

# TENURE ANALYSIS OF FORMAL AND INFORMAL SETTLEMENT

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## ABSTRACT

Tenure security is one of the primary goals in human settlement development. The difference between formal and informal settlement is about tenure acquisition. It is need to be marker between formal and informal settlement. While formal settlement sees dwellers gain security of tenure prior to the construction of built forms and informal settlement tenure has to be negotiated even after a long period of occupancy. Dwellers of informal settlemet may never gain what they have negotiated for, their occupation continues. This leads them to a position of ambiguous tenure. Ambiguity of tenure is one reason why a settlement is called 'informal'. The paper discusses how morphological mapping can help us understand the way in which tenure negotiation operates in formal and informal settlement. It uses kampung Pahandut as a case study of this reserach.

*Keywords: tenure, formal, informal, settlement*

## 1. INTRODUCTION

Illegality concept depends on the legal system and popular perceptions in a given country. Illegality concept concern to informal settlement. Many informal settlements are not squatter settlements, and degrees of illegality can be found relating to the application of property laws in developing countries (Hardoy & Satterthwaite, 1989; Fernandes & Varley, 1998). This research is not trying to enter into the debate about informal or illegality, but instead tries to look into the consequences of the illegalities of their settlement. Informal settlements around the world have struggled through uncertainty under the formal laws used for urban planning and slum clearance. The consequences of the illegalities of their settlements occurs in many countries. Illegalities is one of the urban poor effort to gain formal access to appropriate infrastructure, jobs, education, housing credit and long-term certainty of occupancy.

The urban poor occupy in large number of spontaneous informal settlements. The UN Habitat (2003) estimate that nearly 1 billion people in the world live in urban slums in 2001. It has frequently been used to remind us that slum and informal settlement are increasingly unavoidable, particularly in the lower income countries. This paper sees informal settlement as a spatial assemblage, emerging as a result of unauthorized tenure acquisition by which built form is employed as a tool of territorial claim.

Informal settlement referred to as "Kampung". Kampung have evolved under the changing economic, social, and political conditions of the city from Dutch colonial times, through Japanese occupation and into the independence era. Although many Kampung have been consolidated into the urban system, there are still some that are considered to be illegal or have unregistered lad titles. It is estimated that about 50% of the land for housing consists of unregistered

land (National Land Agency, 2010). This land may have quasi-legal title such as garapan or girik or called farm land. Which are formally registered at the National Land Board.

Poor Kampung resident represent the marginalized groups that push their way to occupy disputed land, state land has been illegality subdivided into individual plots for residential and sometime for working space. These characteristics imply that such kampung fall into the illegal settlementcategories described by Durrand-Lasserve (1998). Nationwide, the former State Ministry of Public Working and Housing (2015) defined kampung kumuh or slums, as irregular settlements with substandard infrastructure, small plots of land for each housing unit, substandard of structure and materials, and illegality constructed (Silas, 1990). Illegal locations for human settlement found along railways, along right of ways, along riverbanks, under bridges, amd along green paths dan park.

The concept of security of tenure related to informal settlement has been identified as one of the key factors to promote investment in housing and environmental improvement (Shubert, 1990; Habitat, 1997). Community organization is one of the key actors in gaining secure tenure (Angel, 1983). Parthnership between government, and community based organization (CBO) are important in community development programs in developing countries (Shubert, 1996). Shubert (1996) states that urban poor communities are no longer seen as simply welfare beneficiaries, but partners in a process to improve their communities and as contributors to the overall well-being of the city. However, full legal titles are not always necessary for investments in house improvement (Garr, 1996; Payne, 1997) as security of tenure is a matter of

perception by resident, whether achieved de jure or de facto (Leaf, 1994).

De Soto (1989) argues of the process of territorial claim can be massive yet rapid, or incremental yet lengthy. Some informal settlements in South America emerged as a result of planned massive invasion that could take place in one day, while with others, like the riverbank kampung in Indonesia, the process took years to initiate. Both types have had impacts on the morphology of the built environment. The continuity and change of settlement's morphology can therefore be seen as a way of reading the process of tenure acquisition and stabilization.

The objective of this research is to explore tenure analysis of formal and informal settlement, case study in Kampung Pahandut as an urban riverside area. This paper aims to demonstrate how morphological mapping can help us understand the spatial dynamic of informal settlement, and how it links to tenure. The first section discusses the meaning of secure tenure in the context of informal development. The second looks at the role of built forms in tenure claim and stabilization. The third section discusses how morphological mapping reveals the dialectics of tenure and built form in kampung Pahandut.

## 2. METHOD

Research method in this research use mixed method, qualitative and quantitative research. The collection of data based on: (1) primary data (field observation, questioner, in depth interview); and (2) secondary data (literature review, journal). The primary data consist of field observation was done for recording activities and physical appearances of infrastructure and public spaces, whereas in depth-interview conducted for exploring information from the selected resource persons. Some physical mapping will be done in the observation stage of the research, to map out phenomena of physical and spatial integration of the kampungs. The process of field survey is a quiet difficult to find the key person. In-depth interview was done by interview directly to head of Neighbourhood Association (*Ketua Rukun Tetangga*), head of (Rukun Warga), head of village (Kepala Desa/Lurah) and some senior persons who know well the history and the situation of kampungs (*Tokoh masyarakat/Tokoh agama*).

The location of research is a district located along Kahayan river (see Figure 1). The name of district is Pahandut District, that are six kampungs consist of Kampung Pahandut, Kamoung Langkai, Kampung Panarung, Kampung Pahandut Seberang, Kampung Tanjung Pinang and Kampung Tumbang Rungan along Kahayan river. Selected sample refer to random sampling in Pahandut district with total sample around 100 head neighbourhood (100 KK) consist of Kampung Pahandut (20 KK), Kampung Langkai (20 KK), Kampung Panarung (15 KK) Kampung Pahandut Seberang (15 KK), Kampung Tanjung Pinang (15 KK) and Kampung Tumbang Rungan (15 KK).

We are doing this research with seven research assistants were employed in the data collection. All of research assistants are students of Architecture Study Program of Department of Architecture of Faculty of Engineering of Palangkaraya University. The task of research assistant is daily logbook of observation and interview containing empirical description and supported by photographs, maps, and tables. On the basis of empirical description, tables of categorization of theme of substance of information were made. Some similar and related information were grouped into one theme. The analysis technique used in this research based on exploring data in the field, meaning that every group of related information produced a certain concept of finding data in the field. The field work is try to find the variable of tenure and build form of Kampung Pahandut in Kahayan riverside settlement. This research found in 3 (three) sub topic discusses: (1) security of tenure; (2) territorial claim and built form; and (3) mapping of morphological.

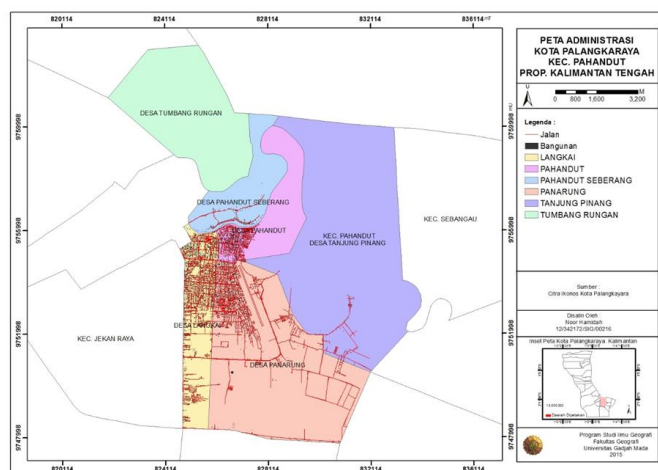


Figure 1. The Location of Research in Pahandut Sub-district, Palangka Raya City (source: Quickbird 2015)

## 3. RESULT AND DISCUSSIONS

This research aims to explore empirical evidence of tenure analyse of formal and informal settlement inside of kampungs Pahandut, Palangkaraya. This research are measured through evidences of tenure and built form by 3 (three) sub topic discusses: (1) security of tenure; (2) territorial claim and built form; and (3) mapping of morphological.

### a. Security of Tenure

The conventional UN definition of secure tenure, which puts the state as people's protector against forced eviction, seems valid only within the state's continuing presence in territorial control. In the absence or lack of state's control over a territory, the squatters establish their own way of perceiving the meaning of secure/stable tenure.

The UN defines security of tenure as the state's protection of citizens against forced eviction (Augustinus 2003). De Soto's argument mentioned above suggests that in informal settlement

tenure is gained through a gradual non-standard process, which results in various forms of tenure system. These facts tend to be oversimplified by “the widespread designation of all urban settlement processes into formal and informal” (Payne 1997:30), but there are at least six types of tenure acquisition in informal settlement, namely *de facto* security, official recognition, land rental, occupancy and use rights, communal or co-operative ownership, and customary ownership (Payne 1997:31-34). This paper focuses on the first three, as they characterize the tenure system in kampung Pahandut, Pahandut District, Palangka Raya City, Indonesia.

The first, *de facto* security of tenure, is gained as a result of tolerated squatting (Payne 1997). In the cities of Indonesia, the lengthy process of spatial planning has often led to a delay in transforming such planning into regulations, which gives adequate time to the squatters to stabilize their territorial claim by improving their shelter (Augustinus 2003). This improvement is often accelerated by slum upgrading initiatives supported by both local government and NGOs that disregard the issues of legal tenure.

Official recognition, the second type, can be obtained through “default over time, or by the active efforts of the residents, developers, and local politician” (Payne 1997:31). The case study selected for this paper, is an example. A neighbourhood (RT) in Pahandut called Dusun (see Figure 2), obtained administrative authorization in 2005, after almost 5 years of negotiation with by the residents with the municipal government. Although they did not obtain property titles, the *Kartu Tanda Penduduk/KTP* (ID cards) granted by the government has enabled residents to access state supported facilities, such as electricity connection and infrastructure upgrading.



Figure 2. Recent format of a KTP based on the author KTP issued in 2012 (source: field survey, 2016)

The third type, land rental, takes place within the practice of customary law (Payne 1997). Again, this can be seen in kampung Pahandut, in which residents termed it *Ngindung*, a traditional practice of land leasing by which the landowners allow people to build a house on their land, and live in it for a period of time - it can be more than 10 years, usually without written consent. Guinness (1986) observed the common rules in this practice with regard to building materials, that is, the use of less permanent materials such as bamboo and timber.

### Tenure status and the perceived permanence of building (Case Study: Kampung Pahandut/ Langkai)

Field survey of the relationship between property and tenure in

the whole Pahandut/Langkai has resulted in at least 9 tenure categories, depicted in Table 1. Because of page restriction, this paper presents only morphological mapping of Atas and Lengkong. Based on the notion that security of tenure is a state assurance for protection against forced eviction (Augustinus 2003), Table 1 shows that category 1 has the highest level of tenure, while category 5 has the lowest. The absence of category 1, 2, and 3 over Bawah and Lengkong indicates the absence of formal tenure in these neighbourhoods. How does the perceived permanence of building materials link to this fact? Table 1. Tenure category within Pahandut/Langkai Category Description.

Table 1. Tenure category within Pahandut/Langkai

Category	Description	Location of occurrence (A=Atas, B = Bawah, DS = Dusun Danau Seha, DF = Dusun Flamboyan)
1	Land/house formally owned – occupied by owner (s)	A, DF
2	Land/house formally owned – occupied by renter (s)	A, DF
3	Land formally owned – leased to renter (s) who self-built the house	A, DF
4	Land formally owned – occupied by owner (s)	A, B, DS, DF
5	Land formally owned – occupied by renter (s)	A, B, DS
6	Public/community building on state land without agreement	B, DS
7	Public/community building on private endowed land with agreement	A, DF
8	Vacant land formally owned	A, DF
9	Vacant land informally owned	B, DS

Source: analyses of Primer data (2016)

Table 1 Shows despite the informal tenure of all properties over Pahandut/Langkai (category 4 and 5), all houses are made of permanent materials, either bricks or concrete blocks, whereas the domination of formal tenure over Atas (categories 1, 2, and 3) does not seem to guaranty those who fall within category 3 (renter who self-builds the house) the possibility of upgrading the house into a more permanent one.

There are three common categories perceived by the locals with regard to building materials of superstructure of Kahayan urban riverside river that is, permanent, semi permanent, and temporary is based on an unique type of settlements. The type of settlement in Tabel 2. show that physical integration between river and settlement. There are two type of riverside settlement in Kahayan shows from settlement mapping (see Figure 5a) area namely: (1) floating houses or called *rumah lanting* with the characteristic of building on the top of river (see Figure 5b); and (2) pillar houses or called *rumah panggung* with the characteristic of building standing on a land if the river dry and on the top of water is the river flooding (see Figure 5c).



Figure (5a) Mapping of Settlement; (5b) Floating houses; and (5c) Pillar houses (Source: Field observation, 2016)

Tabel 2 show that integration between settlement and river. Floating houses found in Kampung Pahandut Seberang (28,58%), Kampung Pahandut (23,80%), Kampung Langkai (11,90%), Kampung Panarung (14,29%), Kampung Tanjung Pinang (11,90%) and Kampung Tumbang Rungan (9,53%). Pillar houses found in Kampung Tumbang Rungan (18,97%), Kampung Tanjung Pinang, Kampung Langkai, and Kampung Pahandut (17,24%), Kampung Panarung (15,52%), and Kampung Pahandut Seberang (13,79%). Based on analysis the integration between formal and informal settlement has strong relationship.

Table 2. Physical integration between river and settlement

No	Name of village	Type of Pillar house		Type of pillar house	
		Frequency	Percentage (%)	Frequenc y	Percentage (%)
1.	Pahandut Seberang	12	28,58	8	13,79
2.	Pahandut	10	23,80	10	17,24
3.	Tumbang Rungan	4	9,53	11	18,97
4.	Langkai	5	11,90	10	17,24
5.	Panarung	6	14,29	9	15,52
6.	Tanjung Pinang	5	11,90	10	17,24
Total		42	100,00	58	100,00

Source: analyses of Primer data (2016)

Public space is the evidence of Palangkaraya which reflects the highest integration indicator of kampungs and the city of Palangkaraya. The city government of Palangkaraya based on irregular urban structure. The physical integration of Kampung is initial from sub-neighbourhood (RT/Rukun Tetangga) and neighbourhood (RW/Rukun Warga) (Sullivan, 1986). Analysis of physical integration in Kampung Pahandut (see Table 1) has

integration between formal (formal settlement) and informal (informal settlement) has strong relationship. Physical integration shown of formal (asphalt street) and informal (wooden bridge) linkage/street (having strong relationship to support social activities. Integration of people efforts and government programs appear in the development and improvement of the physical condition of kampung.

### b. Built Forms And Territorial Claim

Tenure in informal settlement occurs as a result of territorial claim, which involves the exercise of power. Invasion of vacant state land by squatters usually takes place when the land is governed in a disorderly manner. This lack or absence of a state's power to control property allows squatters to carry out territorial claim. Such a power contestation partially corresponds to what Dovey (1999) termed 'power over', which he defines as "the power of one agent (or group) over another, the power to ensure the compliance of the other with one's will" (Dovey 1999:10). In rapid land invasion by a group of squatters, such as the case in Peru (de Soto, 1989), the power of massive planned invasion by squatters surpassed the state's capacity to immediately react; while in gradual invasion, which is usually carried out by individuals, the process is lengthy, since these invaders arrive separately and tends to be unorganized. Consolidation of power occurs when they reach sufficient population to establish a social network, by which they negotiate for a more secure tenure.

Both models - rapid and gradual invasions - do not see ownership as a pertinent issue in their early stages. What these people are most concerned with is the capacity to control over territory, which conforms to Habraken's notion that "Ownership is not necessarily congruent with control" (Habraken 2000:37). The capacity to maintain control over property ensures one's security of tenure. And in informal settlements, this requires the role of built forms. Squatters demarcate their territory by at least laying out markers then appropriate them until reaching a sufficient stage to dwell. The continuity and change of these built forms reflect the progress and constraints in tenure stabilization, which can be best observed by means of morphological mapping.

### Assemblage of Kampung Pahandut/Langkai

Pahandut rests upon the bank of the Kahayan River in the western fringe of Palangka Raya, Indonesia. As a spatial assemblage, Pahandut consists of 4 parts: Atas, Bawah, Dusun Danau Seha, Dusun Flamboyan (Figure 1). Atas, Bawah, Danau Seha are officially part of kampung Pahandut, while Flamboyan is actually part of a larger kampung called Kampung Langkai (South Langkai- see Figure 3).

The term 'assemblage' used here is borrowed from the work of Deleuze and Guattari (1995), which was further developed by DeLanda (2006) into assemblage theory. In short, they describe assemblage as a whole formed and characterized by relations of parts. This paper reviews the assemblage of Pahandut in terms of the historical process of its formation, recent tenure status, and perceived permanence of building construction.

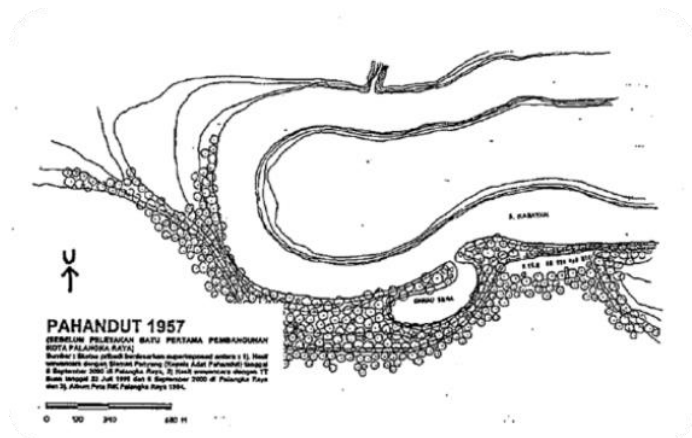


Figure 3a. Assemblage structure of the case study of Kampung Pahandut (source: Riwut, 1979; 180)

### c. Morphological Mapping

Urban morphology is a study of human habitat, which basically looks at the urban forms in terms of building, open spaces, plot, and street. These elements may be examined through four levels of resolution: building and plot, street and block, city, and region (Moudon, 1997). Morphological change is a result of “a cycle of reaction between form and function” (Conzen 1981:105).

Morphological maps presented in this paper put urban forms in the level of city as well as street and block of the selected case study. Unlike the conventional morphological mapping, these maps look beyond Conzen’s notion of ‘form and function’ dialectics. They use the visualization of urban morphology as a tool to reveal the hidden characters of informal settlement, such as changes of neighbourhood boundary and households’ tenure situation. The mapping was carried out through a combination of field survey, aerial photograph review, interview of some key informants, and archival study.

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### History of The Assemblage Formation (Case Study: Kampung Pahandut/ Langkai)

Historically, the city of Palangkaraya was built on the basis of informal planning or natural. It is meaning that the city of

Palangkaraya seems many cities in Indonesia, the beginnings of settlement were on the riverside (see Figure 4a). This initial settlement actually has been there earlier before the city was formed. The initial kampung is named Kampung Pahandut. Thus, the waterfront settlement became the opening of the collective settlements and eventually evolved into the city. The choice of settlement location on riverside affected by human relationship with nature as a source of life. The river serves as a source of water, food, transportation, and livelihood. Natural conditions will directly affect human behavior and forms of house that is built on the site. The adaptation process begins when human specify location of settlements. Form of house is influenced by the processed of human adaptation to environment which is located on the riverside. Kampung Pahandut has a unique characteristic of settlement. Kampung Pahandut is located around Kahayan river’s. Form of house on the Kahayan riverside is usually a house we called “rumah lanting” (erected on poles or floating house) and “rumah panggung” (pillar house). Kampung Pahandut is recognized as apart of city history and existence (see Figure 4b). Integration of people efforts and government programs appear in the development and improvement of the physical condition of kampung.

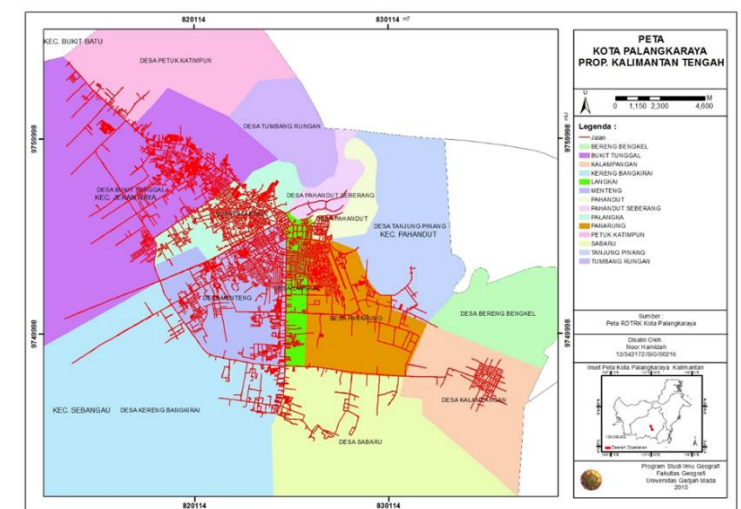
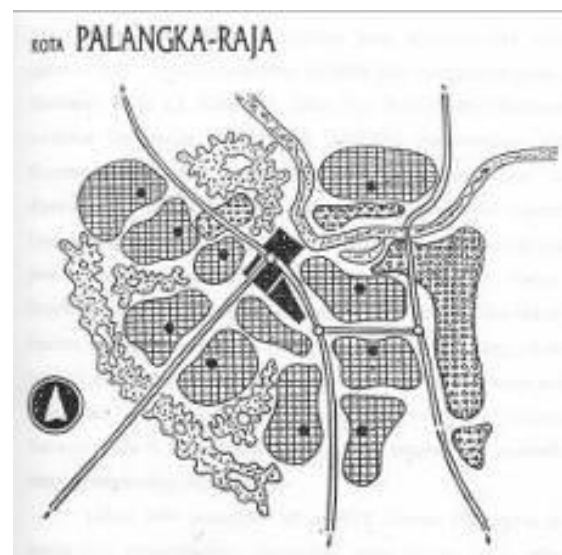


Figure (4a) The Palangka Raya original Map (Riwut, 1979: 137); (4b) Map of Palangka Raya City (Primary analyses, ArcGIS 2016)

Physical integration between community’s programs and the

government programs appear in the form of: road and drainage development, pathways improvement, social infrastructure development, garbage collection and management, kampung greenery movement, water supply connection, sanitation development, electricity connection, bridge construction, and recently public space development, intervention and extension of the government programs on physical improvements of the kampung of Palangka Raya indicate that kampungs are inclusively included in the developments maps of the city government. There is no any dichotomous model in the policy and development actions of Palangka Raya city.

#### 4. CONCLUSION

The conventional UN definition of secure tenure, which puts the state as people's protector against forced eviction, seems valid only within the state's continuing presence in territorial control. In the absence or lack of state's control over a territory, the squatters establish their own way of perceiving the meaning of secure/stable tenure.

Morphological mapping of the blocks and streets of the case study helps us to see the tendency of Dusun Danau Seha residents of Kampung Pahandut to invest in house construction using materials with a high sense of permanence (brick and concrete), albeit with the extra-legal status of their sites. This shows that the state apparatus is not seen as a serious threat to their existence because there is no agreement between them; yet the state is not visible in their everyday life. In contrast, the continuity of temporary materials used in renters' housing at Atas links to the (unwritten) agreement made between these renters and the landlords, as well as the continuing presence of these landlords in renters' everyday life. Thus, the close proximity to agents who have a clear and present power in controlling the territory contributes to the insecurity/instability of tenure.

Mapping of the continuity and change of the administrative entity of Pahandut/Langkai suggests that the positive progress of territorial authorization is a result of non-verbal negotiation. The authorization of Bawah and later Lengkong are examples of how a solid social network of residents and clear spatial order have contributed to state decision in officially recognizing the neighbourhood as part of the formal governance system, despite no title being attached to the land. Given the state's weak control over planning, maintaining the absence of formal title in this settlement is probably better for the time being rather than granting formal individual title, as the latter might accelerate property speculation, which may only give benefit to affluent groups.

Kampung Pahandut, Palangkaraya city, Indonesia as a case study shows its capacity to integrate formal and informal activities both within the kampung itself and activities at city level. The integration of formal and informal activities in a kampung shows that dualistic approach and dichotomous model of urban policy have no their empirical arguments. The integration of formal and informal activities we call here as "a kampung is a compact kampung". The research comes out with three typologies of integration of "compact kampung". The first type of typology is shown by the present of "spatial" to "spatial" integration could be found in the openness of kampung to receive new development introduced in some

kampung of Palangkaraya, as shown by new housing developments in the middle of kampung become; they use same access as used by the residents of kampung. The second type "social integration", appears the theme of inter-kampungs networking, it is found that in Kampung Pahandut people forms a community forum which is named as Forum Masyarakat Kampung Pahandut (Pahandut Village forum). This community forum has a yearly cultural ritual and attraction program which is called as "Babarasih Kampung", meaning an event to thanks to God for saving people (man, women, and children) work together (gotong royong) to clean up the river of Kahayan from the garbage (from the upper river). By working together, people know each other, at least by face; this forum then strengthened people.

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