



# Implementation Of Biodiversity And Environmental Sustainability Based On Kajang Culture

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**Abstract.** With the rise of environmental unrest and the periodic felling of trees by some individuals and even elements with legal rights, concerns about sustainability and the life of the next regeneration triggered the emergence of sustainability concepts that were thought to help reduce environmental damage. In Indonesia itself, there have been many theories and regulations thrown from both academics and government however, it has not been properly executed by all parties. The research aims to investigate aspects of kajang tribe that implement biodiversity and environmental sustainability. The method used in this research is a qualitative method, using an ethnographic approach in analyzing data obtained directly from the field, namely observation, interviews and documentation. The results showed that the implementation of biodiversity and environmental sustainability in the kajang tribe prioritizes social and environmental aspects over economic growth. The kajang tribe still believes in ancestral messages and preserves their natural forests. It is called *Pasang ri Kajang* which contains unwritten rules and ancestral messages but is widely instilled by the kajang tribe community who believe that the message is message from Allah swt delivered through the prophet, the kajang tribe believes that by protecting the environment and forests, it is the same as protecting and respecting their mother and the next regeneration will be guaranteed to fulfill the resources that will be used in their lives.

**Keywords:** Biodiversity, environmental sustainability, local wisdom, kajang

## 1 Introduction

Environmental damage occurs because of the increasingly anthropocentric concept of environmental and natural resource management backed up by regulations which are more concerned with economic development but ignore sustainability. In the concept of deep ecology, environmental protection and rescue carried out by humans basically stems from the realization that humans are part of nature and environmental sustainability is intended for the entire ecological community[1]

Illegal logging and environmental damage are rampant in Indonesia. Quoted from Tempo.co “ Civil servant investigators (PPNS) and forestry police of the DKI Jakarta urban forest parks office have revealed 39 cases of unauthorized (illegal) logging over the past five years from 2017 to august 2022”, and also social media has just been shocked by news story quoted from BBC News Indonesia “ forests in papua face a

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serious threat due to the expansion of oil palm plantations shows a giant company from south korea deliberately and it will use fire to clear the forests of papua to expand oil palm land” where it is widely condemned by the community.

Law No. 32 of 2009 concerning the protection and management of the environment (UUPPLH 2009) which stipulates the obligation to prepare environmental protection and management plans (RPPLH), strategic environmental studies (KLHS), environmental impact assessments (AMDAL) within the framework of the environmental management licensing system at the effort to project or activity level must be understood as an effort to protect and maintain the carrying capacity and environmental capacity (DDDTLH) as an implementation of the concept of deep ecology in indonesia’s environmental law[2].

Companies through biodiversity accounting are expected not only as a means of improving the company's image. However, it is more about how to reflect the duties of humans as khalifah on earth who are tasked with maintaining the balance of nature. The disclosure of environmental responsibility by the Company is communicated through sustainability reporting as explained in PSAK number 1, namely the Company can present additional reports especially if in its business activities the environmental factor plays a very important role or is directly visible to nature.[3].

The concept of biodiversity accounting itself began to be proposed by jones (1996) published by the British Accounting review, which proposed a natural model inventory model with the aim of providing a comprehensive framework, and it is important for resource management and conservation purposes[4]. Geospatial information agency (BIG) data for 2023 shows that Indonesia's forest area recorded 102.53 million hectares, equivalent to 50.9% of Indonesia's total area. Among the many cities and islands in Indonesia, there are several areas that implement biodiversity including the local government of Gowa district, DKI Jakarta, Semarang, Surabaya although only limited to documentation.

According to Jeffries, the world conservation strategy is divided into three elements of conservation strategy, namely protection, sustainable use, and benefit sharing[5]. Efforts are being made to conserve forest resources and local community-based conservation. The Ammatoa Kajang indigenous community is one of the indigenous peoples located in the Kajang sub-district who still upholds customs from generation to generation to inhabit the forest. One of the manifestations of the customs of ammatoa kajang is realized in the form of maintaining and preserving the forest[6].

*The Washington Post* mentioned that the world's best forest guardians are in Indonesia, precisely in South Sulawesi, namely the Kajang tribe, the Kajang tribe who protect their forests and nature are recognized worldwide. Numerous studies have shown that, when it comes to land tenure, communities that manage half of the world's land and 80% of its biodiversity are effective guardians. Local cultures “have contributed to reducing forest destruction in a variety of ways”, concluded more than 300 United Nations studies in 2021. The kajang tribe illustrates how indigenous communities are doing just that.

The organization and management of customary forests is carried out by the ammatoa indigenous community based on *Pasang ri Kajang* and applicable laws and regulations. The prevention of the destruction of environmental sustainability in the Kajang tribe community is characterized by the imposition of customary sanctions on

the community if illegal logging is carried out, because they believe that cutting down trees illegally will result in environmental damage and make *Turiek arakna* (God) wrath[4]. His wrath will be believed to bring curses to the Kajang community. The curse that is believed to be in the form of disease for people who damage the forest, or disasters that overtake the Kajang community. The belief is hereditary has been grounded in the land of kajang, because *Pasang ri Kajang* is a message or ancestral mandate that is sacred and must be obeyed which if not practiced in everyday life will have a negative impact on the Community kajang, for example the destruction of the balance of social and ecological systems[7].

## 2 Literature Review

### 2.1 Stakeholders Theory

This theory explains that a company must be responsible to those who have an interest in the company. The company must foster good relationships with these stakeholders. Donaldson and Preston support this theory by arguing that stakeholder theory will expand the Company's responsibility to all stakeholders, not just to the Company's shareholders[8]

The company must make real efforts to maintain good relations with stakeholders, by accommodating the wants and needs of stakeholders who are directly related to the resources used by the company in its operational activities, such as labor, consumers, and shareholders[9]. One of the ways that companies can do to foster and improve good relations with stakeholders is to disclose reports that have added value, namely sustainability reports[10].

Stakeholders in involving themselves in a utilization of natural resources and the environment need a great accountability of the Company to stakeholders, the kajang tribe which is known to be very protective of nature and its contents also do biodiversity reporting Where *Turiek a'rana* (God), *Linoa* (Nature), and humans as stakeholders, the kajang tribe believes what they protect will save nature and the next regeneration[4]. stakeholders who have involvement in terms of power and high interest in management[11].

### 2.2 Biodiversity Theory

Biodiversity is all living things on earth (plants, animals and microorganisms) including the genetic diversity they contain and the diversity of ecosystems they form. Biodiversity itself consists of three levels, namely: 1 species diversity, 2 genetic diversity, 3 ecosystem diversity. Biodiversity is the basis for the emergence of various ecosystem services, both in the form of goods/products and in the form of environmental services that are indispensable for the lives of living things, especially humans.

Biodiversity has an important role for aspects of life helping (1) healthy ecosystems, biodiversity supports pest control, pollination, and oxygen provision. Healthy ecosystems are also more resilient to disturbances and climate change (2) biodiversity is an important source of food, medicine, and other raw materials. Many

modern medicines are derived from compounds found in plants or animals (3) economic stability, sectors such as agriculture, fisheries, and tourism rely heavily on biodiversity, the loss of which can have negative impacts on local and global economies (4) biodiversity contributes to the quality of human life, including recreation, culture and spiritualization (5) finally, diverse ecosystems such as forests and wetlands can sequester carbon dioxide and help mitigate climate change.

However, biodiversity is currently facing many threats and challenges in its conservation, such as environmental degradation, overexploitation of species, climate change, invasion of foreign species, habitat destruction, urbanization, and depletion of water resources and forest fires. Therefore, there is a need for efforts that can maintain biodiversity in order to maintain the balance of the ecosystem and the sustainability of human life. Efforts that can be made are reducing waste, reducing the use of hazardous chemicals, maintaining water and air quality, cultivating sustainable consumption patterns, and reforesting and replanting forests[12].

### 2.3 Environmental Sustainability Concept

The concept of environmental sustainability is a broad term that encompasses “conditions of resilience, balance, and relationships that allow society (humans) to meet its needs without exceeding the capacity of its supporting ecosystems to continue regenerating services without jeopardizing biodiversity”[13].

Environmental sustainability is a conservation concept that is the fulfillment of services and resources of present and future generations without affecting the health of the ecosystems that provide them, the principles of environmental sustainability strategies are[14]:

- 1) Biodiversity conservation is the preservation of biodiversity and energy resources.
- 2) Social need, availability of basic needs, products, and services for current and future generations. Supporting local employment, fair trade, and environmental attributes of raw material.
- 3) Regeneration capacity, protecting natural resource depletion and maintaining the latest harvesting rate of resources within regeneration capacity.
- 4) Reuse or recycling, supporting the practice of reuse, recycling to reduce waste, emissions, and costs and improve product efficiency.
- 5) Limited non-renewable resources and waste generation, low-impact transportation, and Effective decisions taking into account environmental quality.

### 2.4 Kajang Tribe

There are three communities in South Sulawesi that treat their natural life wisely and make environmental conservation part of their culture, namely the bajo ethnic group who protect the marine and coastal environment, the dentong ethnic group who protect the mountainous areas where they garden and the kajang tribe who protect their forests so that they remain sustainable. The Kajang tribe is one of the tribes living in South Sulawesi province, precisely in Bulukumba district. The distance is

about 139 km north of Makassar. Makassar is the capital of South Sulawesi province, the population of Bulukumba district is generally bugis tribe with the language used is bugis language. While the kajang tribe is considered part of the kajang tribe is considered part of the macassar tribe, the kajang tribe lives in Tanah Toa (old land) which is located about 60 km from the center of the bulukumba district government[15].

The kajang tribe itself claims that they are the oldest tribe in South Sulawesi. In fact, apart from the majority of the population being Bugis tribe, some are Macassar tribe and others are Kajang tribe. This tribe is known as a minority group that lives isolated in a forest area that covers more than 729 hectares or more than half of the island.

### 3 **Research Methods**

In this study, researchers used qualitative research methods using an ethnographic approach, aiming to reveal an event that is considered the most relevant to the study of cultural science. Ethnography is built on the basis of belief in the existence of a relationship between humans, nature, and God. According to Brobislaw Mallonowski, the purpose of ethnography is “to understand the point of view of the native, his relationship with life, to get his view of the world”. Ethnographic research involves learning about the world of people who have learned to see, hear, speak, think, and act in different ways, so ethnography is not just studying society, but more than that because ethnography learns from the community. The essence of ethnography is an attempt to pay attention to the meanings of the actions of the people we want to understand.[16].

The research uses primary data that will be obtained in the field directly based on informants' statements and researchers' observations. In addition to primary, this research also uses secondary data that is qualitative and quantitative in nature such as documents, journals, and those related to the research. collection is done through observation, in-depth interviews, and documentation.

This research relies on what is to be achieved, the research will be conducted in the Kajang tribe located in Bulukumba district, South Sulawesi. The researcher's consideration in determining the Kajang tribe as a research site is due to the concept of protecting trees, the environment and nature that is aware of the values of local wisdom which is then internalized in the lives of the Kajang people.

### 4 **Research Results**

#### 4.1 *Pasang ri Kajang*

Pasang ri Kajang is the rules or messages of the ancestors of the kajang tribe, which is believed that the ancestral message is a mandate obtained by the prophet which is an order from ALLAH SWT as one of the purposes of creating humans in the world. Related to Trust, in QS. Al-A'raf verse 56 which means “do not do damage to the earth after it is well regulated. Pray to Him with fear and hope. Surely the Mercy of Allah is very close to those who do good “. The verse is very clear that the

earth and its contents have been arranged as well as possible and do not let humans make damage in it, the kajang tribe community always prioritizes what is called pasang ri kajang which is a value that has the sacredness taught by ancestors as a guide in establishing relationships between fellow humans, nature and also Tuhan, therefore accountability and amabah and clean hearts ha-rus always maintained to be able to implement Pasang ri Kajang.

The concept of carrying out all the teachings in *Pasang ri kajang* by the Kajang tribe community is symbolized by “Trust”, which in this case relates to the practice of biodiversity and environmental sustainability, for example there are people who want to cut down trees for the purposes of making houses or traditional events, then it is mandatory to report or ask permission from ammatoa by conveying in detail what and the purpose of cutting trees. Then the *Ammatoa* will decide whether to give permission or not by conducting deliberations, usually for this we must first notify the galla or minister in government language, which is then forwarded to the *Ammatoa* for discussion.

In this case, usually the trees to be cut down will also be decided by *Ammatoa*, trees that are ready to be cut down so that loggers do not just cut down trees. This means that in taking natural resources not arbitrarily, and arbitrarily, it must go through a process of deliberation and consensus, which of course is a consideration of environmental realities and existing resources, and as a step in analyzing the environmental impact that will be caused when cutting down trees, as a form of preventing irresponsible cutting of trees that will have a negative impact on the environment.

This deliberation is carried out as a form of supervision over the existence of natural resources and the sustainability of biodiversity. The ecological awareness shown by the Kajang tribe community is an awareness of the importance of the environment for human life. If today's natural conditions continue to be degraded so massively and nature's response to this is often seen and threatens the sustainability of human life. *Pasang* or the message of the ancestors of the kajang tribe teaches the values that the environment must always be maintained to maintain the balance of the system so that it always benefits the sustainability of life.

#### 4.2 *Linoa intu Anron (Nature is a mother)*

The Kajang tribe believes that nature is like their mother who must be respected and protected. For this reason, humans are required to behave well towards nature so that there is no damage to nature which actually comes from human behavior that is wrong in addressing nature. Nature in the context as a mother is a symbol of self-unification with nature, the concept of nature is analogous to a biological mother is actually the concept that nature is part of humanity itself, as a child who is part of his mother, therefore, this value is one of the teachings in the ancestral message or Pasang ri Kajang then until now the philosophy is still always grounded in the kajang tribe.

Considering nature as a biological mother has a very deep meaning, which means that humans are required to have good morals and behavior towards nature and will not make nature an object for momentary interests, thus arbitrarily exploiting natural resources without thinking about the impact. This selfish behavior should be

eliminated in humans through the internalization of environmental morality because if this continues to happen, humans will face the environment and nature that they destroy themselves.

Nature as a mother should have a high position because it has nurtured humans since birth and will return to nature when death comes. This awareness must always be encouraged to manage and preserve nature as a mother and a place to return. From the philosophy of nature as a mother, there is a growing awareness in the Kajang indigenous people who have been hereditary to be careful in taking natural resources, so that they will report or deliberate with the customary elders to make the best decision so that nature is not injured or damaged, before taking the resources owned by nature. This means that reporting to customary leaders and so that other communities also know is a form of transparency practiced by the Kajang indigenous people in taking natural resources for their interests, whether it is in building a house or cutting down trees in order to open agricultural land.

### 4.3 Kajang Tribe Forest Preservation

Ammatoa is obliged to maintain the life of the kajang tribe community based on what is contained in the ancestral message or pasang ri kajang, showing how the kajang tribe community implements their rules into daily life, there are several questions of the kajang tribe related to forest conservation. These statements are

*a. jagai linoa lollobonena nasaba' injo boronga pallekona linoa.*

. We must protect nature because the forest is the savior of nature which means we must save the forest because the forest is the soul of the world. This statement provides an understanding to the Kajang tribal community that what is guarded now is the preservation of the sustainability of life and future regeneration

*b. Punna nitabbangi kajua ri Borongan ang'ngurangi bosi, appatanrei tumbusu.*

. If trees are cut down in the forest, it will reduce rainfall and lose water sources. Which means that if trees are cut down in the forest, it will reduce rainfall and lose water springs, this reminds us that something will be lost or reduced from illegal cutting of trees.

*c. Katutui ririe'na, rigentengang tabattuna palaraya*

. Which means keep it while it lasts (sustainability), before the drought comes. This question warns the community that if they do not conserve the forest, there will be a drought in their environment.

*d. Anjo Borongan iya kontaki bosiya, nasaba konni mae anre' pangairang iyaminjo borongnga selaku pengairang, nasaba ita nakabattui bosi*

. Which means that the forest is one of the links with rain because there is no irrigation here, so the forest functions as irrigation because with dense forests it will cause rain to fall. The people of the kajang tribe believe that the forest they occupy is what brings rain so they will not run out of water.

*e. Jagailalo linoa lollong boronga ka injomi angkota I bosiya naappattimbo lamung-lamung.*

. It means take care of the earth and forest because the forest absorbs water and fertilizes the plants that are planted. Kajang people who still do everything manually so that they are still very dependent on the resources produced by their nature.

## 5 Conclusion

The concept carried out by the kajang tribe is a concept that can actually be taken and carried out by various elements, from the concept of protecting their environment, it can make a design model for preserving and reporting biodiversity and sustainability. The more advanced the economy, the more difficult it will be to protect biodiversity . however, with sustainability being promoted, there is an opportunity for economic growth and sustainability to go hand in hand.

This research found that there are several concepts of biodiversity applied in the kajang tribe, although not in writing but the kajang tribe community is very adherent to Pasang Ri Kajang, which contains the rules of the ancestors. The licensing system before cutting down trees or taking resources and the fine system that is applied when anchoring the rules is one of the concepts used by the kajang tribe.

The limitation of this research is that it only focuses on the concepts of biodiversity and environmental sustainability, especially on logging and protecting trees or forests, further researchers can study the fine system applied both in terms of the amount or law and the age of trees that can be cut down. So that further research is more in-depth and properly structured so that a perfect concept is formed.

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