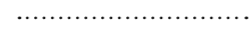
How it developed



Too big intervention area



Smaller intervention in an unsuitable location



Final intervention fitting in the existing fabric

Fig.107 Project development

Plan with the new settlement



Fig.108 Bumi Harapan with the settlement intervention, plan 1:10000

Settlements' comparison

Pemaluan with intervention



Bumi Harapan with intervention

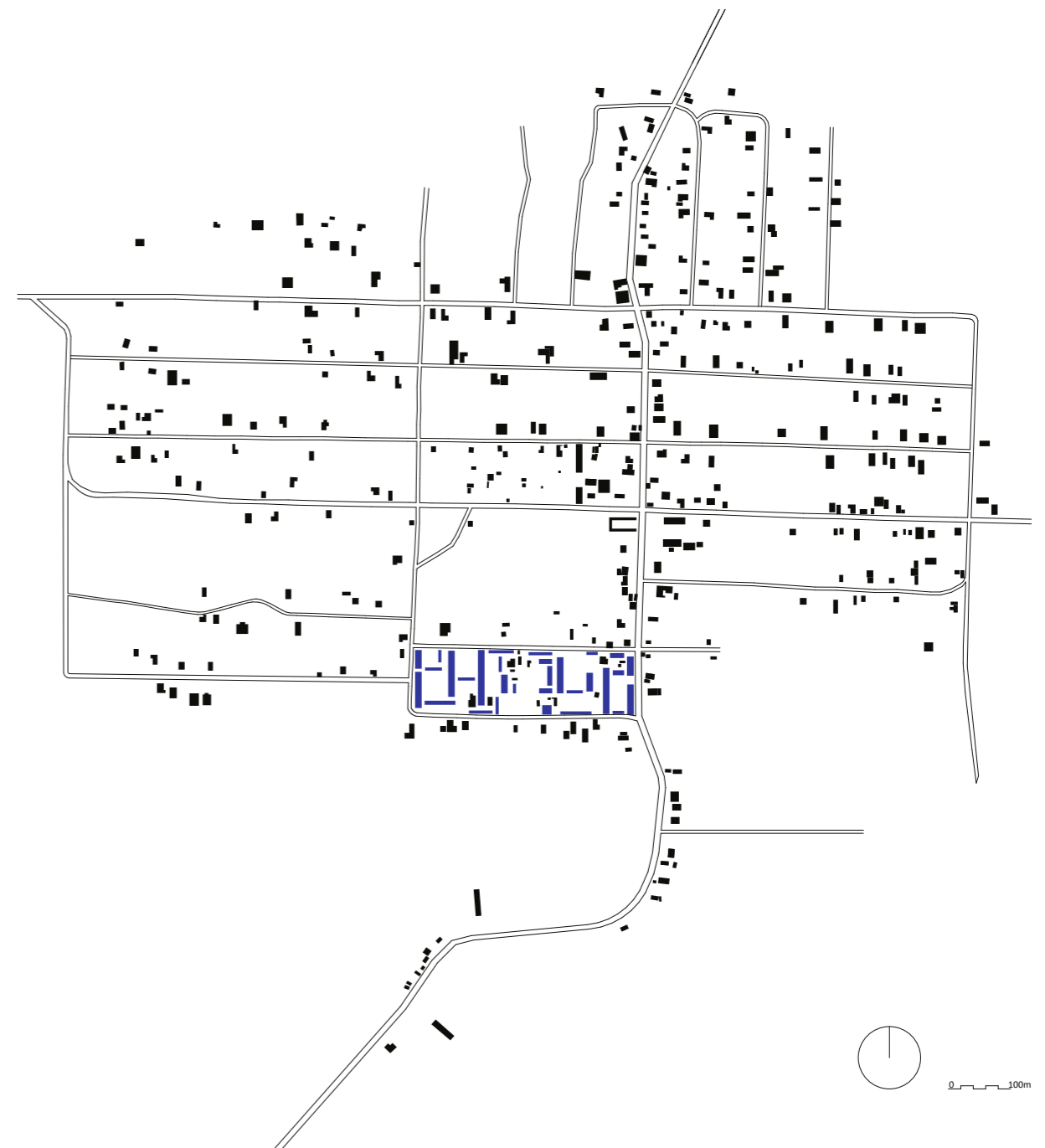


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Living in Pemaluan



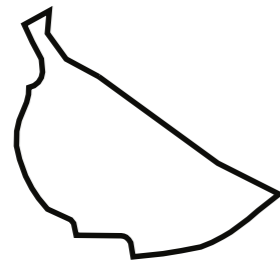
Living in Bumi Harapan



Fig.110 Living in Pemaluan vs Living in Bumi Harapan



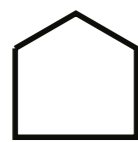
Pemaluan



Area:
4,9 ha



Population: 727
 Population density:
148 ppl/ha



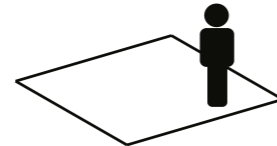
Households number: 248
 Average: 2,9 ppl/ household



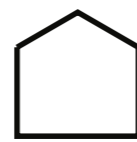
Bumi Harapan



Area:
3,8 ha



Population: 213
 Population density:
56 ppl/ha



Households number: 57
 Average: 3,7 ppl/household



Pemaluan



Ethnic groups:
4



Green spaces:
0,5 ha
 around 10% of the
 settlement area



Semi-private green spaces: 0,26 ha
 Public green spaces: 0,24 ha

Interventions comparison



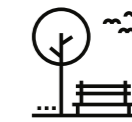
Bumi Harapan



Ethnic groups:
1



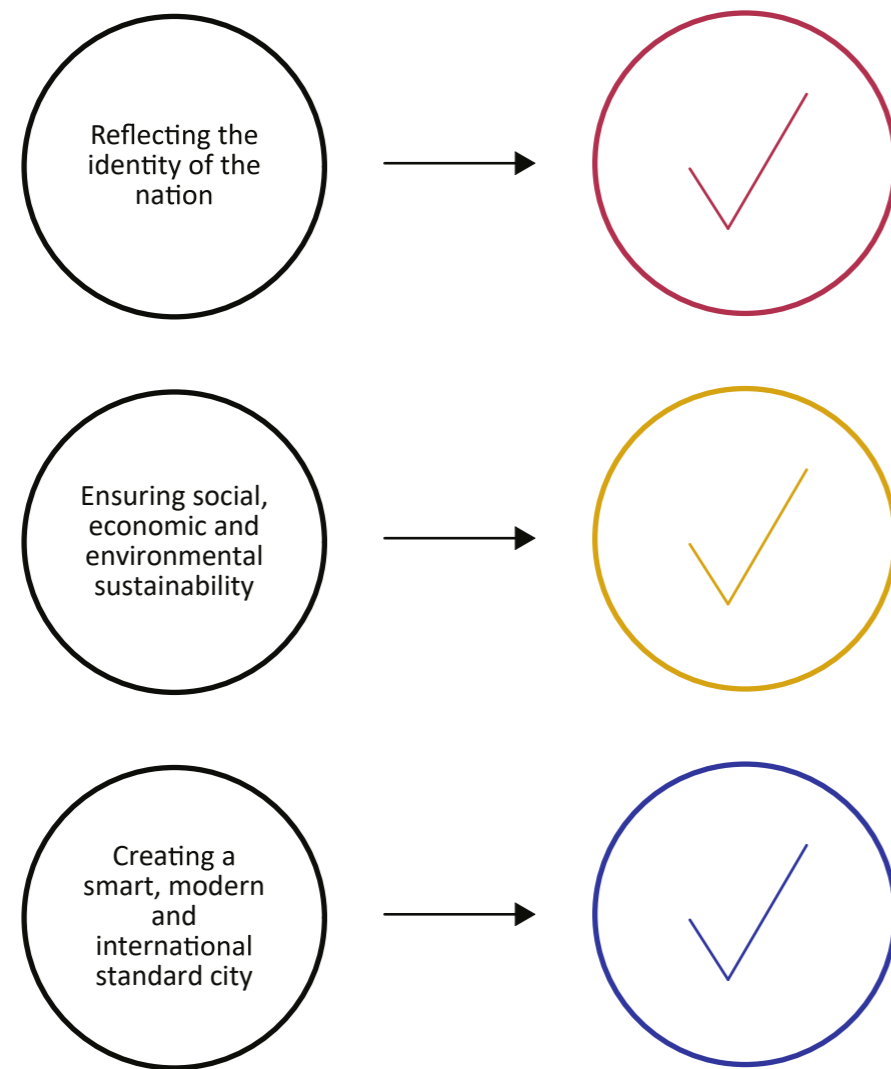
Green spaces:
1,9 ha
 around 50% of the
 settlement area



Semi-private green spaces: 0,9 ha
 Public green spaces: 1 ha

Fig.111 Pemaluan and Bumi Harapan hard facts

New capital goals achieved



Thank you !

To everyone who supported me during my university years. Special thanks to my supervisor prof. Markus Tomaselli, who guided me during my online trips to Indonesia. To Kristian, my family and friends.

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