Community service facilities and infrastructure improvement in remote areas of East Kalimantan
(Case study: Conflict in Batoq Kelo Village, Mahakam Ulu Regency)

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Abstract. Conflict at the local level is one of the implications of regional separation. Mahakam Ulu Regency is a new autonomous region which is a division of Kutai Barat District, East Kalimantan Province which was established in 2013. Mahakam Ulu Regency is located in the border area with the State of Malaysia and is located in a remote area of East Kalimantan province, one of which was faced was conflict in fulfilling the needs of village community service facilities and infrastructure. This research explores the condition of facilities and infrastructure in Batoq Kelo village which is divided into two residential development areas by involving community participation. The approach used is Community Needs Assessment (CNA) with an effort to identify needs with involvement from the community. The results of the analysis show that there are differences in the needs of facilities and infrastructure in the two residential areas of Batoq Kelo Village. Directed at the two residential areas to develop BUM Desa as an effort to improve the government's financial capacity in the administration of the government and can increase people's income by involving the economic activities of the community and the potential of the Batoq Kelo Village.

Keywords: conflict, remote area, community services, infrastructure, community needs assessment.

1. Introduction

In Indonesia, village at least has 3 different names. One of them is a “Kampung”. Based on Law No. 6 concerning Villages in 2014 [1], the village has the opportunity to develop its territory in accordance with local customs and culture. Of course the construction does not conflict with applicable regulations. The law also explains that in regulating villages it has the principle of diversity. The existence of diversity triggers conflict. Conflict in society is mainly caused by how to respond to differences that arise, both differences in interests, perceptions, identities, jobs and positions. Another factor is the existence of interest groups, organizational institutions, and social classes in society that do not always have the same and harmonious interests [2].

Conflict at the local level is one of the implications of regional separation [3]. Mahakam Ulu Regency is a new autonomous region which is the division of West Kutai Regency, East Kalimantan Province which was established in 2013. Mahakam Ulu Regency is located in the border region with the State of Malaysia, as a new district and is located in a remote area of East Kalimantan province. The remote area is defined as a remote (rural/settlement) location within an area [4]. One of the problems experienced is the still difficult accessibility between regions within the Mahakam Ulu District or other districts. The main transportation between villages in Mahakam Ulu Regency is using water transportation. As a new autonomous region, they are facing conflict in meeting the needs of village facilities and infrastructure. This study aims to determine the needs of village facilities and infrastructure that have experienced local conflicts in Mahakam Ulu District, namely Batoq Kelo Village.
1.1 Literature Review
The village is defined as an association of human beings who live together and have an organization in a government that is supported by its own rules of regulation, the village is under the village leadership who is elected for joint decisions [5]. In planning an area arrangement (as an example of a village) one that is needed is support for government policies, one of which includes the development of infrastructure conditions.

Infrastructure has an important influence in improving the quality of life and human well-being [6]. one of the constraints of the government in the effort to develop village infrastructure is the rejection of the community due to the mismatch between the infrastructure built and their needs, hence the participation of the community in the planning process is an effective way [7]. A person or community will participate in rural development efforts (village infrastructure) influenced by a belief in a situation of interdependence, and a network of social organizations that facilitate cooperation for mutual benefits [8].

According to Suriana [9], the existence of community participation can increase the independence of the community. It can accelerate the rural development. The benefits are as follows:

- Participation broadens the knowledge base
- Participation helps build communication transparency and power relations between stakeholders
- Participation can improve solutions based on local understanding and knowledge
- Participation will encourage local ownership, commitment. Engagement can help create sustainable results by facilitating community ownership of the program.

Social conflict is a conflict between individuals and groups in society to fight over and contrast various things that are considered true or valuable. Todd stated [10], the conflict is divided into 3 stages, namely:

- Pre-conflict, interpreted as a condition based on someone or group dissatisfaction
- Conflict, interpreted as a situation where the parties involved are aware of the existence of such dissatisfaction
- Post conflict, defined as a situation where the conflict is declared public (in public) and involves a third party

Villages have various conflicts. The conflict included conflict with rural communities with higher levels of government and conflicts among village communities. The conflict can be interpreted positively or negatively. If interpreted positively, conflict encourages people to improve conditions to be able to resolve the conflict. Conflict can be interpreted negatively. Conflict can disrupt community activities. Often conflicts are interpreted in negative dimensions. Because conflict has a greater negative impact on society. Moreover, the conflict was completed in a relatively long period of time. Rural conflicts can disrupt village development. So conflicts in the countryside need to be resolved quickly. Settlement capital is available, namely the social bond of the community. This becomes the main tool in resolving conflicts.

In this study aims to find out the needs and desires of the community. The Community Needs assessment approach was used. Based on the Participant Workbook: Community Needs assessment [11], Community needs assessment has a definition as an effort to identify the needs of the community in providing fun services to those needs with involvement from the community. With this community needs assessment approach, it provides a brief overview to researchers or stakeholders regarding current policies, systems and strategies for changing the local environment and helps identify areas that need to be improved. With this data, the community can create strategies to make positive and sustainable changes in the community (in this study the villagers of Batoq Kelo village).

2 Methods
The study site area was Batoq Kelo village. Batoq Kelo village is one of the villages in Long Bagun district with the condition of the development area divided into two different locations. The flow in this study begins by identifying the existing conditions and problems at the study location, the next stage of
data collection. Data collection is done by primary and secondary surveys. In this study also conducted a Forum Group Discussion (FGD) with local communities and extracted information related to plans to increase the availability of village facilities and infrastructure based on community perceptions. After the existing condition data and planned fulfillment of needs are collected, an analysis of needs and desires is carried out in the availability of village facilities and infrastructure. The purpose of this research is determining the needs of facilities and infrastructure using community participation approach. The variables of this research are as follows:

**Table 1. Research variables**

| Variables                          | Sub variables                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------|
| Community services facilities     | • The number and condition of educational facilities;                         |
|                                   | • The number and condition of health facilities;                             |
|                                   | • The number and condition of worship facilities;                            |
|                                   | • The number and condition of Government Community Service and Public Services; |
|                                   | • The number and conditions of commercial services facilities.               |
| Infrastructure                    | • Road conditions;                                                           |
|                                   | • Condition of transportation infrastructure (docks);                        |
|                                   | • The condition of clean water infrastructure;                              |
|                                   | • Conditions for sanitation infrastructure and waste;                        |
|                                   | • Telecommunications infrastructure conditions;                              |
|                                   | • Condition of electricity infrastructure.                                   |
| Needs and desires of the community | • Existing conditions of village facilities and infrastructure;               |
|                                   | • Consideration of important village leaders (key person);                   |
|                                   | • Assessment of village facilities and infrastructure in Forum Group Discussion (FGD). |

The approach in this study uses community needs assessment (CNA). Figure 1 shows the step of CAN that consists of 5 steps. Facilitator must identify community teams as well as keypersons, develop a team strategy, define scope and location, and collect basic data related to the issue. To obtain the data, a primary survey was carried out by using interviews, field observations and questionnaires which then the results of the field conditions were planned with community participation in Forum Group Discussion (FGD) activities. Namely the system or customary norms that apply. At the time of the FGD a comparison was made between the existing conditions of the village infrastructure. Preparation of plans for improvement and improvement of the availability of village facilities and infrastructure based on community perceptions and consideration of important village leaders (keyperson). The CNA in this study did not establish an action plan. Because the final results of this study are used in the preparation of a comprehensive village development master plan. Beforehand, this research investigating historical profile to understand how the conflict was emerged.

![Figure 1. Community needs assessment [11]](image-url)
3 Results and Discussions

3.1 Current condition of Batoq Kelo Village

Mahakam Ulu Regency was established in 2013. It was part of West Kutai Regency. Mahakam Ulu Regency consists of 5 sub-districts, namely Long Apari District, Long Pahangai, Long Bagun, Laham, and Long Hubung. Mahakam Ulu Regency consists of 49 villages with the regency capital, Ujoh Bilang. The area of Mahakam Ulu Regency is ± 15,315 km². The boundaries of the Mahakam Ulu Regency are as follows:

- Long Apari District is the largest district in the Mahakam Ulu Regency. Batoq Kelo Village is one of the villages in Long Bagun District, Mahakam Ulu Regency. Batoq Kelo Village is divided into two residential development areas, Batoq Kelo Ulu at upper stream of Mahakam River and Batoq Kelo Ilir at lower stream of Mahakam River. Those are separated 20 Km. Due to this separation, it elicited conflict in improving community service facility and infrastructure. In the otherhand, government has limited budget.

Batoq Kelo village can be accessed by land and river routes. The area of Kampung Batoq Kelo is 1,940 Km² which is divided into 4 neighborhoods (i.e. Rukun Tetangga or RT). RT 01 and 02 are in the ilir section, namely in Long Bagun Tengah and RT 03 and 04 in the upper part. In the village of Batoq Kelo ilir close to the capital of the Regency, namely Kampung Ujoh Bilang. the condition of the conflict in the development of the Kampung Batoq Kelo has the following history.

| Year     | Events                                                                 |
|----------|------------------------------------------------------------------------|
| 1912-1982| In 1912 about ± 40 people from the Kal teng tribe (the Udanum tribe, the Kahajan tribe and the Siyaang tribe) came to East Kalimantan (East Kalimantan) precisely to the Batoq Kelo. Then, they formed settlements and planted crops in Batoq Kelo Village. until in 1982 the movement of the Batoq Kelo settlement began to continue to Long Bagun, precisely in Long Bagun Tengah |
| 1982-1994| Due to the access of the upper Kampung Batoq Kelo to the center of the activity at that time in Long Bagun or Kampung Ujoh Bilang. The purpose of the resettlement was because the Batoq Kelo Ulu area was difficult to reach by the government and where at that time Batoq kelo was still within the administrative area of West Kutai Regency. After considering some options, the people of Batoq Kelo preferred to move and to settle in Long Bagun which was right in the middle of the village of Long Bagun ilir and Long Bagun ulu. |
| 2003     | In 2003, Batoq Kelo Ilir community slowly re-opened residential and agricultural land in the Batoq Kelo Ulu. Precisely, it is located between across sub-watershed Tebaq Kecil Village and Tebaq Besar Village. the reason the people of Batoq Kelo ilir re-cleared agricultural land and the construction of settlements in Batoq Kelo Ulu was a response to the impact of rapidly increasing population growth and even greater land needs. so the need for land to build new settlements has dropped dramatically. Batoq Kelo Ilir people, one by one, are reopening residential land in Batoq Kelo Ulu. But there are a number of villager who remain reside at Batoq Kelo Ilir. |
| 2015-2018| In 2015, Village office proposed adding 2 neighborhoods unit (RT) in Batoq Kelo Ulu namely RT 03 and RT 004. RT 01 and RT 02 were in Batoq Kelo Ilir. Mahakam Ulu Regency government responded and agreed to the proposal. Until 2018, 80% of development is focused on Batoq Kelo Ulu. And 20% development was carried out in Batoq Kelo Ilir. Batoq Kelo Ilir received a lower percentage because villagers can access neighboring village community service facilities, Ujo Bilang which is the Regency capital. |

The majority of the population lives in Kampung Batoq Kelo Ilir (neighborhood unit or RT 01 and RT 02) which account for 66% of the total population of Batoq Kelo Village. Due to separation of the settlement development areas, it inflicted an internal conflict.

3.2 Community services and infrastructure

Community services are the most important supporting tools in social activities or economic activities. Facilities can also be said as facilities that function for the implementation and development of economic, social, cultural life in the form of commercial facilities or workplaces, educational facilities,
health facilities, worship facilities, government facilities and public services [12]. the condition of facilities in the research area can be explained by the following tables.

### Tabel 3. Public services at Kampung Batoq Kelo

| Community services facilities | Kampung Batoq Kelo Ulu | Kampung Batoq Kelo ilir |
|-----------------------------|------------------------|-------------------------|
| Education facility          | 2 units. Fair condition but need to be repaired | -                       |
| Health facility             | 3 units. Limited equipment | 2 units, Limited equipment |
| Government Community Service and Public Services | 4 units | 3 units |
| Worship Community Service   | 2 units | 1 unit |
| Commercial facilities       | 1 unit | 7 units |

### Tabel 4. Infrastructure at Batoq Kelo Village

| Infrastructures | Kampung Batoq Kelo Ulu | Kampung Batoq Kelo ilir |
|-----------------|------------------------|-------------------------|
| Road            | main road mainly without pavement and muddy during rainy season | One concret pavement road |
| Dock            | 1 unit at fair condition | 1 unit at fair condition |
| Sanitation      | 5 units public toilet in fair condition | Every household has sanitation system |
| Clean water     | Community piped clean water system. It has spring as water source | 60% of Household own well 40% of household using river as water source |
| Electricity     | Household scale electricity source. Only used at 18.00 to 24.00 | 24 hours/day. Often Blackedout |
| Telecommunication | No signal | Fair signal is available |

3.3 Analisis Community needs assessment (CNA)

To find out the needs of Batoq Kelo village facilities and infrastructure, the Community Need Assessment approach was carried out by involving the people of Batoq Kelo Village through Focus Group Discussion. Researchers were taking role as a facilitator in the forum so that the community provides an assessment of the things that are felt necessary for the development of Batoq Kelo Village facilities and infrastructures. At this stage, the researchers were able to identify the current conditions community facilities and infrastructure.

During the FGD, the community was quite enthusiastic in compiling plans for community service facilities and infrastructure. Community engagement in planning can accelerate rural development. The community can participate in the stages of planning, implementation and evaluation of development programs [13]. The forum is conducted in the villager house.

Participants identify the current condition and elicited development plan. Then, they assessed their option and classified into needs and desires. The assessment was carried out by considering existing conditions of community service facilities and infrastructure and opinions of important village person (i.e. keyperson).

Based on the results of the analysis, facilities and infrastructure in Batoq Kelo Ilir village are more complete. This is because the location of the settlement is close to regency capital, Kampung Ujoh Bilang. Educational facilities, Batoq Kelo Ulu requires the construction of a kindergarten building. Because, until now, it is still integrated with SD buildings. Development of Junior high school building is considered as desires because the population is still low and the capacity is sufficient. In the Batoq Kelo Ilir, there are currently no educational facilities. However, the community does not need new formal education facilities. Because students go to school that located in Long Bagun Ulu villages and Ilir. The reading park development plan is still included in the desire category. Because people don't need it. It has an impact on the limited opportunities of school-age children to access science. But the
community considers the number of visitor/user still low. Moreover, students attend school in the district capital which has a large collection of books.

Health facilities In Batoq Kelo Ulu and Batoq Kelo Ilir require the addition of complementary facilities. An example is for handling dental health. The existing condition of health equipments are insufficient and only capable of serving minor ailments. Although the distance between the village and the district capital center is relatively affordable, community health center/Puskesmas as a first aid facility requires qualified equipment to treat patients with various illnesses. While the community said that the addition of pharmacy facilities and midwife practices was included in the category of desires. Each village has at least a midwife. But the community considers the practice of midwives not a necessity because of the distance of the center to the district capital relatively close. So for emergencies condition, the community goes to health facilities in the regency capital.

The community does not need the addition of government service facilities and public services. the security post unit is classified as desire. At existing condition of the security post is sufficient because the area of the village settlement is relatively narrow. The community needs repairs to Customary building/lamin adat buildings, adding cultural fields around custom lamin buildings. lamin adat is a cultural activity facility which is expected to become a tourist attraction in Batoq Kelo Village. In both residential areas requires developing BUMKampung as a business institution that can encourage economic productivity of the community. It is expected that with BUMKampung, it can support community economic activities such as the sale of products from the Batoq Kelo Village. The community expects BUMKampung to run several types of businesses. Those are social business / serving, rental business, and trade

Regarding the village infrastructure development plan, there are still residential areas with road conditions in the form of land pavement and in poor conditions. Due to limited funds to improve road quality. Both villages need to improve the quality of residential roads by concrete road pavement. Good road conditions will facilitate community accessibility. The community needs to improve the quality of the dock as a water transportation infrastructure. The community considers that the current dock is still sufficient to serve their activities. Their dock is very traditional. The dock is made of wood. Different results were pointed out by the Batoq Kelo ulu community. They need to repair road access to the pier. The community determines these needs because access to the pier often hampers community activities. Access to the pier is still soil pavement.

The differences between the villages of Batoq Kelo Ulu and Ilir are telecommunication and electricity infrastructure. Access to the two infrastructures in Batoq Kelo ulu is still lacking. The village of Batoq Kelo does not yet have access to telecommunications. It is necessary to develop Base transceiver station (BTS) in Batoq Kelo Ulu. Information and Communication Technology infrastructure provides benefits to its users both from socio-economic, social psychology, and socio-cultural aspects. Rural telecommunications development has a high and significant benefit to rural development, socio-economic and sufficient but significant benefits in the social psychological and socio-cultural aspects.

Electricity Infrastructure, in the existing condition of electricity fulfillment in the village of Batoq Kelo Ulu, is still lacking and can only serve at certain hours, this limits community activities at night. Collaboration with the government program in the form of electricity is included in the village and the Development of BUMKampung in diesel power plant management in Batoq Kelo Ulu. By knowing the needs and desires of village facilities and infrastructure, it can be an input for the government in making the priorities of village development. With the formation of community participation in the village planning process, communication was also formed between the community as the party who felt the impact of the development and the government as a policy maker [14].

The impact of the conflict that arose in the village was the need for community service facilities and infrastructure. The needs of Batoq Kelo Ilir is lower than Batoq Kelo Ulu because the availability of community service facilities and infrastructure are supported by the next village. Whereas batoq kelo ulu requires a lot of additions because this part of the village stands alone. If villagers need supporting facilities and infrastructure, they must go to the regency capital. Due to the distance from the regency
capital is quite close, the people of Batoq Kelo Ulu tend to separate from Batoq Kelo Village and establish new village.

The results show that Batoq Kelo Ulu needs to build new kindergarten, building quality improvement, and complementary facilities for elementary school, repairing or rebuilding village offices, repairing *Lamin adat* buildings, adding cultural fields around custom lamin buildings, improving the quality of facilities for worship and commercial facilities. In the aspect of infrastructure, it is prioritized for repairing the road environment and improving the quality of access to telecommunications and electricity.

In contrast to Kampung Batoq Kelo Ilir, the need for facilities and infrastructure is more for improving health facilities at community health service, repairing mosques, and adding worship equipment, adding shop / service units to sell daily necessities. In the aspect of infrastructure, needs additional residential roads with cement road pavement and communal clean water supply that managed by the BUMKampung, and increasing clean water piping coverage area and quality of piping system.

In Batoq Kelo village, it was directed develop BUMKampung in both settlement areas. This strategy aims to improve the government's financial capacity and villagers’ income by involving the economic activities of the community and the potential of the Batoq Kelo village. The conflict that occurred in Batoq Kelo Village is a rare problem. These problems emerged because of the process of sustaining community livelihoods. This conflict can be considered as natural process in human settlement development. However, these conditions have a negative impact on infrastructure development. Because it is separated into two parts, then from a legal point of view, the construction of facilities and infrastructure will experience legal issues. From the point of view of community development, the separation of the villages showed a lack of community harmony and formed two different communities, even mutually hostile.

Conflict in Batoq Kelo shows problems in terms of village development. one of the problems was supported by the local government by giving permission to open new settlements in the area outside the village administration. however, the tragedy carried out by the regional government shows a careful attitude in resolving the conflict. Mahamkam Ulu district government gets more financial assistance from the central government because of its status as a new autonomous region and border region. Therefore financial support for the development of areas that experiencing conflict is available. The construction of the two groups of Kelo Batoq Villages requires higher costs than they should because the location of the two villages is separated. Settlement facilities and infrastructure for the community must be able to meet all the people who live within the scope of their territory. if the location of the village is far away, the construction of facilities and infrastructure will focus on the village and cannot support one another. villages or villages in Kalimantan usually have one residential center so that the construction of facilities and infrastructure can be utilized effectively. In addition, it can save village fund allocation for other activities.

4 Conclusions

The results show that there is a big problems to fulfilling community service facilities and infrastructure. First, in Batoq Kelo village is located at remote area that needs high financial support to improve their facilities and infrastructure. Second, Batoq Kelo Village has 2 settlement areas that need to be met their facilities and infrastructure. As response, Batoq Kelo Ilir only receive 20% budget for improving community service facilities and infrastructure. Because it receive support from Ujoh Bilang Village which is Regency capital. 80% of development is concentrated in Batoq Kelo Ulu. Because, it needs to improve their facilities and infrastructure without support from neighbour villages.

The results also show that settlement facilities are complete but in some facilities have conditions that need quality improvement. the main problems of infrastructure in the villages of Batoq Kelo Ulu and Ilir are different. Batoq Kelo Ulu is lack access to telecommunications, electricity and roads. while in Batoq Kelo needs quality improvement of community service facilities and infrastructure.
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