

“PENGATAA” AND “NALODO” NATURAL DISASTERS WITH A PHENOMENOLOGY APPROACH IN CENTRAL SULAWESI INDONESIA

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Abstract:

As the largest archipelagic country, Indonesia can potentially have disasters such as volcanic disasters marked by volcanic rings and several earthquake faults that can cause potential earthquakes. Central Sulawesi has the *Palu Koro* earthquake fault, which periodically causes earthquakes. The *Kaili* tribe spread across Central Sulawesi has local wisdom about unified environmental management, particularly the "*Nalodo*" land movement disaster called "*Pengataa*," which contains guidelines for environmental management to minimize the impact on society from disasters such as "*Nalodo*." Research on "*pengataa*" is needed to restore public knowledge on how to minimize and impact disasters. This study aims to reveal the phenomenon of "*Pengataa*" in the *ToKaili* community facing disasters. This study uses a qualitative method with a phenomenological approach. The basis for determining this approach refers to the paradigm put forward by Edmund Husserl, namely the use of awareness of reality and the expression of consciousness behind that reality. This study found the role of local wisdom "*Pengataa*" in minimizing the impact of disasters over a long period and organizing settlements free from the impacts of *Nalodo*.

Keywords: *Pengataa*, life, customary rules, natural disasters (*Nalodo*), *ToKaili*

I. Introduction

This research is motivated by various facts about the impact of natural disasters in the *Nalodo* disaster, which handled human victims in *Palu City*, August 28, 2018, and the uniqueness of *To Kaili's* local wisdom in avoiding the impact of disasters in the region. Forgotten communities in the construction of settlements in the city of *Palu*.

This local wisdom in each ethnic group has an essential role in realizing harmony in the life of the people in Indonesia; research is significant for the business world so that local wisdom does not become extinct and can be used as the basis and basic concept of identity. Settlement and able to reduce the impact of future disasters.

The influence of globalization on local wisdom in Indonesia is so strong that it tends to ignore existing local wisdom, which is the legacy of the Indonesian nation; this tendency causes degradation, even its followers' response from generation to generation. So that the natural disaster that became a natural disaster in 2018 seemed as if it had just happened at that time, but in fact, their ancestors had provided information for a long time through pre-existing local wisdom.

The phenomenon of the natural disaster "*Nalodo*," or an earthquake that causes canals and rolls of the earth to devour settlements that take hundreds and even casualties, shows local wisdom about neglecting settlements in settlement development.

For local wisdom to be re-understood, research on "*Pengataa*" is needed to rediscover knowledge about local wisdom in life that provides opportunities to reduce the impact of natural disasters like *Nalodo* in the future and their results. The results of this research can be published to the public. Share knowledge in today's global era.

Various local wisdom living in Indonesia require categorization and deepening of the ideal settlement system. Based on the views of rural communities and the local values inherent in them, this local wisdom allows it to be integrated or become input for developing a global culture that is currently very strong to be pushed to the countryside.

The acceptance of new values in local culture can be used to improve local culture as long as it does not leave our ancestors' cultural values. It is hoped that the influence of global culture in the community's residential life does not eliminate local cultural characteristics such as the community's local architectural features in various villages. Efforts must be made to maintain distinctive features so that local architecture is maintained. Thus, efforts to combine local culture with global culture require in-depth knowledge of the various local cultural knowledge possessed by each ethnic group so that research and studies provide knowledge about what is behind living culture and how is the process?

Research "*pengataa*" in the *ToKaili* community is an effort to build epistemology (knowledge) and a deeper understanding of life's culture. This understanding and knowledge begin with how *Kaili* determines the ideal place to live in his cultural developments. The study of various settlements ranging from resettlement to permanent settlements is expected to produce knowledge about processes and patterns of behavior and ways of life that continue to develop, and this understanding becomes the basis for the development of science and knowledge. their technology and culture.

So this research aims to find out local wisdom regarding the way to live harmoniously in *ToKaili*? This knowledge must then be used as the basis for developing sustainable settlement patterns present with the characteristics of each tribe.

Thus, the Indonesian nation's diversity nation's diversity can be maintained, and Indonesian ethnic settlements' identity can be seen in the life of each ethnic group in Indonesia. Based on these thoughts, it is essential to research "*Pengataa*" in the *ToKaili* community settlement.

2. Literature review

The literature review in this study is intended as the background of the researcher's knowledge used to capture various phenomena in the field according to this study's needs.

Vernacular Architecture

The term vernacular in architecture, often interpreted as architecture without an architect. The use of the term vernacular is defined as a local language so that in architecture, this term refers to local forms that contain local climate in the physical form of architecture. Such as layout,

structure, ornament details. The term local wisdom in regional languages is related to the economic potential in a variety of building materials and local labor ^[1].

The term vernacular also relates to primitive architecture, such as housing and housing, space, orientation, structure, natural influence, and human behavior. The uniqueness of the vernacular building is applied from generation to generation Utilization of the surrounding environment makes the *ToKaili* home and housing collection one of vernacular architecture. Housing and housing conditions depend on the desire to meet individual needs and accommodate their culture.

They build houses and share houses, such as architects who work as actors to realize their needs so that they become communities that form small settlements in the interior and traditions that local customs and culture.

Community groups continue to hold local wisdom from time to time to realize the house and housing as a place of birth or residence with all the facilities it has. The formation of homes and dwelling in a community is determined based on the implementation stages carried out and not the final results of the work.

Houses and community housing areas through the development of carpentry technology at the time. The initiation process at each stage becomes something that must ensure that no rule violations occur.

The community realizes that tradition must always be a priority in building houses and housing so that work begins with rituals to achieve its goals. ^[2]

His development process's execution is generally determined from generation to generation or based on agreements related to local orientation so that what will be similar, although not entirely the same. The local orientation in vernacular architecture (native Village) explains three things: place, people, and period as a kind of architecture, so local direction becomes a keyword.

Thus native villages are also sent to local communities or local villages because they can grow, develop, assimilate naturally, and continue to grow until now.

The native Village grows and is born from such ethnic communities and ethnic traditions. Hence, it is always in line with the understanding of cosmology, outlook on life, and a lifestyle that has a unique appearance and an innovative reflection of one's identity.

The function of norms, customs, culture, climate, and the potential of local materials that have received 'recognition' due to a long journey of experience (trial and error).

The birth of forms containing "Local genius" brought the values of "identity" made as "folk architecture," which was then called vernacular architecture. Vernacular architecture has strong characteristics by cosmological thinking and the style of life of its people.

Something essential to have a vernacular architecture or native villages is the ecological value reactive to the environment. It always refers to economic potentials, abilities and skills,

practical knowledge, and traditional techniques that are usually carried out alone or assisted by relatives/community.

Local culture

Local wisdom of a community is an effort to find solutions that solve the problems of a harmonious life and tend to be dominant, attractive, or magnetic elements and have an attraction or glue. Residential areas have characteristics that, through physical conditions, the environment such as topography, geology, and non-physical conditions. The role of culture, society's social life, becomes a stable and patterned system if carried out correctly. Community efforts to create harmonious and patterned conditions are inseparable from the history of society's development from generation to generation.

Another aspect of settlements is that settlements are part of a large area that functions as a central group and is a source of interpretation of a site, land or plot. Change the local values contained in local wisdom into a place where people live.

Some environments that have natural characteristics and specific spatial structures are plain spaces, valley spaces, and pool spaces (basins). These spaces with natural elements, such as topography with rocks, plants, and water, which are owned and perfected by orientation, have a relationship between the site with light, places with the weather, and natural conditions microclimate. Settlement exists because there are people who know the culture and coincide with human civilization or culture. (Yusrannn 2016) ^{3}

The construction and shape of the house as embodiments of the cultural values of the community. The house as a shelter or a place for humans to deal with climate and weather conditions (hot, cold, rain, and wind). Subsequent views revealed that some communities had formed shared houses such as architects who work as workers.

Tribal worshipers make their homes and buildings traditionally, and they work together to adopt habits in the local natural environment.

Communities that agree to a place of residence tend to apply cultural and customary provisions that they apply from time to time or from generation to generation and consider it a place of birth or hometown ^{4}

The concept of sustainable Pragmatism planning

The rapid development of the concept of pragmatism planning in the planning dimension provides an opportunity for several experts to debate. Debates that occur related to the concept of pragmatic planning and generate several opinions Some opinions express the idea of pragmatism, which represents the influence of practical philosophy of developing theories about nature, purpose, and methods of planning. The main contributions of the pragmatic and "neo-pragmatic" philosophers illustrate that identifying the influence of pragmatism on the initial concept of planning as a rational process is the perspective of Friedman, Lincoln, and Schom. Perspectives reveal the development of "critical pragmatism"; and other planning theory contributions in the 1980s and 1990s. What shows the importance of identifying practical ideas that emphasize the planning dimension as a possible social learning activity,

and which must utilize human capacity to enhance critical transformation in the public sphere?
[5]

Philosophical pragmatism as a conceptual pillar for design thinking contributes to a broader line of thinking about how the main concepts of design thinking resonate. Argue that there is a large degree of convergence between practical perspectives and design thinking.

Pragmatism offers an articulation of well-developed and coherent concerns about the importance of the concept of pragmatism for designing thought. On the other hand, pragmatic perspectives can only be valuable at a theoretical and practical level.

At the theoretical level, pragmatism informs and inspires the development of design discourse. While at the practical level, pragmatic concepts can inform and guide buildings' design and help understand and manage the design process. (Dalsgaard 2014) [6]

Thinking about code, coding for design can obscure the construction of a holistic. The dichotomy is a classic that was recognized more than a century ago by the pragmatic philosopher William James, his mind who thought hard and soft-minded, or in this case, who believed in more and better information to overcome the challenges of sustainability and who relied on strength, from some sounds. [7]

He then argues that the sustainable development approach to the philosophy of pragmatism as a means to connect hard and soft perspectives with sustainability planning, policy, and action. After detailing how hard and soft-minded temperaments among proponents of sustainability are translated into various understandings and initiatives, pragmatic frameworks for holistic sustainability planning and the proposed set of policies. [8]

Shows that this framework on an understanding of pragmatic theories about truth and rationality, integration, and fundamental processes in action. And human experience as a test of public values and priority actions.

This opinion contributes to the evolution, which refers to pragmatic philosophy, which connects with more work in environmental philosophy and highlights the usefulness of pragmatism in building a sustainable development philosophy. Planners and members of democratic societies work towards a common understanding, which is a continuous process of communication and interaction between citizens and experts that needs to promote sustainable development. [9]

That knowledge must be generated and tested in public. Alongside scientific models and statistics, essential steps towards sustainability can result in the overall planning profession. In terms of psychology, his desire to reason and work hard among individuals makes everything perfectly fit their position. Hard work done is one aspect that encourages rational understanding.

The concept of meeting needs is the perfect initial spirit in dealing with the demands of work, which then encourages the birth of needs that succeed in creating new ideas. [10]

It is encouraged not only to receive material rewards but also to achieve inner satisfaction. Thus poverty and underdevelopment in society are caused by the environment, which is a virus that needs to excel.

3. METHODOLOGY

The selection of qualitative methods with a phenomenological approach refers to the real conditions of the *ToKaili* people who do not have a written culture, only a speech culture, and have rules and customs of unwritten cultural traditions. So it requires a different action.

In gathering information, several instruments such as observation, images independent of observation tools to reveal empirical reality, and comments that reveal these reasons. S-depth views that reveal the phenomena behind the empirical reality or transcendental reality, and analytical procedures and analysis results found high reliability based on three parameters—ethical reduction, phenomenological reduction, and transcendental reduction.

Reducing ethics is a consideration to explore information that gives birth to various empirical themes that can be achieved through object awareness and identification awareness. Phenomenological reduction aims to explore these themes by exploring the interaction of themes, which is continued by building the concepts in them, and transcendental reduction designs the essence of ideas that lead to the initial (non-generalizable) formation theories.

Research with the phenomenological paradigm used in this study refers to Edmund Husserl's view, which emphasizes intentionalism (conscious), which produces conscious objective awareness because deliberate objects will only appear when supporting data (Phyletic Data) or empirical reality. The objective function of objective awareness and identification awareness is to connect objects and data to find their validity.

Human perceptions and activities have different awareness, such as awareness in thinking and doubt, which require identification awareness to direct various data from certain events.

The depth recognition is found in an object with various aspects such as motivation, interest, and involvement as a guide. The goal is that an identical object that meets the reliability requirements is needed. If no goal meets the requirements, it causes the goal to become a "sensation" or something that can be seen but has no meaning.

Correlation awareness is the view of identical objects with one another; The pair of relationships between the front view and the side view of the two forms an inseparable whole, indicating a degree of intimate connection that forms the basis of developing themes.

Object connectivity provides an opportunity for subjects to experience similar events at a later date. Correlation/connection means that identical objects will always overshadow the prospect of an object to be explored further towards institutional awareness that can construct a theme-theme into something that shows the reality behind empirical reality and becomes a concept.

FINDINGS AND DISCUSSION

Findings

Indonesia, which has various potential for natural disasters caused by various potential areas that store various disaster resources; the ring of fire in a cluster of islands in Indonesia is one of the potential disasters in volcanic eruptions scattered in various islands Indonesia. Potential disasters are also caused by the presence of so many earthquake faults on the existing islands; one of the active earthquake faults and periodically produces tectonic earthquakes, and other earthquakes are found in Central Sulawesi; this quake fault is known as the *Palu Koro* fault.

Frequent earthquakes occur in Indonesia, causing the tribes who inhabit the islands to have a variety of local wisdom that is generated to avoid a significant impact on the people who live.

Knowledge in the form of local wisdom about efforts to minimize natural disasters in every ethnic group in Indonesia is owned by the various tribes that exist and the local wisdom. That is owned has the same in overcoming, and local conditions determine the differences. So the knowledge of each group cannot be equated. A society with one another,

This research is expected to become basic knowledge in the form of background knowledge that can help researchers see various perspectives of each tribe to minimize the impact of natural disasters and build harmonious settlements, especially the tribes that are the object of research.

The research results on "*Pengataa*" in the *ToKaili* settlement show: the process of forming the settlement was intended to find the ideal location and minimize the impact of natural disasters that often occur in the Central Sulawesi region. Based on the mini-tour results and the grand tour carried out, it found a long process, and it has stages consisting of a study of empirical reality and a study of the reality behind the empirical, which can be described as follows.

Empirical Reality Awareness Study

The results of the analysis conducted show that there are several findings of empirical reality related to the seismicity that occurred, which gave birth to the type of living space, settlement procedures, customary rules, and settlement patterns which are the main findings so that the focus of discussion is directed at *ToKaili* to minimize the impact of natural disasters on residential behavior. , so that the process of living *ToKaili* finds a balance point of residence or finds living harmony.

The basis used in finding the periodicity of settlements in the *To Kaili* community begins with the *ToKaili* community's belief and trust in the Macrocosms regulations. These rules are expressed through the natural classification of the universe, which has become the *ToKaili* people's understanding or belief from generation to generation. The classification consists of belief in the existence of an upper, middle, and lower realm. What is believed to be the embodiment of various lives that led the *ToKaili* people to find ideal living patterns according to their era?

The upper realm explains that the upper realm is believed to be the place where the spirits of their ancestors who have good behavior reside during their life so that temporarily these spirits

occupy the upper realm as a temporary place which then goes to the afterlife. Meanwhile, the explanation of the belief in the middle realm shows that the middle world is believed to be a place where humans develop their lives while in this world so that in *ToKaili's* belief, humans should only occupy the middle realm. The explanation of the underworld into *Kaili's* view is believed to be the place where ancestral spirits reside who during his life has lousy behavior so that the spirit is carried away by the water and is in the lower realm and joins other creatures such as jinn and demons who are believed to occupy the lower realms. Understanding the underworld that is meant by *ToKaili* is a wet area and several areas around the wet area; see Figure 1.

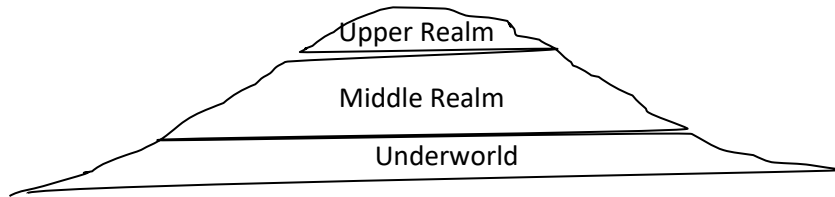


Figure 1, Hierarchy of macrocosms according to *ToKaili*

The belief in the three realms' division shows the manifestation of a harmonious life among humans and the rulers of nature (the upper realm) based on *To Kaili's* belief in the upper realm as a sustenance source protecting them from various disasters. The upper realm consists of three spaces, namely the space for the rulers of nature (*wanangiki*) who are lethargic at the top of the mountain and believed to be the place for good spirits and angels, then the space between the upper realm and human activities in the form of dense forest (core forest) which becomes a forbidden forest against humans. There is a transitional space called *Pangale* and *pahawa pongko*; in the *Pangale* area, humans can take forest products in the form of animals that are contained therein but are not empowered to destroy them, for example, by cutting down trees in it. That what can be taken is in the form of animals that are in it and other forest products in the form of resin and the *pahawa pongko* area, humans are required to take wood that is used to make a place to live with various conditions, for example, to take tree trunks it is not allowed to cut down at the base of the tree. Still, it must be cut down the minimum set in above the human head, so a bench (*pongko*) is needed as a place to stand when cutting down.

The middle realm consists of three spaces that have different functions. According to *ToKaili's* belief, humans occupy the middle realm having several rooms with the same designation. Still, the allocation is based on the process of human life development called *Oma*. The three spaces are 1) *Oma Ntua*, which is the first room used as a nomadic residence, in this space lives for a certain period and lives and lives in trees or caves around it. 1) *Oma Ntua* is located under *Oma Ntua* and is still used as a place to live nomadically. 2) *OmaNgiki* in this space, *Tokaili* develops settlements by introducing various forms of residence. Such as *Torowau* or shelter from rain and hot sun, made of leaves supported by four poles as a support, and *Bamaru Ncamali* is used as a shelter or a very simple and a development from *Torowau*, the difference is that *Bamarun Ncamali* has wooden bale used as a resting place. 3) *Oma Nguku*, in this room *ToKaili* has a longer residence time than the two previous rooms, and they already know the group leader, but still live on a mobile basis; in this room, *ToKaili* develops a residence which they call *Bolanoa* as the residence of the leader them, and *Bolawo* is the residence of the community he

leads. Usually, they build a building group consisting of one *Totua* (leader) house and several married children's houses.

Underworld, located at the foot of a mountain or hill, which is generally a valley adjacent to inundated areas such as swamps, lakes, lakes, and rivers that flow to the estuary or sea, the natural area below is divided into two, namely areas that are not flooded and areas that are always. Inundated by water, this area is believed to be inhabited by their ancestors' evil spirits and other spirits such as demons and jinn, so this area is forbidden *toKaili's* group. Subsequent developments, with the advancement of culture and technology, the prohibition against the underworld changed understanding so that it turned into a permanent residence. This change occurred because of various customary rules that gave *ToKaili* space to compromise with the underworld inhabitants through a series of rituals as an antidote to various disturbances and the influence of evil spirits or demons and jinn.

4.1.1.1. Periodization of Residing *ToKaili*

The development of culture, knowledge, and technology in the *Kaili* community makes *Pengataa* an embodiment of the settlement system; it is essential to know its development phases. These phases are related to life behavior, and *Kaili's* efforts to meet life needs from time to time continue to increase. The change process *ToKaili* indicates this. Initially, *ToKaili* was a very individualistic society and lived in tiny numbers (nuclear family) and spread everywhere. It became a more extensive community group that needed a place to live or say. These changes occur, showing a period that shows the period of cultural development, which shows that *ToKaili* has a culture of openness that allows the entry of other cultures into the community group. This process shows that the *Kaili* community has periodically settled about *Pengataa*. Changes in society's condition from closed to open society allow the formation of new words that are more developed than before. So that *pengataa* is identified with the form of the settlement system's periodicity, which can be explained as follows.

4.1.1.2. The Early Period of Getting to Know the *ToKaili* Community Settlements

The analysis shows that the *ToKaili* people believe that nature consists of three parts, namely: the upper or upper realm, the middle realm, and the lower realm as described above. The middle realm is a space that is believed to be a place where humans organize and organize and manage to fulfill their needs as long as they live, and the underworld is a space that always brings disaster and is forbidden to humans. Belief is a place to reside non-human spirits and evil spirits rejected in the upper realm and a space that tends to disturb humans, making it a forbidden space in human view.

The division of the middle realm, which is believed to be a place for humans to fulfill their needs, is a realm that is not a space used by humans to live. As a place for humans to live their lives and fulfill their needs, it is called *Oma*. The understanding of '*Oma*' as a place of moving (nomadic) residence has three phases, namely: 1) '*Oma N Tua*', which is the place used by *To Kali* to carry out the process of shifting rotation, and because the group is small and the land area is so large that It takes a relatively long time, between 15 to 25 years they return to their original settlement location, 2) '*Oma Ngiki*' is the place used by *ToKaili* to undergo a residential rotation process, which is located *under Oma Ntua*, the rotation process that occurs requires 5

to 15 years for one rotation period, 3) '*Oma Nguku*' is the place used by *ToKaili* to carry out the residential rotation process and is located under *Oma Ngiki*, the rotation process in this area takes between 3 to 5 years, because of the length of stay in a place relatively more prolonged than in some previous places, and a relatively smaller home range due to society at *ToKaili* has been divided into several groups with the size of each area, and in this area the settlement pattern has progressed to temporary settlement, meaning that they already have the facilities and infrastructure that are used at certain times to gather to then spread to meet their needs get to know their Group leader.

4.1.1.3. Duration of *ToKaili* settlement development

The period of development started from the middle realm, from *Oma Nguku*, who introduced temporary living. So they have found several forms of buildings used for gathering called balls or buildings used by the group leader to live and at the same time as a gathering place for all group members and group members who come to occupy the house they call *Bolawo*, after that. They gather to perform rituals together; they return to their respective places to meet their daily needs; the place used as a gathering place is '*Balingkae*' or the transition area from the middle realm to the lower realm; this area is not *ToKaili*. These areas and areas are valley areas associated with rivers, lakes, or rash, which are damp areas throughout the year and are believed to be the dwelling places for spirits such as jinn and demons. The Tokai culture continues to develop due *ToKaili's* interaction with various immigrants under their own culture. This intervention has made *ToKaili* experience cultural and technological changes. It changes the perspective of '*Balingkae*' into permanent residence in the *ToKaili* Area with various customary rules that must be obeyed to make use of it.

The customary rules agreed by *ToKaili* are based on *ToKaili's* view, which believes that '*Balingkae*' is a place inhabited by spirits so that humans if they are to occupy the area, must perform various forms of ritual as a form of requesting permission to occupy collectively and not interfere with each other.

Settlement in *ToKaili's* perception as a container used by ToKaili to fulfill their daily needs individually or in groups with various needs is one step in developing *ToKaili* culture. This development gave birth to the notion of settlements as permanent residences called Ngata, while *pengataa* was an area or area that could be used for living.

ToKaili's cultural change is influenced by various sources, including internal and external influences. Internal influence focuses on how *Tokaili* builds a relationship between humans and humans (*Hintuvu*), "*Hintuvu*," which creates social networks and becomes social capital for the *Tokaili* community in determining a suitable location to serve as a residential location (*pengataa*). Initially, social networks are a small group of families. They are exclusive or closed; the subsequent development of *ToKaili's* social capital and external influences caused *ToKaili's* exclusive nature to evolve and develop into larger groups and form larger groups with an ever-evolving pattern. There are still groups of people who have an exclusionary attitude in some groups, such as the '*Wana*' community or small indigenous groups in the mountains around the valley in Central Sulawesi.

ToKaili, the process of cultural evolution gave birth to several settlement patterns, namely migratory settlement patterns, initially migratory patterns, semi-migratory settlement patterns, and permanent settlement patterns.

Thus, this development period attempts to enter a sedentary period with various development needs that characterize and demand in building and determining the ideal settlement location. This development period is characterized by shorter rotational periods of displacement and more extended periods of stay in relatively longer residential locations and dwellings that tend to approach valleys or confined areas and housing forms that develop into *Bola*, *Lobo*, *duhungan*, or *Baruga* as a gathering place. , *Bolawo* for group leaders and *Bolanoa* for indigenous peoples.

4.1.1.4. Period of Settlement by gazing

The development of *Kaili's* culture, which continues to evolve, gave birth to several residence periods that continued to change due to culture, knowledge, and technology. The previous period of residence shows a change in perspective and a change in needs. The beginning of the change started from a primitive perspective that considers nature controlled by natural authorities who can turn things around so that humans cannot make changes; such a view is known as primitive epistemology. Then *ToKaili* begins to know that this nature can be processed to meet his life's needs, various knowledge gained by trying and trying to form a belief in the benefits of these changes and establishing various customary rules that gave birth to traditional epistemology. Entering the rational view influences the traditional view so that the development of settlements is more to fulfill basic needs and avoid calamities that are believed to come from natural rulers due to human behavior. Develop into basic needs that can be met through the human ability to do biological engineering. This rational view then provides an opportunity for the birth of engineering that comes from changes in knowledge, culture, and technology. Thus the change in perspective led *ToKaili* to develop customary rules as a frame for *ToKaili's* life.

The change in the perspective of *ToKaili* gave birth to a change in the way of living. If the previous stage was introduced to early settlement and semi-permanent settlement, the permanent settlement method is introduced. Some of the characteristics of permanent settlements that are found are customary rules that are getting more complex and binding all communities within the scope of customary rules; group life is increasingly developing to increase their knowledge and culture and technology. This process gave rise to a modern epistemology that prioritizes rationalization. Another characteristic is the emergence of a culture of *Pengayuan* or fighting between groups indicating that there has been a power struggle between groups that have occurred so that the community is divided into two groups, namely the *Madika* group (capable group) and the *watau* group (low group) or slaves.

In this period, the people of *Kaili* started to know to live permanently. They began to build community groups starting with building *Sou* (a house consisting of 5 to 10 building units), then several *sou* yang's equipped with a *Boya* ball (village). This phase begins to form leaders through customary agreements and establishing family representatives (*Totua Bola*). Some of the *Boya* in concert formed *Ngata* (village). Some *Ngata* formed *Ngata Bete* or large villages

which had more complex traditional leadership and consisted of *Jagugu* as the spiritual leader, *Tina Ngata* as the ruler who owned the village, *Maradika* as the executor of leadership in the community, and *Pabicara* as an interpreter who connects leaders and society and is equipped with *Totua Ngata* as an institution that controls leadership.

After the traditional leadership phase, it was then developed into current leadership, which was influenced by the entry of culture and knowledge from outside, which introduced new forms of leadership such as kings and forms of social strata such as aristocrats in *Kaili* society, which led to the development of the big kampong into the royal territory. This development then gave birth to 7 kingdoms in the west and eight kingdoms in the east of the *Kaili* region in Central Sulawesi.

The development phase of living permanently shows that the community is increasingly open and impacts changing views of family formation patterns; previously, the family was built in so that a closed family was formed. The subsequent development of customary agreements prohibiting endogamy marriages by giving privileges to women as land rulers provided that married people are not allowed to leave the village, this is seen in the customary rules that determine the law of inheritance in the *ToKaili* society, which determines that women receive an immovable inheritance in the form of houses and land. Men will inherit in the form of pets.

4.1.2. The Study of Consciousness Behind Reality (Transcendental Awareness)

Based on the results of empirical studies, it shows that several terms are the principles of *Tokaili's* life in achieving a harmonious life; the principles of life are customary rules or local wisdom that have become the guidelines for life in tracing their behavior so far. The three principles of life are *Pahakovia*, *Hintuvu*, and *Katuvua*, which are explained as follows.

4.1.2.1. *Pehakovia*

Pehakovia by *Tokaili* embodies the relationship between humans and rulers of nature, which manifested by respect for their ancestors, a source of happiness and sustenance for *ToKaili*. The realistic implementation of *pehakovia* in the form of an upper nature consisting of mountain peaks (*wanangiki*) as a place for the *ToKaili's* ancestral spirits to reside, for which there is a forest surrounded by dense forest that humans cannot enter is called *wana*. Moreover, in the next area, it is called *pangale*, as the forest is used as a source of protein like *ToKaili* because humans can only enter the *pangale* area to hunt animals for consumption. Based on the description above, the natural area above is called the positive forbidden area.

ToKaili's belief in the influence of *pehakovia* in preventing humans from various disasters and sustenance sources, its existence is also manifested in the house by placing offerings on the top under the roof so that residents avoid disasters and the consequences continue to increase.

Pehakovia is also used as a communication process with natural authorities if people experience various problems, such as illness, or the result of their marriage that has never been given a child or child. Ritual = a ritual that is usually held by calling the ancestors' spirits and communicating with them so that illness or residents are healed, and families who have not been given children are filled with their desires.

Thus the existence of the upper realm in the reality of *ToKaili's* life is essential, very influential in the development of *ToKaili's* life from time to time.

4.1.2.2. *Hintuvu*

Hintuvu is implemented as a relationship between human beings, which occurs in the *pangele* region as the area between *Pehakovia* and *hintuvu*, the *pahawapongko* area as a production forest, which *Tokali* uses as a source of living life, *Oma* which consists of *Oma Ntua*, *OmaNgiki* and *Oma Nguku* where he lives *ToKaili* starting from nomad end or permanently.

In this *Hintuvu*, various developments or customary traditions are to create a harmonious relationship between each other. The customary rules in question, such as rules governing social manners, procedures for utilizing forest potential, procedures for the land organization, and procedures for managing the surrounding environment, all of which are grouped with the term *Vaya*, which means a collection of rules that are used by *Totua* or customary leaders in the community for the development of social capital in *ToKaili* community.

Besides *Vaya Totua*, it is also equipped with a set of rules used to carry out the customary rules known as *Mogane*.

Mogane has a structure of implementing rules with the first stage called *digane*, *digane* means to carry out investigations and investigations to determine the suspect and then *digivu* which means being tried to impose a fine that must be charged as retribution for the wrong done, in *sompo* is the payment of a fine for the wrongdoing.

Pumping is carried out by handing over fines to victims of mistakes in front of the community and *totua* or *totua* if related to nature's destruction. The process of *sompo* is carried out in front of the community, and *totua* ends a meal together, which shows that the person concerned is free from the fines imposed on him.

The *mogane* mechanism is a customary rule that is ready for everything to be done, such as *pehakovia*, *hintuvu*, and *katuvua*.

4.1.2.3. *Katuvua*

Katuvua is understood as nature that is related to human relations with the surrounding environment. *katuvua* is also applied as *ToKaili's* human effort in preserving the surrounding natural environment. *Kaili* is free from various disasters they often face, such as landslides, flash floods, tectonic earthquakes, and disasters. Land displacement, which is also called *Nalodo*.

Katuvua in the *ToKaili* community is implemented in addition to preservation and prevention of the impact of disasters. also applies it as a negative forbidden area, because of the impact that humans might receive when they are wrong's organization. Thus to warn against this possibility, the customary agreement stipulates that *Katuvua* is a negative forbidden area, which have the risk of being hit by a disaster if they break it.

4.2. Discussion

Based on the findings of empirical or transcendental findings, there is something powerful in ordering *Kaili's* life in managing social networks and managing nature and its environment, and not forgetting to build relationships with the rulers of nature so that life is always believed to find life harmony.

The empirical reality shows that *ToKaili* has zones which are designated areas that are very firm and embodied with slogans that indicate the position of the region and how to use the area, for example, the upper nature or the positive forbidden area they call *pehakovia*, which shows how *ToKaili* builds relations with the authorities. The rulers of nature always protect nature with their life belief and always gets the blessing of every effort in their life to achieve life harmony.

The next zone is the middle natural zone, a zone designated for human life, amid all the necessities of human life being prepared, but obtaining it requires sufficient knowledge to fulfill human life needs.

Humans' managing nature is carried out by trial and error or trial and error; this is due to very minimal knowledge. This un description prose is slowly based on the development of culture and knowledge due to the acculturation process with immigrants who enter the *ToKaili* area, causing their description increase and land management develop according to their evolving needs.

Tokaili's fighting is increasingly advanced with changes in environmental conditions that continue to occur due to catastrophic events that result in the natural zone (*katuvua*); *Tokaili* divides it into two: areas that can be used for living and areas that are prohibited from settling. A residential area has a stable soil structure; for example, on a hill, the soil structure is unstable, while the area prohibited from living is an area where the soil structure is unstable.

5. Conclusions and suggestions

5.1. Conclusion.

Based on the analysis results, the choice of words is part of the *Katuva* principle regarding the procedures for determining the *ToKaili* settlement location free from the impact of disasters, especially the *Nalodo* disaster, which is very much a disaster that often occurs. It happens and has an exact cycle.

The importance of reviewing the wording is expected to warn the current generation who has forgotten the inhabited area's character so that the local wisdom inherited from *ToKaili's* ancestors cannot be ignored or abandoned.

Local wisdom is neglected by the assumption that science has developed. Simultaneously, the area's history is unknown, has a terrible impact, such as what happened in the *Nalodo* earthquake on September 28, 2018, which claimed many victims and casualties. material loss is also huge

Pengataa must be seen as a knowledge process (epistemology) for the *Kaili* community, which begins with local wisdom, which is equated as an epistemology of free description and must be developed towards a discretionary epistemology.

The free description is interpreted as *ToKaili's* attempt to find the ideal settlement pattern through a trial and error process agreed upon at that time. Meanwhile, continuous change is an evolutionary process by developing culture and knowledge possessed by a society. Local wisdom born from this process belongs to each community or ethnic group if it continues to develop by developing knowledge and does not leave or ignore it. Therefore, it is unwise and unwise if the development of a community is done by eliminating local wisdom and replacing it with the foreign culture, which can be done with a combination of local and global cultures. Hence, it is wise to use local wisdom. Re-articulated to adjust to the global culture that continues to develop to be very wise and wise there.

5.2. Suggestion

This research is not the final result of the actual research, so referring to this research, various studies must be conducted on indigenous peoples or other ethnic groups, so that knowledge will be found about the diversity of efforts to minimize the impact of disasters. underlies how to build community settlements in Indonesia.

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