

# Disaster Mitigation on Indigenous People

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**Abstract.** The aim of this study is analyze the local wisdom of disaster mitigation of people in Kuta Village. Kuta is a hometown community of indigenous peoples who still firmly run the ancestral traditions, customs and Chairman Kuncen position is very important in controlling the implementation of the heritage tradition. This study using qualitative method which to describe and reveal the meaning about the tradition of people in Kuta Village. In the tradition of qualitative research known terminology as a kind of case study research. The case study is defined as methods or strategies in qualitative research to uncover the specific cases. Data collection was done through observation and interview. The result of this study shows that the ancestral tradition of the community of hometown Kuta filled with wisdom in treating nature, in accordance with the tradition of the ecological condition of the hometown Kuta. Preventive efforts conducted by the disaster mitigation Kuncen and custom Chair delivered through indigenous ceremonies, which contains advice-advice in order for community pikukuh kanu adat, so hometown Kuta to avoid disaster.

## 1. Introduction

The aim of studied some natural disasters in Indonesia to develop ideas on how to minimize health risks following natural disasters and to ensure good quality of life for people [1]. A community is a social unity or unit are organized in groups with common interests (communities of common interest), both of which are functional and have territorial. The term community in a certain boundaries can refer to the citizens of a village (hometown), villages, cities, tribes or Nations. In the perspective of Sociology of communities can be distinguished from the broader society (society) through the depth of the joint attention (a community of interest), or by a high level of interaction (an attachment community). The members of the community have shared needs (common needs) [2]. Any community is meant as a human group that inhabit a particular area with all the ties and norms in it to achieve the same goal, they not only share our knowledge but also skills. The term *gemeinschaft* (community) and *gesellschaft* (society) to elaborate on how human beings relate to other human beings [3].

Generally a cultures have the same communities, culture is understood as a way of life that developed and owned by an indigenous community and passed down from generation to generation. Cultural is copyright, works and *karsa*. Each nation's culture, and culture of each nation [4]. A form of culture in numbers much, is divided into several cultural element that universally among others are belief systems (religion), knowledge systems, a livelihood, equipment and fixtures, societal systems human life, language, and the arts. The existence of a community will not be detached from the natural environment, where they inhabit orally, they are very understanding its ecological environment, so that they treat the environment ecological intelligently. In his view of the universe is not the only source of



exploitation but as the home of living together which continue to be protected, cared for, and laid out, because people must have a responsibility towards nature and other living beings, with emphasis on principles of morally regulating how humans manage or use natural resources and the environment. Humans become a factor that plays an important role. In this case, how human beings position themselves against the natural surroundings including components of other living beings. Conception of ecological intelligence meant not only by the ability of the community who are adept at observing their surroundings but includes science that its principles are applied to understand the dynamic that goes from small to global scale.

It is the ecological understanding of organisms and their ecosystems. Ecological intelligence himself made man can apply what humans learn about due to human activities so that ecosystems can mitigate against the damage [5]. Ecological intelligence, allowing to understand the system in all its complexity as well as the link between nature and man. The four levels in ecological intelligence, namely (1) identify the components of the ecosystem, either biotic or abiotic component; (2) understand the function and usefulness of each component in the ecosystem; (3) understand the nature and environment management system; (4) understand and capable of running the prevailing values in ecological systems. In relation to the community's traditional ecological ethics of the universe is not just a source of exploitation but as the home of living together which continue to be protected, cared for, and styled [6]. This ecological intelligence, desires a man to apply what he had learned and experienced firsthand about the relationship of human activity with the ecosystem. The ecological intelligence of forging human emotions, to organize his thoughts and actions in addressing the visible universe. Ecological intelligence poured in the form of attitude and behavior of real ecological capacity into consideration, and gave birth to the attitude of the human landscape with arif [4]. Conception of ecological intelligence meant not only by the ability of residents of the Outback (original) are adept at observing their surroundings but includes his principles of science. Ecological intelligence allows to understand the system in all its complexity as well as the link between nature and man. This ecological intelligence term call it "local wisdom insightful ecology"[5]. Well-maintained local wisdom has been going through the interaction with the outside world and experiencing acculturation with culture outside their culture, because local wisdom preserved by tradition and customs that they still run and comply with them. In this case says that [7]:

Wisdom-local wisdom in society can be found in the song, saying, sasanti, tip, alarm, and ancient books that are inherent in everyday behavior. More local wisdom describes one specific phenomenon that usually would be the hallmark of a community group. Social Ministry defines local wisdom as philosophy of life and knowledge as well as many disembodied life strategy activities conducted by local communities in answering the various problems in the fulfillment of their needs [8]. Local wisdom is views and traditional knowledge into referrers in behave and have practiced orally to meet the needs and challenges in the life of a society. The experience has taught them how to water, trees, and other natural resources should be used in accordance with needs and help them survive for a long time [6,7]. Local wisdom is the legacy of the ancestors in the form of culture, in the form of corporate values that coalesce in the form of religion and customs. Interpretation about the local wisdom is identical to the "labelling" or characteristic of a particular society and described in variable. Local wisdom is the ideas of the local (local) which is full of wisdom, discernment, good-value embedded and followed by the member society [9]. One form of local wisdom in obeying the Sundanese "pamali" (taboos) is already known and done in generations, since hundreds of years ago. Local wisdom is a Sundanese belief about spiritual belief against their ancestors and evolved into norm governing the behaviour of the public. With regard to local wisdom, one of the interesting customs to hometown examined more deeply is the hometown of Kuta which is located in Karangpaningal Village, Sub district Tambaksari, Ciamis Regency, West Java. This village is known to have great respect for the heritage of his forefathers. Pamali or taboos ever known in his hometown community of Kuta. In the community of hometown Kuta pamali or taboo revealed in phrases that are the main principles expressed *kuncen* and indigenous customary rules as Chairman of which must be observed and is believed to be the truth. In the community of hometown Kuta local wisdom is done wisely, for

example; the tree has its benefits as a good source for firewood, certain plants contain substances of drugs, foods, dyes, etc. This means that the plant is the source of life, and then continually maintained through local wisdom [8]. By developing a system to materialize the idea of wisdom, social systems and equipment, which are guided by the customary norm in managing the environment so that life would be aligned. Doing so will minimize the occurrence of the damage of nature which affects the appearance of disaster, thus local wisdom and disaster mitigation is a concept that cannot be separated.

As the wrong attitude of local wisdom, mitigation the disaster conducted by traditional communities, which in general preventive. So that traditional communities in disaster mitigation is defined as the efforts made to prevent disasters or to mitigate the effects of disaster. The real disaster mitigation related to the cycle of disaster relief efforts in the form of handling before the occurrence of the disaster [8]. But according to the decision of the Minister of Internal Affairs RI No. 131 year 2003, mitigation (defined as domestication), namely efforts and activities undertaken to mitigate and minimize the consequences brought about by the disaster which includes preparedness and vigilance. The study of local wisdom and traditional communities on disaster mitigation in Indonesia related to natural resources and human resources. In view of the traditional community of man and nature is a unity because both are equally the creation of Almighty. Nature and man are believed to share the spirit. Nature can become friendly if humans treat in arif and vice versa will be mad if ruin it. In General, traditional communities that neighbourhoods surrounding some have inherited it and apart from humans. Therefore, human beings who dwell around them must respect and preserve their places, such as forests, mountains, valleys and water sources. Not even a little bit of the places made sacred or sacred place [7]. Local wisdom is owned by the people of hometown Kuta, they treat nature with earthy, compliance with Customs (pikukuh) is a form of preventive disaster mitigation hometown Kuta.

The research objectives of this study there are:

- To understand the meaning of the Community Customs pikukuh kanu adat hometown Kuta.
- To know the efforts of indigenous and Chairman in *kuncen* run custom rules that have a value of mitigation disaster.
- To know the knowledge society hometown Kuta about mitigation disaster.
- To understand the shape of local wisdom that has a value of mitigation disaster in the hometown Kuta.

## 2. Methods

This research was done with a qualitative approach using methods of case studies (case study). In the tradition of qualitative research known terminology as a kind of case study research. The case study is defined as methods or strategies in qualitative research to uncover the specific cases. There is also another sense that is the result of a research of a particular case, states that, research on case study research is not a methodological, but an option to search for cases that need to be examined. The existence of a case in this research is the cause of the required research case studies [2].

The focus of the case studies is the specification of the case in an event that encompasses either cultural groups or individuals, a portrait of life [10]. Some of the characteristics of a case study according to Creswell, namely:

(1) identify the "case" for a study; (2) the case is a "system-bound" by time and place; (3) case studies using various sources of information in the collection of data to give an overview in detail and depth about the response of an event; and (4) using a case study approach, researchers would "spend some time" in describing the context or setting to a case [10].

The case study is an in-depth research about the individual, a group, within a specified time. Objective to obtain an intact and profound task of an entity. Case study generates data for further analyzed to produce theory. As the procedure of obtaining qualitative research data, data obtained from the case study interviews, observation, and archives. The case study method according to [6] that:

The case study is testing in detail against a background or one person subject or one document storage or one particular event. Based on the limit it is understood that limitation of the case study include: first, the goal of her research can be a human, events, background, and documents; and second, the targets were investigated in depth as a totality in accordance with background or context respectively with a view to understanding the various relationship that exists among the variables from.

Some limitations of the object can be referred to as the ' case studies ' are: first, the Opinions expressed says that [5], many studies that have followed the structure but not worth mentioning as a research case study, because it is not done thoroughly and deeply. The case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; When the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used [11]. According to the two opinions it can be concluded that, research the case study is a research method which specifically investigates a contemporary phenomenon which occurs in the context of real life, which was implemented when the limitations between the phenomenon and its context is not yet clear, using a variety of data sources. The Landing was built at the beginning of the research process as a 'proposition' [11].

Data collection was done through observation and interview. Observation activities undertaken: (1) buildings, settlements and their surroundings, as well as the activities therein, (2) land and environment fields, as well as the fields of activity, and (3) the water source, the River basin and the environment, forest, mountains, as well as activity in it. Meanwhile, the activities of the informant interviews and informants, namely kuncen, Chair of the indigenous residents, and Kuta are selected as key informants. Key informants selected by snowballing starts from the Chairman of the customary kuncen to residents who are very knowledgeable about the topic. Generally, they are interviewed individually. The information collected includes (1) pikukuh kanu adat; (2) the efforts of the Customs and the Chairman deliver kuncen provisions Customs (3) the concept of a culture of disaster mitigation, and (3) traditional knowledge about disaster and disaster risk prevention. The data and information that has been collected is processed using the analysis of case studies i.e. using various sources of information in the collection of data to give an overview in detail and depth about the response of an event. The data analyzed includes the pamali and customary rules in the community hometown Kuta, other forms of local wisdom, and disaster mitigation forest fires, earthquakes, landslides and floods.

### **3. Results and discussion**

Hometown Kuta is administratively under the reign of Karangpaningal village of Tambak Sari Sub district Ciamis. Kampung Kuta consists of 2 RT and 4 RW and it borders the hamlet of Cibodas, in the North of the hamlet of Margamulya to the West, and to the South and East by the Cijolang River and the border with West Java region, Central Java. To go to the hometown of the distance that had to be taken from the county town of Ciamis, about 34 km towards the North and can be reached using public transport to car Sub Rancah. Being from Sub Rancah using a rented motorcycle or ojeg, with winding asphalt road conditions, and steep climbs. If the Sub district Tambaksari through can use public transportation or ojeg with road conditions are similar. Hometown Kuta is found as a traditional or indigenous community hometown, having similarities in shape and material, the building houses physical kuncen (Gatekeeper), the Chairman of the customs, and the existence of binding customs of the people. In General, most homes still use the roof made of leaves jure kirai. The pillar of his house was erected on a pedestal rock called tatapakan so it is a form of home staging, is the Chamber walls were made of bamboo or Board.

Hometown Kuta is the indigenous peoples who were still firmly holding and running tradition with supervision kuncen and Chairman of custom. The majority of the population of this village is a devout Islamic religions, but in daily life tinged by beliefs are myths and animism. Trust of pamali or taboo and the Ethereal or supernatural powers still looks at their views towards the sacred forest shrines form. The sacred forests are often accosted by people who want to get the safety and happiness of life.

It's just that, in the sacred forest should not be asking for something that shows greed as wealth. To enter the hallowed forest region enacted a number of pamali or taboo i.e. pamali harness and damaging forest resources, wearing Office, wearing gold jewelry, wearing black-Black, carrying bag, wearing footwear, spitting, rowdy and did. Pamali other outside the hallowed forest area but still include any mandatory hometown Kuta followed, such as the pamali build houses with roofs or *genting*, the corpse pamali buried in hometown Kuta, pamali shows things are flaunting of wealth may give rise to competition such as building a House from the walls, and performing arts pamali containing scenes and stories, such as wayang. Religious norms and customs of hometown has balanced the "power" as a guideline in the make. The community is very obedient keep sacred forests. Kuncen is regarded as sacred, and Forest Rangers can be a liaison between the sacred forests of the sanctified by those who have the "intent". The sacred forest visitors shall comply with existing rules if breaking taboos or restrictions, then that person will get penalized in the form of plague.

Kuncen and Chairman of Customs is an important indigenous figure in erecting a customary provision, they always deliver the customary rules on citizens as well as visitors through customary ceremonies, which contains advice-advice so that the Community pikukuh kanu adat. There are conditions that characterize the indigenous hometown Kuta i.e. preservation of custom homes, banning of the burial of the bodies in the hometown Kuta and the banning of the manufacture of the well, and the preservation of the sacred forests based on the rules and conditions customary pamali, in agriculture. Fourth it becomes customary norm that binds the community for being a source of spiritual beliefs that can be used as community disaster mitigation hometown Kuta [11]. Community hometown Kuta to date still holds fast to preserve his ancestor's customary (*karuhun*), the mandate of the parent that is retained is part of the mitigation disaster, can be outlined as follows:

### *3.1. Mitigation disaster earthquake resistant buildings*

Many of the historical architectures and cities have already survived the long history of disasters and became designated as cultural heritages because of this traditional wisdom [12]. Pattern building of hometown Kuta is inseparable from building pattern of ancient Sundanese, in ancient Sundanese architecture form home, such as motif anjung meru, namely building shaped like a taper mount, higher up into the smaller; badak heuay. the form of the house not wearing wuwung, to be continued between the roof of the back and the front roof seemed like a rhinoceros which were gaping; julang ngapak, the shape of the building housing the front tow wear sorondoy like the wings of a flying Hornbill, and others. House form of hometown Kuta in General is the stage. Stage that is home helpless (the space under) by using the foundation base. High base from the ground 40-60 cm. Under the floor of the House was used for various purposes such as storing firewood, building materials warehouse, a chicken coop, duck and others.

In general, the community hometown Kuta know three kinds, namely: the base form of the whole (integer), namely natural stones taken from the river wear to golodog footwear; The shape of dimples (*lisung*) which is a beam-shaped stones standing upright to the surface on the side of the pedestal is smaller than the surface side down, widely used in the home and leuit (barn); and the shape of the cube (beams), the stone cube is enforced with equal sides. The stage is the most important building for the community hometown Kuta, with extra length and *suhunan* (roof) theoretical on the front and back as well as *suhunan jure*, roof form a shield that extends. The second form of the roof is a form of the roof of the building that is common among rural residents in tatar Sunda. In view of the community hometown Kuta stage house has three functions, namely: do not interfere with the field under water, *resapan* as the media conditioning of air flowing out in space with a good cross for warmth and coolness, and the under is also used to keep a supply of firewood and others. Symbolic function is based on the beliefs of Sundanese, that the world is divided into three: *ambu handap*, *ambu luhur*, dan *ambu tengah*. *Ambu tengah* is the center of the universe and humans put ourselves as the center of the universe, because that's the human habitation should be located in the Middle, not to feed *ambu handap* (Underworld) and *ambu luhur* (upper world) [7]. Thus, the house must wear a pole that doubles as dividers home overall with the bottom and top of the world. Pole homes also must not be

located directly above the ground, therefore it must be give a functioning base separates it from land that is called the stone base. Home staging that must be roofed sago Palm or injuk (not to be permanent). The concept of home staging for the community hometown Kuta is based on the mandate of the ancestor of " "Ulah rek di kubur hirup-hirup, ulah ngabangun istana jadi astana"" in the Sundanese language meaning, don't want to buried alive, do not build castles (home) that became astana (the cemetery), it is reminded that the mansion made of walls will crumble if there's an earthquake and will bury its inhabitants. Provisions in building home the stage: Home staging that must be roofed thatched or injuk and should not be permanent, with thatched-roofed houses could last 5 years and if in Add with straw roofs can last for 35 years; the shape of the square and the House should not be shaped "sikon", meaning should not form a leter U leter, L. and others. The tradition of maintaining a homemade wooden stage proved to be capable of absorbing the impact of an earthquake. Before establishing the community ngadeugkeun ceremony and after House successfully built they will dwell in it after getting a good day. In addition to building a House, other buildings equip it is leuit. The community has a leuit for storage of grain or rice yields, which serve as the preparation in case of failed harvest. Every occurrence of the earthquake there were no buildings damaged, homes only to sway to the left and the right. The concept of home staging is applied on the mosque, a meeting hall, and leuit (rice barn) which follow the customary system. Manufacture of building done only within a specified time. The Chairman of the custom usually determines a good day to let the House be kept away from mean. Other functions of the home staging is the existence of the taboo nature of riches that could give rise to competition such as building a house from the walls.

### *3.2. Prohibitions manufacture of wells and ban the burial of the bodies, in the Hometown Kuta*

The servant makes wells by way of digging or drilling into the ground to find water sources, for the purposes of obtaining water in daily life should be taken from the water. The prohibition of its ancestors. This is due to the condition of the soil in the hometown Kuta which she feared could undermine the contours of the land. They also may not build places of public conveniences (shower toilet wash) they choose to go river if he want to relieve himself. If there are residents who died should not be buried in the hometown Kuta, should be brought to the ground so that the Cibodas here not polluted hazardous substances from the funerals and to maintain the sanctity of the land of kampong Kuta. Messages and abstinence (pamali) were coloring the awareness of disaster mitigation. One of these restrictions create grave in hometown Kuta. During this time, the burial was always done at the hometown Kuta neighboring hometown Cibodas. One of its objectives the ban the burial of the bodies in the hometown Kuta to protect ground forces. When the ground continued to excavated, believed to reduce the strength of the soil.

### *3.3. Sacred forest preservation based on the rules of pamali*

Hometown Kuta has beliefs and customs that are associated with the sacred forest. The sacred forest is considered by society as holy place so that the community can impose different rules hometown Kuta custom to protect the sacred forests are: shouldn't take forest products such as timber, fruits, animals, and others that were in the sacred forest; should not wear black, and all-round clothes service uniform or uniform government; must not spit, trash, or small bowel movements that can litter the forest; should not say "sompral" (arbitrarily) in the sacred forest; and should not wear footwear such as sandals and shoes. Visit the sacred place which allowed according to custom is the Monday and Friday. Aim allows nature to grow and reproduce without human interference.

Sacred places are maintained, namely: Leuwueng Gede are a source of water and the natural fortress for hometown Kuta, Gunung Wayang, Pandan Domas, Gunung Barang, Cikasih, Gunung Goong, and Panyipuhan. Another tradition that is still held residents of hometown Kuta is compliance maintain protected forest covering an area of 40 hectares. Rules that keep the forests remain sustainable, the tree hard, like the cauri, pari, rattan, and aren ten years, thrives without interruption. Similarly, many kinds of birds and mammals, such as monkeys and eagles, a comfortable living in their habitat. In meeting the needs of clean water way harness 4 spring, namely Cibangbara, Ciasihan,

Cipanyipuhan and Cinangka streamed with plastic and bamboo slang to place public baths are always available even though the long drought. The ancestral tradition in keeping forests proved to make the hometown was never a shortage of water during a drought or flooded in the rainy season, but its location in the Valley. Community hometown Kuta believe, Woods was able to store water and strengthens the connective power of the land. Water resources is the one element that is essential for the sustainability of life living creatures especially humans. The presence of water can assume the role of multipurpose, it can be used as drinking water and sanitary facility (shower, toilet, washing), irrigating farmland, the purposes of the implementation of acts of worship, and economic interests. Water resource management in the form of local wisdom in the sacred forest through hometown Kuta is beneficial in maintaining the balance of nature, the rights of society life, order and mitigation drought disaster during the long drought. Treatment of the forest ban is also somewhat special, because it is believed the forest is considered as the abode of the ancestors.

### *3.4. Mitigation indigenous fire disaster in agriculture*

The existing farms in the hometown of kuta using rainwater system, because there are no waterways and irrigation. In the community of hometown Kuta cultivate farm individually, but can also be employed and can also be done by dividing the produce. Although the community hometown Kuta farmed slash burn reuma (forest of reeds) to make the fields (huma) but the fire never happened. Agriculture at hometown Kuta usually always make use of the empty land, for example when planting rice has been completed or failed harvest could be implanted in other plants, such as corn, peanuts, and others. The majority of residents as a maker of search-eyed hometown Kuta. Palm sugar. Approximately 1,000 trees growing in the Palm and still productive. Every average family tree 7-8 Palm has taken niranya. Citizens are obligated to maintain it and the forbidden cut tree Palm, areca palm trees as the main source of livelihood of the community hometown Kuta so Palm sugar into a typical hometown Kuta.

### *3.5. Ceremonies in the community Hometown Kuta*

Hometown Kuta the faithful keep the mandate of the parent they are benefiting from the success of keeping customs, as a form of gratitude community do some ceremony are: 1) the Earth Charity, Alms of this earth do when residents in the hometown Kuta was about to start a farming activity. These activities are regularly conducted. The goal is to thanks to the good fortune of produce. Activities performed are the residents of hometown Kuta gathered in one place and then cooking and eating together. On this show every citizen should sit straight on the ground without using a pedestal then eat food that has been provided together; 2) ceremonial nyuguh. This ceremony is a ceremony customs of hometown Kuta which is always held on the 25th Shapar on each year. This ceremony aims as offering a form of gratitude to God and the Earth which has provided food for the people of hometown Kuta. In the ceremony relayed admonition-advice ancestors by kuncen and Chairman of customs, so that citizens always cling to the customary rules; 3) Babarit, held every there is natural occurrence such as lines (earthquakes) and other natural occurrences. and 4) Urination Earth, held at each harvest, the goal is an expression of gratitude for the success of the community hometown Kuta in farming, while pleading for protection for the suitable planting, usually held in September to November, or days that are considered good. Religious and customary norm has the intensity and the "power" that is balanced in the community hometown Kuta, as guidelines in make life as a whole. Customs in the hometown Kuta i.e. existence of rites, to get the blessings (barokah) from God Almighty, and as an act of devotion to ancestors.

## **4. Conclusions**

The tradition that has local wisdom in hometown Kuta Ciamis to date is still maintained. Hometown Kuta still holds fast to his ancestor's culture so that the tradition of the custom still preserved. A typical hometown Kuta tradition when associated with the orientation of cultural value is visible on the very

essence of human life, the human relationship with the "invisibility" of human relationships with the natural environment and human relationships with humans.

The meaning of the Community hometown Kuta pikukuh kanu adat is running a custom rule karuhun and avoiding prohibitions (pamali). Pikukuh kanu adat is the basic concept that has a value of mitigation traditional disaster laboured by kuncen and Chairman of the Customs preventive basis in ceremonies. According to the community hometown Kuta nature is a place of livelihood should be preserved.

The source of local wisdom that can be used as the example in the hometown Kuta, prove that (1) Although the community hometown Kuta farmed slash burn reuma to make fields (huma) but the fire never happened; (2) in the territory of hometown Kuta many stage House adjacent to the river flow but never experienced swamped; (3) stilts in hometown Kuta area nothing is damaged when the catastrophic earthquake struck this village; (4) the hometown Kuta never experienced a catastrophic drought despite the long drought; and (5) the servant makes wells by way of digging or drilling into the ground to find water sources, due to the soil conditions in the hometown Kuta are labile and the other reason is to protect the power of the land. When the ground continued to excavated, believed to reduce the strength of the soil. Prohibitions (*pamali*) in force in the hometown Kuta any mandatory followed, when these prohibitions are violated is believed by the public will cause woe for those who break them and a disaster for the other. Religious and customary norm has the intensity and "forces" are balanced as guidelines in make the overall life in public life hometown of Kuta.

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