Elderly safety and accessibility as planning considerations for residential areas along the Alalak Riverbank, Banjarmasin

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Abstract. The community living along the Alalak riverbank in Banjarmasin is highly dependent on the river including transportation purposes, economic, social, and cultural support, and for daily needs. This underlines the importance of access to the river, which is supported by wooden footbridges. Meanwhile, community members who depend on the river vary from children to the elderly whereas the elderly have different needs compared to other age groups. Several accidents with the elderly have been recorded in the last five years due to the poor accessibility to facilities. This study evaluated the cause of the poor accessibility to facilities for the elderly and the community planning process in the area. The planning process is discussed within the framework of community development and transformative planning theories. The study uses descriptive-qualitative methods. Five neighborhood groups or RukunTetangga (RT) have been chosen as samples using purposive sampling. This study demonstrated that there is no established planning process for the provision and construction of access facilities. The poor accessibility to facilities is caused by two factors, i.e., the lack of consideration for the needs of the elderly in the planning process, and poor maintenance.

1. Introduction
Banjarmasin is well-known as “the city of a thousand rivers” since more than one hundred rivers traverse the city. Rivers have always been an important part of daily life for the inhabitants of Banjarmasin, especially those living along the riverbanks. The riverbanks of many rivers are used as residential areas, including the Alalak river. Similar to other communities living in residential areas along the rivers, the community living on the riverbanks of the Alalak river is highly dependent on the river. This dependency includes the use of the river for transportation, economic, social, and cultural support, and for daily needs. Thus, river access is very essential, yet it is mostly supported by wooden footbridges.

Wooden footbridges along the riverbank vary by ownership, width, physical condition, and function. Some footbridges are owned and built by the local government, while others are privately owned and built by individual community members. The width of the footbridges varies from less than 60 cm (sufficient for one person) to more than 120 cm (large enough for two people). The physical condition also varies from poor to good. The footbridges are used as access either to latrines, to docks, or both. Users of these access facilities vary in age groups: children, teenagers, adults, pre-elderly, and elderly. However, the facilities seem to primarily serve teenagers and adults. The lack of concern for
children, pre-elderly, and elderly age groups resulted in accidents on footbridges and most of which happened to pre-elderly and elderly.

The physical condition of the footbridges implicitly shows that there is no initial planning before its construction. This was further reaffirmed by interviews. Footbridges were constructed mainly based on individual needs and the availability of funds. Almost all households have built individual footbridges attached to their house. Communal footbridges were constructed by local governments and the community sometimes without initial planning. The absence of a community planning process becomes a problem when the comfort and safety of the community are at risk.

2. Overview of the study area
The Alalak community is considered as one of the oldest communities in Banjarmasin. They have lived along the Alalak riverbank for decades and are economically and socially dependent on the river. The area is divided into two kelurahans, i.e., Alalak Utara and Alalak Selatan. A kelurahan is an urban village consisting of several community groups (Rukun Warga or RW) whereas each RW is divided into several neighborhood groups (RukunTetangga or RT). The study is conducted in Alalak Utara which consists of three RWs comprising forty-six RTs. From those neighborhood groups, RT 4, RT 5, RT 7, RT 10, and RT 14 were selected as the area of study using purposeful sampling. The selected RTs are situated along the riverbank.

Based on the Kelurahan Alalak Utara 2015 profile, the area has 24,441 inhabitants, consisting of 12,306 males and 12,135 females. Thus, the population is distributed almost equally in terms of gender. The population is made up of the following age groups: 21.34% children, 17.44% teenagers, 49.94% adults, 8.83% pre-elderly (age 50 to 64 years) and 2.45% elderly (65-year-old or above).

The study area has forty-five footbridges. These are categorized based on their ownership, function, width, and physical condition. Sixty percent of these footbridges are privately owned by individual households and 40% are owned by the local government. From all footbridges, 24.44% are used to access latrines, 42.22% are used to access docks, and the remaining 33.33% gives access to several facilities such as latrines, docks, and washing areas.

Based on their width, the footbridges can be classified into three types. The first type has a width of less than 60 cm. This type of footbridge only accommodates one person at a time and makes up 2.22% of all footbridges. The second type is those with a width ranging from 60 cm to less than 120 cm, which can accommodate one to two persons at a time. Footbridges that fall into this type include 66.67% of all footbridges. The third type can accommodate more than two people at a time, with a width equal to or more than 120 cm, making up 31.11% of the total footbridges.

Footbridges can be categorized into four types based on their physical condition. The first type is those in very good condition, meaning there is no physical damage, they are not slippery, hand railings are available at least on one side of the footbridge, and there is sufficient lighting for at night. No footbridges fall under this type. The second type is foot bridges in good condition. This means that there is no physical damage, they are non-slippery, and hand railing is available at least on one side of the footbridge but lighting is in sufficient at night. Only 2.22% of footbridges belong to this type. Footbridges can be categorized into the third type when there is no physical damage, but they are slippery in certain conditions, there is no hand railing, and lighting is insufficient at night. This type covers 66.67% of footbridges. The last type is those with a poor condition which covers 31.11% of the total. The poor condition means that there is some physical damage, they are slippery in certain conditions, there is no hand railing, and there is insufficient lighting for at night.

There are other findings that can be noted based on the survey. Firstly, all footbridges have insufficient lighting for at night. Secondly, all footbridges owned by the community are more than 120 cm wide and function as access to docks and/or latrines. Thirdly, there is one footbridge with a width of less than 60 cm. Fourthly, only one footbridge is provided with a hand railing. Lastly, most footbridges are slippery under certain conditions (44 out of 45 footbridges ~98%).

Within the last five years, there have been many footbridge-related accidents. Forty respondents from different age groups were randomly selected for interviews. The interviews uncovered that 66.67% of respondents have experienced accidents on footbridges. The accidents include slipping because of the slippery surface of the footbridges, being plunged in the river because the wooden
surface of the footbridges was rotten, as well as tripping and falling into the river because of the uneven surface of the footbridges. Females experienced more accidents (58%) compared to males (42%) and most accidents happened to the pre-elderly (25%) and elderly (33%) age groups.

3. The community planning process

Accidents that occurred in the area indicate that there is a lack of safety planning which is crucial in an area with a high risk of accidents. The study area located on the Alalak riverbank has a high risk of river-related accidents because of the frequent use of rivers. The river, with a depth of approximately three meters, presents a high level of danger. Thus, safety planning must be considered in the community planning process.

The community element is very important to the concept of participation. Community participation is a substantial element to ensure the success of developments since it guarantees the inclusion of locals’ interests [1]. Banjarmasin people are familiar with community planning. In the period of 2010-2015, the city adopted a program known as the Neighborhood Project. One of its stages involved focus group discussions with the community. This project attempted to ensure public participation in its process. However, public involvement was mostly limited to collecting data, problem formulation, and selecting problem solutions offered by professional planners. The community was rarely involved in the analyzing process and formulating solutions for the problems.

According to Drake in Giriwati et al [2], there are three stages of community involvement. The first is “positioning the community as the subject of development that plays an active role in the planning process”. In this context, community involvement in the Alalak community does not even reach this stage. The community is treated more as an object of planning rather than a subject. The second stage is “the active role of the community in the implementation and development of programs and their management” [2]. In this stage, the community involvement is more in the building stage rather than the implementation and development of programs. The community is involved in building facilities using the concept of gotongroyong (cooperative working). The third stage is “the role and position of the community in obtaining the value of significant (economic and socio-cultural) benefits, both individually and collectively” [2]. This stage has not been achieved in the Alalak community.

It is important to involve people in the planning process. It is a way to improve both community and personal development, which, in the end, will enhance national development [3]. In the case of the Alalak community, this involvement is crucial since most members of the community are ignorant of the planning process and only the physical product matters to them. Olico-Okui [4] stated that “community participation is the process by which individuals and families assume responsibility for their own health and welfare and those of the community, and develop the capacity to contribute to their and the community’s development”. This will lead them to know “their own situation better and are motivated to solve their common problems”. Thus, this will enable them “to become agents of their own development instead of passive beneficiaries of development aid” [4], to become the subject as Drake [2] put it.

Kennedy [5] informed that the immediate product should not be the main purpose of a good planning process. A good planning process will enhance the community’s capacity to face future challenges and needs. The process to achieve the product is as important as -if not more important than - the product itself [5]. The condition of footbridges in the Alalak area is far from fulfilling the community’s actual needs. They are most appropriate for the needs of certain age groups (mainly teenagers and adults), but they fail to meet the needs of children, pre-elderly, and elderly. This is supported by the fact that most accidents happened to the pre-elderly and elderly. This reflects that the needs of those age groups are insufficiently considered in the planning process. In fact, based on interviews conducted with some of the members of the community, there was no community involvement in the planning process. They were just given a ready-to-use product (footbridges).

The International Organization for Migration (IOM), Norwegian Refugee Council (NRC) and UN Refugee Agency (UNHCR) highlighted that special attention should be given to ensure the participation of all groups [6]. Meanwhile, the Norwegian Refugee Council mentioned that older people are one of the groups that tend to be given insufficient levels of participation [7]. This condition also occurs in the Alalak community. Greater involvement in the planning process is needed.
by the Alalak community. By being involved, they will learn how to formulate their problems and needs and how to solve them. However, supervision and facilitation from professional planners are needed because most community members do not have any background knowledge of the planning process.

Pickett Institute Curriculum [8] explained that there are four characteristics of community planning, which are people and organizations’ relationships at different levels, the involvement of command resources, policy generation, and “power over” planning. Moreover, community planning should be implemented in the planning process, resource allocation, as well as project and events development and implementation [9]. Referring to this theory, it can be concluded that community planning in the Alalak community is still at the early stage of involvement in the planning process. The type of involvement includes the relationships between the community as the people and local government and its consultants as the organization. Many aspects are still missing. The relationship between the people and the organization is mainly a top-down process, in which the community is merely given an immediate product, neglecting their involvement in the planning process.

Kennedy [5] highlighted that “a quality and sustainable product depends on the quality and sustainable process”. Moreover, it is important that the planning process is sustainable for the community. Kennedy further explained that “integrating social and economic imperatives into the quality of place (the ecological imperative)” is what a sustainable community plan entails. This is in line with the Pickett Institute Curriculum [8], that the involvement of command resources is one of the characteristics of community planning. The integration of people, place and economy into a single plan over a long-term perspective is a critical process for achieving sustainable community development [5].

To be able to formulate sustainable planning, the community should learn how to “integrate social and economic imperatives into the quality of place” [5]. There are learning processes wherein the Alalak community must experience this. It is impossible for the community to learn without the help of professional planners. Planners can help transform the way of thinking from product-oriented into process-oriented. Kennedy [5] suggested that “a successful transformative planner must actively listen and respect what people know, help people acknowledge what they already know, help them back up this ‘common sense’ and put it in a form that communicates convincingly to others” [5]. Moreover, “successful transformative community planning means wielding our planning tools in a way that puts real control in the hands of people most affected—that frames real alternatives and elaborates the tradeoffs in making one choice or another” [5]. So far, planners who have worked with the Alalak community mainly formulated the community’s needs based on their own perspective, not based on the community’s perspective and needs. However, it is difficult for the planning to be sustainable if the community does not learn and acknowledge the importance of the planning process.

The Community Development Department of the Federal Reserve Bank of St. Louis [10] stated that typically there are four elements needed in community development. They are 1) consideration of the needs and desires of the community involved and the areas where they reside, 2) community control, 3) application of the self-help concept, and 4) a holistic view of the community. Kennedy [11] agreed with the above statement by stating that “a comprehensive approach to meeting community needs—an approach that recognizes the interrelationship of economic, physical and social development” is associated with effective community development planning. Kennedy placed community control, the application of the self-help concept, and a holistic view of the community as ‘empowerment’. Power is considered as a process. Kennedy stated that “a group can empower itself by increasing its ability to achieve its own interests” [11]. This means the community’s own interest, not others.

Only a few of the elements of community development exist in the Alalak community. In fact, the consideration of the needs and desires of the community merely comes from the planner’s perspective, not from the community’s perspective and interests. Community control and self-help concept are not apparent in the community. These elements might be found in the concept of gotongroyong (cooperative working) of the community. However, this concept is mainly applied in terms of conducting physical projects, not in the planning process. A holistic view of the community is a bit difficult to apply. The community is more accustomed to being viewed as a separate part than being a
part of something bigger. Competition is more well-known than cooperation. This is a result of the community being dominated by traders (57% of the productive age population are traders).

The Community Development Department of the Federal Reserve Bank of St. Louis mentioned in 2014 that community development should begin with “defining the unmet needs of a community”. The engagement of residents and other stakeholders is also important to define “those unmet needs and developing solutions”. The public has a right to participate and to articulate what their needs are. Community engagement is a type of public participation that involves people in problem-solving or decision-making processes. It is a multifaceted, ongoing process [10]. As it has been mentioned before, in the Alalak community, the involvement is not in the problem-solving or decision-making process; it is merely in the problem formulating process. Normally, in the participation process, members of the community tend to state individual problems rather than community problems. It is rather difficult for them to formulate community problems but it is easier to formulate collective individual problems. However, it is necessary for the community to learn to define community problems and needs; only through this, the community can recognize its unmet needs.

To be able to empower the Alalak community, the local government should work together with the community and professional planners to define the (unmet) needs of the community. In the case of footbridges, the unmet needs of the community are the consideration of the elderly needs in terms of footbridges’ physical design. The physical design merely considers the needs of younger adult users, in terms of their basic measurements and accessibility. Basic measurements mostly relate to architecture, yet accessibility should be an important consideration in planning.

Design and planning guidance related to elderly needs should be provided. In order to do so, the community, especially the elderly, should be involved in each step of the planning process. In the early stage, the community should be involved not only in the problem formulation process but also in determining their interests and needs. This means fulfilling the need to safely and comfortably access community facilities. Safety should be one of the most essential parts of planning. However, it appears that this is a neglected factor in the planning process in the area.

Norwegian Refugee Council [7] specifies that “the ultimate goal of participation is a feeling of ownership” and “participation should be understood as an on-going process, as a means to coordinate between agencies and displaced people to uphold rights, achieve goals, improve assistance and reduce vulnerability”. This statement is in line with Kennedy [5] that states immediate product should not be the main purpose of a good planning process. It should be a feeling of ownership. By having this feeling, the community will develop a sense of responsibility for its territory.

Regarding community empowerment, Yang (2005) in [12] points out “the issue of the need for mutual trust between public administrators and citizens to increase public involvement in the public administration”. Moreover, Mitchell (2005) in [12] mentioned that trust is related to “the need for a shared vision and some other attributes to realize an effective partnership between government and society”. These attributes are “(a) compatibility among participants based on mutual trust and reward; (b) benefits to all partners; (c) the equality of power with partners; (d) communication channels; (e) adaptability; and (f) the existence of integrity, patience and willingness to solve problems” [12]. This trust should be built by giving the Alalak community greater involvement in the planning process.

4. Conclusion

Footbridge-related accidents in the Alalak community are caused by the lack of consideration of safety planning. This includes the consideration of the needs of the pre-elderly and elderly in the design and planning process, as the data shows that most accidents occur to the pre-elderly and elderly. Planning that neglects safety factors will lead to the provision of access that neglect the comfort and safety of the community. The involvement of the community in the planning process is necessary to avoid future accidents, not only in the construction of footbridges but also in the provision of other facilities. Community involvement will allow the community to learn about the planning process. The planning learning process will lead to understanding their own potentials, problems, interests, needs, and allows them to determine their own community development policies. This could lead to community empowerment.
To empower means to help the community to determine their own interests and needs, to recognize their potentials, to formulate their own problems and find their own solutions. This could be achieved through a long learning process. The Alalak community is accustomed to being given a ready-to-use product without being involved in the process. The government’s top-down approach has become very familiar to them. In the last two decades, the government has applied a more bottom-up approach yet, the community is already accustomed to the previous approach. This is an obstacle for the community to get involved in the planning process. It will take time to change the community’s way of thinking, to develop a realization that the process is as important as—or even more than—the product.

References
[1] Baksh, R, Soemarno, Hakim L and Nugroho I 2012 Community participation in the development of ecotourism: a case study in Tambaksari Village, East Java Indonesia Journal of Basic and Applied Science Research 2 Available at: https://www.textroad.com/pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%202%(12)12432-12437,%202012.pdf accessed 09-01-2020
[2] Giriwati N S S, Hawa L C, Pamungkas S T, Iyati W and Hidayat A R T 2019 Local community participation in ecotourism development: the case of Sumberwangi Hamlet Destination, East Java, Indonesia PEOPLE: International Journal of Social Sciences 5 81-98 DOI: 10.20319/pijss.2019.51.8198
[3] Kent G 1981 Community-based planning: A better approach to development? National Development June/July 1981
[4] Olico-Okui 2004 Community participation: An abused concept? Health Policy and Development Journal 2 7-10 Available at http://www.bioline.org.br/request?hp04003 accessed 10-01-2020
[5] Kennedy M 2018 Transformative planning for community development, part one: Moving from advocacy planning to transformative planning Available at: https://www.plannersnetwork.org/2018/11 transformative-planning-for-community-development-part-one-moving-from-advocacy-planning-to-transformative-planning/ accessed 10-01-2020
[6] International Organization for Migration (IOM), Norwegian Refugee Council (NRC) and UN Refugee Agency (UNHCR), Global Camp Coordination and Camp Management (CCCM) Cluster 2015 Camp Management Toolkit Available at: https://www.refworld.org/pdfid/526f6cde4.pdf accessed 10-01-2020
[7] Norwegian Refugee Council (NRC)/The Camp Management Project (CMP) 2008 Camp management toolkit (Norway: Norwegian Refugee Council) Available at: https://cms.emergency.unhcr.org/documents/11982/47942/Norwegian+Refugee+Council,+The+Camp+Management+Toolkit/a718d47b-5906-4adb-9735-de8009e9b2a0 accessed 10-01-2020
[8] Pickett Institute Curriculum 2002 Facilitation skills: Developing facilitative leadership [online] available at http://www.ilj.org/publications/docs/Facilitation_Skills_Developing_Facilitative_Leadership.pdf accessed 22-01-2020
[9] Minkler M 2005 Community organizing and community building for health 2nd edition (New Jersey: Rutgers University Press)
[10] Federal Reserve Bank of St. Louis 2014 Coming up with the money: Five principles for launching a successful community development initiative Available at: https://www.stlouisfed.org/~media/files/pdfs/community-development/comingupwithmoney/launching_successful_community_development_initiative.pdf?la=en accessed 10-01-2020
[11] Kennedy M 1996 Transformative Community Planning: Empowerment Through Community Development [online] Available at https://www.plannersnetwork.org/case-studies-and-
[12] Kurniawan T 2018 E-Musrenbang as a means in increasing community participation in development planning in Indonesia: Its challenges and obstacles Proceedings of the 2018 Annual Conference of Asian Association for Public Administration: "Reinventing Public Administration in a Globalized World: A Non-Western Perspective" (AAPA 2018) Advances in Social Science, Education and Humanities Research 191 DOI: 10.2991/aapa-18.2018.2