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MORALITY BEFORE KNOWLEDGE

Flood prevention through zoning system in Baduy local wisdom

Nisrinah[1], Herdis Herdiansyah[1*]
[1] *Environmental Science, School of Environmental Science, Universitas Indonesia, Central Jakarta, Jakarta 10430, Indonesia.*
*Correspondence: herdis@ui.ac.id

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ABSTRACT

Background: Flooding is frequent disasters faced by the majority of regions in Indonesia. One cause of the flooding was the fault of urban and regional planning. Need a good regional plan to prevent flooding. **Method:** The study reviews existing literature on the Baduy tribe's zoning system and local knowledge to understand its role in flood risk management. It examines how these traditional practices, as discussed in previous research, contribute to preventing and mitigating flooding. **Findings:** Community participation is very influential in maintaining natural ecosystems. Baduy tribes live in the village of Kanakes, Banten Province. Baduy tribe held the belief that it is called by the Sunda wiwitan. That trust is called pikukuh customs regulations. Pikukuh contains the prohibition for a change; it can be seen from the utterances in pikukuh. The utterance meaning related to the relationship between humans and the environment. Relationships are not always good for the environment. Negative impacts could be catastrophic that can harm humans themselves. The role of the community can be influenced by the prevailing local wisdom in the area. One of the tribes that still apply local knowledge is Baduy. Local knowledge of Baduy tribe-related issues through the use of the applicable zoning area. Zone area of the Baduy tribe is divided into three zones, namely a third or upper zone, a second zone or central zone and the first zone or the lower zone. The results of this study indicate that the zoning system applied to the wisdom of the Baduy tribe workshops can prevent flooding The importance of forests in minimizing erosion. Forests in the third zone or upper zones serve to catch the falling water flow from upstream, reducing the water flowing downstream. They also help retain soil material during rainfall, further preventing erosion. This analysis underscores the intricate relationship between local practices, environmental conservation, and sustainable development. **Conclusion:** In conclusion, the Baduy tribe's zoning system is a testament to their deep understanding of their environment and their commitment to living in harmony with nature. It highlights the importance of local wisdom in managing natural resources and mitigating environmental risks. As we grapple with the increasing threat of climate change and environmental degradation, there is much to learn from the Baduy tribe's sustainable practices and profound respect for nature. **Novelty/Originality of this article:** This study uniquely examines the Baduy tribe's traditional zoning system as an effective flood prevention strategy, offering valuable insights into how indigenous knowledge can be integrated into modern environmental management and disaster risk reduction practices.

KEYWORDS: Baduy; flood prevention; local wisdom; spatial planning.

1. Introduction

The Baduy live in an area around Kendeng mountain, in the village of Kanekes, sub-district of Leuwidamar, regency of Lebak (Iskandar & Ellen, 2000). Baduy tribes still maintain their culture. Baduy tribe occupies an area of 5,136.58 hectares (Iskandar & Iskandar, 2016). The Baduy still retain their traditional knowledge. Traditional knowledge

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has an important role in the sustainability of the Baduy natural environment (Hidayati et al., 2017).

Baduy tribes live in the village of Kanakes, Banten Province. The Baduy tribe held the belief that is called by the Sunda wiwitan. That trust is called pikukuh customs regulations. Pikukuh contains the prohibition for a change; it can be seen from the utterances in pikukuh. The utterance meaning related to the relationship between humans and the environment. Relationships are not always good for the environment. Negative impacts could be catastrophic that can harm humans themselves (Hakim & Wiersum, 2006).

Pikukuh is still held and used as a reference in everyday life by Baduy. Pikukuh contains utterances that must be obeyed by the Baduy. Meaningful utterances to preserve nature. In the speech it can be seen that the Baduy tribe split into several regions according to its usage. The region is divided into three sections: the upper region, the central region and the bottom region. Zoning is simple regional planning adopted by the Baduy tribe (Suparmini et al., 2013). The author would like to see the connection with the zoning or flood prevention efforts.

The Baduy community lives together in community and considers an indigenous tribe from the area they occupy. This led to the Baduy tribe having ownership of the area they live in is very high. Their sense of belonging that causes them to maintain and protect nature in which they live. This increases Baduy's closeness to nature. The closeness to nature is also supported by that culture who are not affected by modernisation flow. Modernisation has an adverse effect, a cultural shift that raises the risk of weakening the Baduy community's closeness to nature in which they live (Suparmini et al., 2013).

Baduy tribe should behave according to ancestor pukukuh which has been handed down by great-grandparents. The whole Baduy must not violate the ancestor pikukuh including outside people who are visiting Baduy. Violating pikukuh karuhun means relegating prevailing since ancient life (Hakim & Wiersum, 2006). The restrictions that must be obeyed by the tribe Baduy are not allowed to use the hoe, is not allowed to plant cassava, pest should not be eradicated by using chemicals, fertilising the soil is done naturally, is not allowed to open up in Leuweng and forest village (Suparmini et al., 2013). Great-grandparents and their ancestors pikukuh Sundanese pronounced conservative in the form of speech that is delivered during traditional ceremonies or will be narrated by parents to their children. The principle of life as outlined in the utterances.

The meaning of the utterances above is that Baduy should not destroy nature. Nature must still be preserved by not cutting trees and clearing in the forest, river basins should not be broken, and water resources should not be tampered with. Destroying nature means it can damage the nation and the state. Damage of this nature will result in a disaster that would have a negative impact on the Baduy itself.

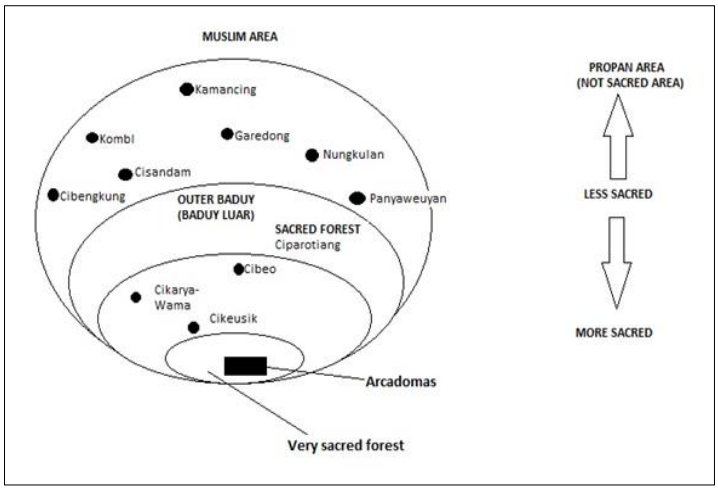

Fig. 1. Baduy area
(Iskandar & Iskandar, 2016)

From the Figure 1 can be seen there are three zones on the Baduy. The first zone is located under the form of settlement. The second zone is the area that functioned for farming and agriculture. The second zone is above the valleys of the hill (above the residential district) or the outside of settlements/villages and hamlets overtime, a forest area arable. Cultivated forests are forest areas functioned as a garden, where ngahuma (farming). In the field of land and secondary fallow forest is being laid to rest (fallow) with age. Secondary forests in the rest within 2-3 years reuma ngora called or known as young secondary forest, this land is in the form of shrubs, and has not been forested. Land that has been fallow fields over three years is called reuma kolot or old secondary forest. The third zone is the area of old forest/leuwing kolot. This forest should not be opened and sanctified by the Baduy tribe (Iskandar & Iskandar, 2016).

From cosmology, Baduy area can be divided into three zones. The first zone, the area of Sasaka Heritage kabuyutan Buana or Arca Domas Domas and Sasaka analogous to the core area is heavily guarded area where there is no interference by the Baduy. It is used to perform the ritual Hermitage. The second zone, it is analogous to the buffer zone, located on the outside of the area kabuyutan, is recognised as an area of Inner Baduy. This area is considered less sacred than the kabuyutan area. Zoning third, analogous to the transition, is considered less sacred than the Baduy Dalam area, as recognised as the Outer Baduy area (Iskandar & Iskandar, 2016).

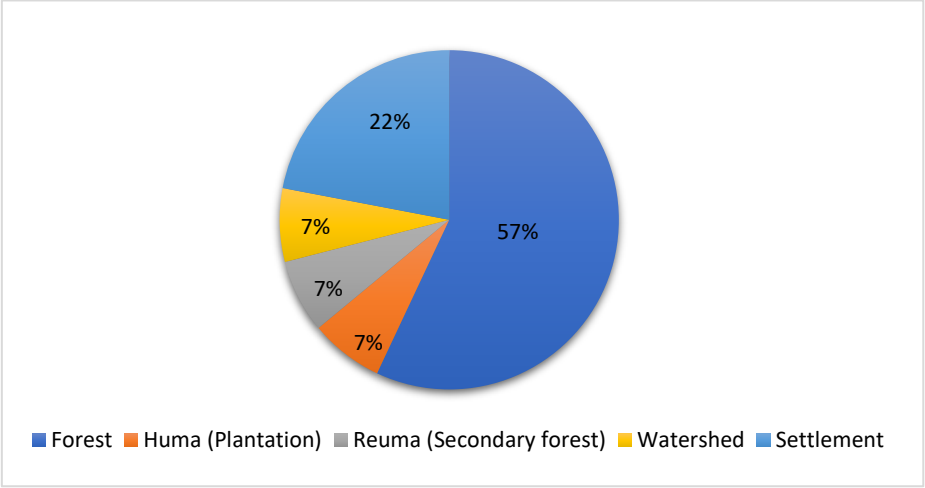

Fig. 2 The percentage of land use in Baduy area
(Utari 2014)

Protection Forest is a forest that is outside the forbidden forest/jungle sacred Sasaka Domas. This area is located on the tops of hills and valleys where the discharge of springs, then earmarked for forest conservation and so-called "*leuweung kolot* (old growth), *leuweung titipan* (forest surrogate) or *leuweung gede* (big forest)" means the forest surrogate parents or forest. The conservation forest Baduy tribe is believed to be relics of the past. These relics must still be preserved because it serves to counterbalance nature. Prohibition does not allow the Baduy tribe to go into the forest without obtaining prior permission from puun. Some of the old-growth forests still large enough are found in Baduy Dalam, especially in Cibeo and Cikeusik. The Figure 2 shows the use of land by the Baduy tribe in 2014. The land is designated for forest 57%, 21.4% residential, and for Watershed, Reuma, and Huma for each of 7.2%. Forest is the most extensive in Baduy. This is because the Baduy tribe still comply with the customary law.

2. Methods

In this study, the research used study literature that is examining the results of research related to local wisdom of the Baduy tribe which have been done before and compare it with theories about the flood. In this research, the authors used the results of the research about

Baduy's local wisdom that they have done before. The authors discuss local wisdom in the Baduy tribe because local wisdom in the Baduy tribe is still obeyed by Baduy society.

The research procedure used consisted of 4 steps. First, the authors organize the literature to be reviewed. Literature reviewed is the literature in accordance with the purpose of writing which is about local wisdom of the Baduy tribe. Then the literature is compiled in accordance with the idea, general purpose, and conclusion. Second, the authors synthesize the first part that is to combine the results of the literary organization. Third, the authors identify the results of the reading of the literature and get the interesting issues to discuss. Fourth, the authors formulated the ideas poured into research purposes for further review. In this fourth step, an idea that will be reviewed is preventing flooding with local wisdom of the Baduy tribe.

3. Results and Discussion

3.1 Environmental management

Dimensions owned local wisdom consists of local knowledge, local values, local skills, local resources, local decision-making mechanism, and local group solidarity. Local knowledge is the ability to relate to their environment Baduy; local value serves to regulate the life of Baduy, in the form of rules that must be obeyed. From the dimensions of which are owned by local wisdom, it can be seen local wisdom tends to achieve a balance of harmony between man, nature, and culture (Suryani, 2014). Local knowledge can also make the community meet its own needs to depend on nature (Mungmachon, 2012). Similarly, the local wisdom, Baduy, regulates behavior related to the use of nature to meet the everyday needs of the Baduy tribe. One of the provisions stipulated in the utilization of natural agriculture. Baduy must comply with the regulations in the agricultural system described in utterances.

The zoning system adopted by the Baduy is a simple concept mapping space. The concept is simple spatial planning is divided into three zones or areas, namely lower region, the central region and the upper region. Is a form of spatial structure and pattern of spaces. Flood prevention can be done with integrated spatial planning by using greener infrastructure that can restore ecosystem functions. Planning to build a flood protection zone. Spatial planning should be regulated in a policy to regulate the use of space priorities (European Commission, 2011). Baduy has had a policy of spatially obtained heredity. This policy includes the designation of the area according to its function. The designation of the area has been the sustainability of natural ecosystems Baduy. Baduy follows the terms of use and area is applied from the first.

3.2 Spatial planning

Baduy have implemented spatial design through a zoning system which can be hereditary. Zoning system divided the territory under its designation. Spatial planning in the form of division of zoning on the Baduy can manage the risk of flooding, it is in line with a recent study in the Netherlands showed that spatial planning to manage the risk of flooding, such as the elevation of residential areas and the reduction of land use in areas prone to flooding, and land underused (European Commission, 2011).

The areas owned by the Baduy tribe have been planned according to their distribution from the first zone or zones, bottom and middle. Spatial planning beyond the traditional land-use planning that brings together and integrates policies for development and land use with other policies and programs that affect the nature of the place and how it functions. The zoning system can also be used as a flood prevention plan, as a solution, flood management can be integrated into land use planning system (Cengiz, 2013).

The first zone or the lower zone is a place of settlement Baduy, the second zone or central zone is a place of farming Baduy, and the third zone or zones above is an old forest. Old-growth forests are in the upper third zone, or zone is a conservation area in the

workshop's wisdom Baduy tribe may not be entered by anyone let alone in disrepair. The third zone or zones above are awake and can serve as retaining water in case of rain. This zone is a conservation area. Not to do logging in the third zone or zones above. It is keeping the forest on top of the third zone or zones are not damaged. The second zone or central zone is farming. Baduy have rules, land used for farming for a year should be allowed into the woods again for 3 years. This is following the principle of reforestation so that when there is a decrease in the soil function of land used for farming, it can be restored within 3 years so the land can have a function as usual. In addition, the cultivation system should not be applied to hoe, to plant cassava, may not use chemicals and the opening of the fields are also arranged. This cultivation system keeps the soil functions. The use of hoes, planting cassava can make the soil become loose. The loose soil, when exposed to rainwater, will be carried into the river resulting in sedimentation in watersheds that lead to silting of rivers that cause river flow to be disrupted. Changes in land function, erosion, sedimentation, and heavy rainfall can lead to flooding. Changes in land use such as deforestation to clear land for residential or agricultural land. Changes in land use can lead to erosion, due to soil carried away by rainwater which in turn will cause sedimentation in the river. Sedimentation in the watershed is resulting in a reduced capacity of the river to collect water that can cause flooding (Munthali et al., 2011).

Which is not environmentally sound development is a human activity that causes flooding. Utilization of land for the construction of not paying attention to the ability of the land. Vast green open space in an urban area is less than the ideal minimum. It is caused by population growth that led to the demand for residential land increasing. Demand for housing led to a green open space converted to a residential or other designation that has a higher economic value. Decreasing the number of green open space areas can cause infiltration rate (flow of water into the ground) is reduced. When rainfall is high, the ability of soil to drain water into the ground (infiltration) will lead to reduced water flows to the lower area. Water collects in the lower area causing flooding (Apollonio et al., 2016). Human activities can cause flooding in the form of land use changes. Changes in land use can affect the surface area of land (Baioni, 2011). Utilization of forest land by the opening can also cause flooding; this is due to the plant together with the soil can serve as a store of water. If the plants or trees can reduce the function of plant and soil to store water (Doswell, 2003). Many factors influence the occurrence of flooding; in addition to rainfall, the other factor is the catchment area. The function of the catchment area is influenced by the size, shape and land use. Plants and soil will store the rain that fell in the catchment area and residual water that is not saved will be recirculated (Working Group of Science, Engineering and Technology Panel, 2011). Flood risk can increase with the growth of population and land use for development (Duaibe, 2008). The ability of soil to cooperate with this plant can reduce the risk of flooding during rain because the rainwater can be stored in the soil, thereby reducing the quantity of water flowing down. This shows the function of forests in the mountains above the region. The upper region serves as a conservation area. This conservation area shall in no way be converted into residential land because it can change the land use to reduce the risk of flooding. The area is protected by customary law that prohibits the Baduy tribe from opening land in the old forest.

The use of chemicals on farm systems also can harm natural ecosystems; chemicals exposed to rainwater will carry over to the river and will poison the plants and animals found in the river. The first zone or zones under a Baduy community settlement or village forest. The existence of a river or water source has a very close relationship with the place for human habitation. Likewise, the Baduy tribe located near the river (Iskandar & Iskandar, 2017). So that when the river flow is disrupted Baduy settlements would be affected.

Judging from the results of research, forest area reached 57% of the total land area of the whole (Utari, 2014). Regarding the number of forest areas, it is enough to retain water when the rain comes. Required green open space that is at least 30% of the total land. So should the land use up to 70% and the remainder earmarked for green open spaces in Law of the Republic of Indonesia No. 26 in 2007 about Spatial Planning. Green open space to prevent flooding by improving the quality of the soil, thereby increasing the rate of

infiltration, in addition to the green open spaces, can also serve to reduce air pollution and temperature of the city. Green open space can also function socially through social interaction and recreational facilities, through increasing architectural beauty of the city that makes people feel more comfortable, and the economy through the use of land to be used as agricultural land as a garden that can produce – in Domestic Government Regulations of the Republic of Indonesia No. 1 in year 2007). Besides the results of research (Kim et al., 2016), suggesting an area of green space is used as a factor to reduce the probability of flooding following the nature of the type of flooded areas. The role of the existing green space is often limited to the production of ecological benefits for wildlife, and the scenery is aesthetically pleasing to the human occupants, but a functionally appropriate design plan for the location of green space to maximize its impact in controlling floods. Most of the damage caused by flooding was caused by changes in the landscape (of forests into watertight), including the history of settlement and land use (Orff, 2007).

The most important factors affecting flooding are rainfall and catchment and the topography of the flow (FAO & CIFOR, 2005), so that a very important role of forests as store rainwater. Besides utterances, a reference in the life of the Baduy community has met the principle of flood control. The flood control principles set out in the speech that the mountain should not be tampered with cutting trees. Flood hazard control can be done by improving the channel and vegetation protection, the construction of the dam/levee safe, active participation from society and the measures and plans (Shaw, 2006).

Soil erosion from water catchment involves the release of land from the land surface and transport it by rainfall and water runoff. Deposition of material occurs when the current capacity is less than the amount of material transported. The impact of erosion has severe effects of sedimentation in the reservoir and to a certain extent will flood. The main cause of erosion is due to deforestation, soil lithological characteristics of certain areas, improper maintenance of the watershed, and other anthropogenic activities. It was concluded that the appropriate erosion control measures should be implemented to prevent further negative effects so that the reservoir can be maintained with storage capacity and damage caused by floods can be minimized (Mahabaleshwara & Nagabhushan, 2014). In addition, Baduy tribes prohibit speech on cassava planting and felling trees in the forest on the third zone or the upper zone; it serves to prevent erosion. If the planting of cassava, cassava harvest time, the land will become loose and when it rains the soil material will be carried by rainwater into the river downstream. Eventually, the downstream river will become shallower as the buildup of soil materials carried by rainwater. Siltation This will prevent or reduce the flow rate of the river, so DAPT causes flooding. The third zone or zones on a forbidden forest that should not be tampered with, the forest on top of the third zone or zones may serve to catch the falling water flow from upstream so that water flowing downstream is reduced. Forests also serve to minimize erosion because the soil material is retained by the trees when it rains.

It delves into the complex issue of soil erosion, particularly as it pertains to water catchment areas. It describes the process of soil erosion as the detachment and transportation of land material from the surface by rainfall and water runoff. This process continues until the carrying capacity of the current is less than the amount of material being transported, leading to the deposition of the material. We highlight the severe impacts of erosion, such as sedimentation in reservoirs and potential flooding. It identifies deforestation, certain soil lithological characteristics, improper watershed maintenance, and other human activities as the primary causes of erosion. its focus on the solutions for controlling erosion. It cites a study by Mahabaleshwara & Nagabhushan (2014), which suggests implementing appropriate erosion control measures to prevent further negative effects. These measures are crucial for maintaining the reservoir's storage capacity and minimizing flood damage. The practices of the Baduy tribes in preventing erosion. They have specific prohibitions on cassava planting and tree felling in the forest's third zone or upper zone. These practices are aimed at preventing the loosening of the soil, which can lead to soil material being carried downstream by rainwater, causing the river to become

shallower due to the buildup of soil materials. This siltation can reduce the river's flow rate, potentially leading to flooding.

The importance of forests in minimizing erosion. Forests in the third zone or upper zones serve to catch the falling water flow from upstream, reducing the water flowing downstream. They also help retain soil material during rainfall, further preventing erosion. This analysis underscores the intricate relationship between local practices, environmental conservation, and sustainable development. Flood management plans should be developed for each river basin. The plan must be based on an integrated approach that covers all aspects of water management, physical planning, land use, agriculture, transport and urban development, nature conservation at all levels (national, regional and local).

Water flowing over the top of the mountain is a complex process. The water flow can be generated by rainfall that falls on the surface of saturated soil caused by the topography, the nature of the soil along the slope (Oki, 2005). It is also in line with the hydrological cycle, where the rainwater will flow down, is absorbed into the soil and there is flowing downward. When the rain falls on the mountain then the amount of water brought down is that water is not absorbed into the soil, so the water does not directly flow into the lower regions.

3.3 Local wisdom

The implementation of spatial planning through the zoning system is a critical aspect of environmental conservation, particularly in regions like Baduy. This system is reinforced by the rules and regulations that are deeply rooted in the local wisdom of the Baduy community. The application of this local wisdom plays a pivotal role in preserving nature and preventing environmental damage. Spatial planning is a complex process that involves the careful management of land use to meet the social, economic, and environmental needs of a community. In the context of Baduy, this process is guided by a zoning system that divides the region into distinct zones, each with its own set of rules and regulations. This system is a reflection of the community's deep understanding of their environment and their commitment to living in harmony with nature.

The zoning system in Baduy is not just a set of rules; it is a manifestation of the community's local wisdom. This wisdom, which has been passed down through generations, is deeply ingrained in the community's culture and way of life. It guides their interactions with the environment and shapes their attitudes towards conservation. The application of this local wisdom is evident in the community's efforts to preserve nature and prevent environmental damage. For instance, certain areas are designated as protected zones where activities such as logging and hunting are prohibited. These measures help maintain the ecological balance and ensure the sustainability of the region's natural resources.

Table 1. The principle and philosophy of life in Baduy

No	Speech	Meaning
1	*Pencar selawe nagara*	Divided into twenty-five countries
2	*Kawan sawidak lima*	river sixty-five
3	*Mipit kudu amit*	Harvest should ask for permission
4	*Ngala kudu minta*	Taking something should ask for permission
5	*Ngagedag kudu beware*	Doing something must notify
6	*Ngali cikur kudu matur*	Taking Kaempferia galanga must say
7	*Ulah goroh ulah linyok*	Do not talk much and do not lie
8	*Ngadeg kudu sacekna*	The establishment must be firm
9	*Ulah sirik ulah pidik*	Do not be envious do not envy
10	*Ulah ngarusak bangsa jeung nagara*	Do not damage the nation and the country
11	*Gunung teu meunang dilebur*	The mountain should not be destroyed
12	*Lebak teu meunang dirusak*	The valley should not be tampered

(Senoaji, 2010)

Local knowledge, which is a significant part of a society's cultural heritage, influences the attitudes of community members and their efforts to save the environment. This knowledge is not just theoretical; it is practical and actionable. It guides the community's actions and decisions, from the way they farm their land to the way they manage their forests. In Baduy, the conservation of natural resources, such as forests, is not just a responsibility; it is a way of life. The community understands the importance of these resources for their survival and wellbeing. As a result, they have developed strategies and practices to prevent their exploitation. Table 1 shows the principle and philosophy of life in baduy (Senoaji, 2010).

As noted by Surtikanti et al. (2017), local knowledge comprises the information known by the public, which is then put into practice and believed by the community. This knowledge is not static; it evolves over time, adapting to changes in the environment and the community's needs. It is a living body of knowledge that is continually being updated and enriched. In conclusion, the zoning system in Baduy and the local knowledge of its community are powerful tools for environmental conservation. They demonstrate how a deep understanding of the environment, coupled with a commitment to sustainable practices, can help preserve nature and prevent environmental damage. As we face the growing challenges of climate change and environmental degradation, there is much we can learn from the wisdom of the Baduy community.

Research conducted in the watershed of Pahang has revealed that local knowledge and practices are instrumental in managing floods (Isahak, 2017). This finding underscores the importance of local knowledge in mitigating environmental challenges and maintaining ecological balance. Local knowledge is not confined to a particular region; it has the same function in other areas, such as Karimun. An analysis of research data from Karimun shows that the value of conservation and local wisdom is deeply ingrained in the communities and regions. The inhabitants of Karimun observe and maintain the value of conservation and use biological resources wisely. These resources include marine fish, marine life, seaweed, sea turtles, and various types of coral reefs.

The moral character of society significantly influences their adherence to regulations. This is evident in Karimun Jawa, where the community complies with all the regulations in effect (Sudarmin & Pujiastuti, 2015). This compliance is a testament to the community's commitment to conservation and sustainable resource management. Local knowledge is also a crucial part of the Baduy tribe's culture. This knowledge, which is believed and practiced by the Baduy community, helps reduce the risk of flooding. Previous studies have shown that the Baduy tribe still complies with the rules in the form of utterances in getting the Baduy earlier. This compliance is a clear indication of the tribe's dedication to preserving their environment and mitigating the impact of natural disasters.

Local knowledge and wisdom play a crucial role in environmental conservation and sustainable resource management. Whether it's in Baduy, Pahang, or Karimun, these principles guide communities in preserving their environment and using their resources wisely. As we move towards a more sustainable future, the importance of local knowledge and wisdom cannot be overstated. They serve as a beacon, guiding us on the path of environmental conservation and sustainability.

4. Conclusions

The Baduy tribe, indigenous to Indonesia, has developed a unique zoning system to prevent flooding. This system is deeply rooted in their culture and is supported by the utterances of the great-grandfather and the guiding principles of pikukuh karuhun, which shape the Baduy way of life. The zoning system divides the territory into three distinct parts: the upper region, the central region, and the bottom region. Each region has a specific role and set of rules that contribute to the overall goal of flood prevention and environmental conservation. The upper region, which is part of the mountains, is primarily forested. The forest is meticulously maintained, and entry is restricted to prevent careless damage. These forests play a crucial role in controlling the rate of rainwater runoff. They act as natural

sponges, absorbing rainwater and releasing it slowly over time. This process reduces the speed and volume of water flowing downstream, thereby reducing the risk of flooding.

The central region is designated for agriculture. However, the Baduy tribe implements a unique farming principle here. After a year of cultivation, the land is left fallow for three years. During this period, the soil is not hoed, and cassava is not planted. These practices are based on the understanding that plowing and cassava cultivation can damage the soil structure. When cassava is harvested, the soil becomes loose. If it rains during this period, the loose soil can be washed away, leading to land degradation and sedimentation in the river. The bottom region is where the settlements and valleys are located. This region is most vulnerable to flooding, especially if the upper and middle regions are damaged. For instance, if deforestation occurs in the upper region, rainwater can carry soil material to the central and lower regions. This soil material can cause silting of rivers, which disrupts the smooth flow of water. If the water flow is not smooth, it can lead to flooding, affecting the Baduy settlements in the area around the river bottom.

To prevent such scenarios, the Baduy tribe strictly adheres to their zoning system and the associated rules. They understand that the health of the upper and middle regions directly impacts the safety and wellbeing of the people living in the bottom region. Therefore, they strive to protect the forests, practice sustainable farming, and maintain the integrity of their land. In conclusion, the Baduy tribe's zoning system is a testament to their deep understanding of their environment and their commitment to living in harmony with nature. It highlights the importance of local wisdom in managing natural resources and mitigating environmental risks. As we grapple with the increasing threat of climate change and environmental degradation, there is much to learn from the Baduy tribe's sustainable practices and profound respect for nature.

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Biographies of Authors

Nisrinah, Environmental Science, School of Environmental Science, Universitas Indonesia, Central Jakarta, Jakarta 10430, Indonesia

- Email: nisrinah@ui.ac.id
- ORCID: 0000-0003-2627-3755
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A

Herdis Herdiansyah, Lecturer at Environmental Science, School of Environmental Science, Universitas Indonesia, Central Jakarta, Jakarta 10430, Indonesia

- Email: herdis@ui.ac.id
- ORCID: 0000-0003-2684-3551
- Web of Science ResearcherID: K-3075-2019
- Scopus Author ID: 57170905600
- Homepage: https://scholar.ui.ac.id/en/persons/herdis-herdiansyah