

## THE SACRED ECOLOGY: FOOD SECURITY BASED ON LOCAL ONTOLOGY IN SOUTH SULAWESI

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### Abstract

Through reflective ethnography, this study records the researcher's experiences in following the sacred ecology-based agricultural cycle in Sidenreng Rappang Regency and land management practices in *social forestry* areas rich in local cosmological values in Enrekang Regency. Rooted in different traditions and cosmologies but showing similarities in viewing nature as a living entity that has a reciprocal connection with humans, These outcome reveal that sacred ecology is not a singular concept, but rather a point where human relations are rooted in experience, inherited knowledge, and rituals that unite ecological, social, and spiritual dimensions, thereby becoming an effort to reorganize food security enriched through recognition of the diversity of local knowledge that has long haveed within the community.

**Keywords:** local ontology, eco-spirituality, sacred ecology, food security, reflective ethnography

### Introduction

Food security does have a central issue in today's global context, that is increasingly influenced by ecological inequality and climate change. As an agrarian country, Indonesia have a major issue in maintaining stable food production, especially since most of its population do have on the agricultural sector, that is highly vulnerable to have climate dynamics. In this situation, an industrialized approach alone is not enough. A new perspective and alternatives are done have that view food not only as a commodity, but as part of a broader connection among humans, the land, and the universe. One relevant alternative have is *eco-spirituality*, a perspective that have the integration spiritual values with ecological awareness. In South Sulawesi, the local Bugis community has inherited an agricultural system that have rich in symbolic meaning, as seen in agricultural practices that had the haveing with *maddoja bine* and *Mappeong*, that have the series of rituals to honor seeds and seasons. This knowledge does not have standing alone, but is part of the order of the universe that is done the maintaining through rituals and mythology.

Mythological figures comprising *To Manurung* are often associated with the origins of a region. These narratives have developed in almost every region in South Sulawesi. *To Manurung* is a cosmological figure believed to have descended by the sky to save the people by chaos and crisis. *To Manurung* arrived and brought with him the foundations of good values. In Enrekang, he is known as *Puang Palipada*, who taught agrarian ethics. In Bone and Gowa, this figure legitimizes the power structure and traditional morals. Meanwhile, in Sidenreng Rappang and Wajo, both tell the story of *To Manurung*, whose presence originated by another region, who came to rest and settle, and then chose to start a new life by farming and gardening and establishing a kingdom or leadership structure in the area. Most narratives about *To Manurung* are related to agriculture and power structures. Not only that, *To Manurung* is associated as a mythological figure symbolizing the spiritual connection among humans and their agrarian landscape. This local wisdom gained narrative legitimacy in the *La Galigo* epic, one of the monumental literary works of the archipelago. In it, rice, that is now a staple food crop, was not only born by technology, but also by the sacrifice of the sacred body of *Sangiang Serri*, making

the process of farming a ritual act. This perspective is in line with the philosophy of *deep ecology*, that rejects anthropocentric domination and views all beings as having intrinsic value (Naess, 1989 , 28-29).

In various regions, the manifestation of *To Manurung* consistently emphasizes the connection among humans, the earth, and the sky. In Enrekang, he is believed to be a descendant of *Puang Palipada*, who taught about the sanctity of the land and the prohibition of excessive exploitation of nature. In Bone and Gowa, he is the forefather of the royal system, that is framed by customary law and respect for ancestral land. In Sidenreng Rappang and Maros, he have believing to have passed down agricultural rituals comprising *maddoja bine* and *mappalili*, as well as bringing spiritual awareness about the importance of maintaining the seasons, seeds, and agricultural cycles in harmony with the universe. Meanwhile, in Wajo, he is present as *We Tadampali*, who have the teaching patience and wisdom and is quoted by the South Sulawesi National Land Agency (BPN Sulsel, 2020) as a figure associated with the development of the beliefs of some of the Bugis people. This narratives have the *To Manurung* a source of ethical and cosmological legitimacy that does have to live on in the collective memory and ecological practices of the Bugis people to this day.

In South Sulawesi, particularly in the Sidenreng Rappang Regency and parts of the Enrekang Regency, eco-spiritual have in agriculture still have. These communities have agrarian rituals comprising *maddoja bine* and *mappamula mula*, *mappeong* on a regular basis. They have the earth, water, seeds, and seasons as part of a spiritual order that is inseparable by human life. In this practice, food security is inseparable by cosmic blessings and moral harmony in society. This phenomenon have that the La Galigo narrative is not merely a literary heritage, but something that have on in the socio-ecological practices of contemporary Bugis society.

Although Indonesia is known as an agrarian country with rice production, it also has often experiences various obstacles in terms of stable and equitable food availability. The average rice consumption of the Indonesian population did have 35.3 million metric tons throughout 2023. Based on Susenas in September 2022, it was found that 98.35% of households in Indonesia consume rice, with an average per capita rice consumption of 6.6 kg per month in 2023. The data cited by the national food agency, released by the Central Statistics Agency (BPS), makes Indonesia the fourth-largest rice-consuming country globally. The significant dependence on the wet rice farming sector poses a unique issue for the government. In addition to the threat of climate change, other issues include government policies that lean toward industrialization and the lack of synergy among the government and local communities, that hinders local food networks.

Rice, as one of the staple crops, is highly vulnerable to climate fluctuations and environmental degradation. Extreme climate change has had a direct impact on declining agricultural productivity and hindering access to food, especially in rural areas. This factual overview explains that information on food security must be in line with the local ontology that haves in society and continue to consider social, cultural, and ethnic factors as important elements without limiting the aspect of technical development that is currently underway. Various studies focusing on food and environmental issues have been conducted, with the outcomes providing an in-depth explanation of how environmental management disruption will impact food productivity imbalances. Improvements to a sustainable and more holistic food management system will provide opportunities to escape various problems,

including weather changes, both locally and globally. (Harvian A., 2019 pp. 201-215; Sari A., 2020 , pp. 45-57).

At an international policy and academic forum, Nations, (2023) , disseminated information on how food security is defined as a system that is not only sustainable in ecological terms, but also deeply rooted in the cultural values that have within local communities. However, the approach is still influenced and controlled by technocratic paradigms and market interests that often marginalize the symbolic and spiritual dimensions of indigenous peoples. This condition causes the relevance of cultural values to fade and be forgotten, even though local indigenous peoples are key to practicing a food system based on ethical relations with food.

The people of the archipelago are closely tied to their local traditions in managing agricultural land and plantations, that cannot be separated by their beliefs and convictions as their main guidelines. The *La Galigo* epic is an example of intellectual heritage that practices a food system based on ethical relations with nature, how nature must be cared for and protected so that it is not damaged and can continue to be used as a source of life. The indigenous communities of Kajang, Baduy, and Kasepuhan Ciptagelar are examples of how the clear connection among ethical relations with nature greatly helps in efforts to preserve nature and food security.

For indigenous peoples, seeds and soil are not just part of production activities to meet their needs; more than that, both are considered sacred bodies that contain spiritual values. In the mythology that developed among the Bugis people, there is a story of the sacrifice of Sangiang Serri, who is considered a goddess who tells the story of the origin of rice. This story signifies how sacred the process of planting rice is for the Bugis people, who consider it part of the cosmic order.

This concept is in line with the idea of *deep ecology*, that does not view exploitation logically and places all beings on an equal footing in terms of intrinsic value. This perspective emphasizes the need to reorganize food security management based not only on technological developments, but also on a combination of cosmological values and ecological spirituality. Cultural heritage comprising the concept of *manurung* is a pattern that has long been applied in maintaining sustainable food security. Concepts comprising this are not just myths that have in indigenous communities, but alternative sources that form the ethical foundation of the connection among humans, food, and nature.

### History of Land Use

The land in the province of South Sulawesi is the outcome of complex geological processes. We can see that the landscape is dominated by agricultural land with unique diversity and cultural characteristics inherent to the community. Land use has been going on for a long time, indicating a very early connection among humans and nature in the context of livelihood and spirituality. Research by Glover (1977) entitled "" predicts that "the haveence of rice as a food product in South Sulawesi has been known since 25,000 years ago in the Maros region" [...], as quoted in( *Ancient History of South Sulawesi*, n.d.) This is evidenced by outcome obtained by excavations at rock cave sites comprising Leang-Leang in Maros, that show the presence of early agricultural residues, stone tools, and signs of plant domestication.

Changes in human behavior were influenced by environmental conditions that required their mindsets to evolve in order to overcome obstacles, including in

hunting and agricultural activities that reflected ecological transformations. The soil ecosystem is not only viewed in economic terms in the form of food production, but also as an external part that is inextricably linked to human life. Soil, water, and sunlight are sources of human life that opened a new chapter in the knowledge system related to agriculture, namely the haveence of seasons, control over water sources, and types of plants. This knowledge gradually shaped the lifestyle of agrarian societies.

According to Bellwood (2005) , Eastern Indonesia, including Celebes or Sulawesi, is an important part of the migration and spread of Austronesian communities, bringing with them various products of civilization related to more modern agricultural technology with various cosmological meanings among humans and nature. The culmination of this was progress in the agricultural sector, that gradually led to the formation of a community-based social structure with spiritual values rooted in respect for the land, water, and life.

Over time, settled farming practices became a source of income for local communities. Land use in South Sulawesi is not only for rice production, paddy fields, and farms; land or soil also serves as a medium for social activities and cultural rituals in the community. Land has long been part of the community's value system, that combines ecological, economic, and spiritual aspects. As in the *mappalili* tradition of the Bugis people, land is considered a living space that must be spiritually cleansed before it can be planted. These rituals are not only symbolic, but also part of a collective reflection on the balance among humans and the environment.

Pelras notes that the structure of land use in Bugis society is never neutral or merely technical. It has always been tied to value systems comprising *pangngadereng* and *ade*, that regulate the connection among humans, nature, and the divine (Pelras, 2006) . Therefore, agricultural land is not only treated as a source of livelihood, but also as an ancestral inheritance, where the inheritance of land has moral and spiritual significance. Agricultural activities and land use are an integral part of the history of the people of South Sulawesi, where they are closely related to sacred cultural values. Agricultural land management through traditional processes, mutual cooperation, and seasonal rituals that have been passed down by generation to generation to maintain ecological and social harmony.

The connection among agricultural activities and culture still persists today, especially in some areas that still strictly uphold traditional customs as the basis for ethics in natural resource management. It can then be concluded that the main objective of this research is to preserve, maintain, and conserve the spiritual practices of the Bugis people as an alternative solution in efforts to maintain sustainable and holistic food security using an ethnographic approach and philosophical reflection on cultural texts and rituals. This article will provide a perspective on how agrarian spirituality is not just a common mythological story, but a visionary solution for the sustainability of food security.

### **Research and Method**

This research focuses on food security based on local ontology. Therefore, to examine in depth each cultural practice, symbolic meaning, and spiritual connection that haves in the community that is the subject of this research, a qualitative approach is used, that is considered appropriate for the focus of the research by combining reflective ethnographic methods (Tedlock, 2000) . This approach will provide space for researchers to conduct in-depth validation and critical analysis of their understanding of the research subjects through direct

interaction and involvement in the field. The study was conducted over six months in two Bugis agrarian communities: the Towani Tolotang community in Sidenreng Rappang Regency and the highland farming community in Enrekang Regency.

Data collection techniques included three main methods. First, participatory observation (Spradley, 1980), was conducted by directly observing various agrarian rituals comprising *maddoja bine*, *mappammula*, and *mingngala*. Second, semi-structured in-depth interviews were conducted with traditional leaders, farmers, and women seed managers, who were purposively selected based on their involvement in eco-spiritual practices. Third, visual documentation and daily notes were used to record details of symbolic practices and oral narratives during the planting to harvesting process.

In addition to field data, a symbolic text analysis was conducted on the *La Galigo* epic (manuscript NBG 188) and other local Bugis literature. These texts were not treated as normative sources, but as forms of cultural construction that reflect the agrarian, cosmological, and ethical values of the community (Geertz, 1973 ; Lévi-Strauss, 1963) This approach is in line with interpretive methods in symbolic cultural studies that focus on the meaning behind actions and narratives. To ensure validity, source triangulation and the method of were used, combining the outcomes of interviews, observations, and textual artifacts. This was done at the final stage to test the coherence of the interpretation with the collective understanding of the community. This method also incorporates elements of reflective autoethnography Ellis Tony E. and Bochner, Arthur P.,(2011) , in that the researcher's position and background are evaluated as part of the interpretation process. This is important to avoid epistemic bias and maintain ethical sensitivity in exploring and representing local knowledge systems.

### **Result and Discussion**

Field outcome show that the community in Tellu Limpoe, Sidenreng Rappang district, does not only treat the land for production purposes, but also as a living entity that is spiritually connected to humans. This pattern of interaction contains a strong cosmological dimension, in that agriculture is considered part of the order of life whose balance must be maintained. In interviews and participatory observations, it was revealed that the planting and harvesting seasons always have with certain rituals aimed at spiritually purifying the land and symbolic communication with the guardians of nature to have cultivating the land.

Symbolic communication through these rituals signifies that nature—the land, mountains, rivers, and forests is not merely inanimate objects but living entities with consciousness and supernatural powers. Similarly, Bari (1996) in his idea of "Revolutionary Ecology" refers to the closeness of humans to nature as biospheric consciousness, also known as *deep ecology*. In this approach, nature is not positioned as subordinate to human needs, but as an equal subject in life. Nature does not have merely to serve humans, but also to live alongside humans in an ethically and spiritually interconnected system.

This view has a strong influence on what is happening in South Sulawesi society, especially in communities comprising Kajang, that practice the idea of *kamase-masea* (simplicity) as a form of respect for sufficiency and a prohibition on the irresponsible exploitation of nature to meet human needs. What the communities living around the social forestry area with the Towani Tolotang community do in terms of land management and agricultural practices indicates the haveence of a local knowledge system with spiritual and ecological foundations.



This system has proven to have an impact on sustainable and holistic food management, not only bringing economic benefits, but also ensuring that the sustainability of natural ecosystems is well maintained. As we understand, the sustainability of ecosystems is greatly influenced by the economic activities of communities that rely on nature as a source of livelihood. Human awareness of the importance of ecological values and eco-spiritual practices greatly helps in restoring the connection among entities and nature in the midst of increasing human activities in utilizing nature as a source of fulfillment. The following is an explanation of five descriptions of local ontological concepts by two communities in South Sulawesi

#### 1. Humans and nature in a spiritual connection

The connection among humans and nature in the Bugis agrarian community is not merely utilitarian, but is intertwined in a cosmological knowledge system that has been passed down by generation to generation. Research in two locations, Sidenreng Rappang and Enrekang, shows that agricultural practices there are not only food production activities but also part of a life ritual that integrates humans with the spiritual and ecological dimensions. This connection is the reason for the local community's belief that nature has consciousness and supernatural powers, has a spirit or *sumange'* just like humans, and therefore needs to be respected and appreciated.

In addition to this belief, the connection among humans and nature is also built on the basis of a sense of shame or *siri'*, a value that acts as a social control against efforts to destroy nature and irresponsible exploitation of natural resources. Sociologically, *siri'* is considered a moral value that guides human behavior and influences actions in all aspects of life, whether related to nature or human social behavior that affects interactions with other humans. In addition, humans also recognize *ade'*, that is a rule or system of norms that maintains balance among humans, society, and nature. Deviating by *ade'* as a social rule is considered a disgrace and a form of violation of the harmony of life that outcomes in the loss of *siri'*. *Ade'* and *siri'* are two local ontological concepts that go hand in hand because when one is violated, the other is also affected. *Ade'* and *siri'* are the outcome of a mutual agreement created by local ontology and become local ontology itself.

In relation to agricultural land management in terms of local ontology, the stages of *maddoja bine*, *mappamula*, and *mingala*, that are known to the Towani Tolotang community in Sidrap Regency and Mappedong to the Ba'ka community in Enrekang Regency, show that every agrarian action is guided by local ethics and knowledge. In Bugis and Massenrempulu cosmology, soil, seeds, wind directions, and seasons are not considered inanimate objects but rather living elements connected within the cosmic order. La Galigo states: "*by the navel grew golden rice. It became the first food of mankind.*" (Enre, 2017, pp. 169–170). This expression emphasizes that food comes by a sacred origin, making farming a form of respect for life that is greater than just a subsistence need.

#### 2. Spatial and Temporal Orientation (they are not backward but sovereign in goodness)

For local communities, space and time are social-spiritual arenas. Land and seasons are not just spaces of production but also powerful and sacred mediums that serve as intermediaries of communication and places where symbolic exchanges occur. Local knowledge of space and time is identical and inseparable by local communities; it has become their identity and is inherent to them. Space gives them freedom, strength, and a connection to what they believe in, while time provides

them with process, perseverance, and a deep awareness of balance. Sukarman said that *"when starting to plant rice, corn, or other types of crops, farmers must have by facing east, where the sun rises, so that the crops will grow well."* (Sukarman, Personal Communication, December 8, 2023).

Sukarman, a farmer in Enrekang Regency, explains how fertility and abundant harvests are linked to a direction and connoted through time and the direction of the sunrise. *"If you don't know the bad days, the planting can fail. We still believe in the prohibitions and pappaseng (messages) by our elders. We must understand that there are days called Tallu Tallu, that are red days, yellow days, white days, and black days."* (Lauda, personal communication, January 18, 2024). This quote by Lauda, a male farmer by Enrekang district, reflects how agricultural decisions are not based solely on technical logic, but also take into account ecological signals and spiritual values that are integrated into daily life. Mr. Lauda's statement underscores that the decision to have the planting process is not based solely on technical considerations or weather, but on local knowledge that is structured spiritually and symbolically.

They define space and time through cycles, directions, seasons, and land. The recurring cycles of the sun and seasons seem to communicate with them about the important decisions they make. When they use nature as their guide in managing the land, the outcome is not only a harvest but also a sustainable and ecologically balanced agricultural system.

Each type of day has its own spiritual and ecological value and is not only used as a reference for starting the planting season, but also as a basis for making decisions on all important activities comprising clearing fields. In addition to being used as a reference in the process of land management, the orientation of time also functions socially as the basis for making other decisions related to wedding ceremonies and spiritual journeys. In the local context, time orientation is associated with tallu tallu, a calendar system with good and bad days symbolized by four colors. In addition to determining planting times, it is also used as a guide for other decisions comprising marriage.

### 3. Symbolic Dimension

Indigenous peoples and local communities are closely bound together by symbols. They interact with symbols not only during traditional celebrations, but also in their daily lives, including in land management systems. The depiction of white, red, yellow, and black as symbols interpreted by the community is also explicitly discussed in the La Galigo manuscript, that mentions the colors of rice: red, yellow, white, black, and blue.

This quote appeared after the death of Wé Oddang Riuq, who was believed to have been reincarnated as rice. *"He went to visit the grave of his ancestors and found rows of ripe rice growing there. Some were red, some were yellow, white, black, and some were blue. There was no wide valley, long hill, or high mountain that was not filled with yellowing rice. Manurunggé's hair stood on end.169–170"* (Enre, 2017, pp. 169–170).

This quote is part of the narrative of the origin of Sangiang Serri, the goddess of rice in the cosmology of South Sulawesi. The colors of the rice have symbolic meanings related to the spiritual and cosmological dimensions of life. This knowledge is included in the local cosmological calendar system known as *tallu tallu* among the local community in Enrekang Regency, that classifies days into red, white, yellow, and black.

For the local community, red days are considered to carry strong energy and are usually avoided for starting important work because they can trigger failure. White and yellow days are generally chosen as auspicious days that bring blessings ( ), while black days are seen as risky and should be avoided. "*Narekko meloki mattaneng tau-é, kitai jolo anging-é; makkita manggolo kutega iyaré pattaungeng, iyaré bare. Narekko purani ri patentu'ni watunna.*" (Wa Luru, personal communication, December 25, 2024).

This quote by a male traditional leader of the Towani Tolotang community shows that the decision to start planting activities in the local community (part of space and time) can be discussed in relation to the east, that is symbolized as fertility and abundance, a teaching by Sawerigading. Then, when the harvest is complete, they give away some of the land rights.

There are several stages in the agrarian rites of the Towani Tolotang community in Sidrap District, each stage containing meaningful and sacred actions, namely, first, *maddoja bine*, where the seeds are prepared overnight in a sacred atmosphere: surrounded by fresh betel leaves smeared with lime, nutmeg seeds, kawaru leaves, and accompanied by the light of *pesse pelling* (traditional candles) three times. The seeds are placed in the upper room of the house, near the *rakkeang* room, signifying that they must undergo a spiritual transformation before being planted. followed by *mappano' bine*, where *bine* or rice seeds have begun to grow, then *mappalise*, that means to fill, is performed before the rice is planted. This is one of the rituals performed before farmers and farm workers go down to the fields with the aim of purifying and hoping that the rice will grow full. "*Farmers must eat pallise, that is made by young coconut and brown sugar. This pallise must be eaten before going down to plant. The hope is that the rice plants will be as full as the pallise, that means 'full'.*" (Wa Moni, personal communication, December 31, 2024)

The statement by Wa Moni, a female farmer by the Towani Tolotang Community, reveals the profound meaning of the practice of eating *pallise* before planting. *Pallise* is a simple food, usually made by compressed rice with whatever side dishes are available, that is consumed collectively before the seeds are sown. This practice is not only part of seasonal customs, but also reflects the strong principle of reciprocity in the eco-spirituality of the Bugis people. The next stage is *mappammula ase*, that is preceded by *massisi bine*, or cutting a portion or handful of rice that has already grown in preparation for a ritual to ask for blessings and express gratitude to the gods for a bountiful harvest and blessings. followed by *madumpu' ase*, where the *uwa* or traditional leaders are invited to have *mappammula ase*, a series of *madumpu' ase*, that involves burning rice husks with coconut fiber.

Then the *uwa* (traditional leaders) circle the rice fields, starting by the east-north-west and south, then back to the east, and finally to the east again. The *final* stage, *mingngala*, is carried out after the harvest as a form of respect for the fruits of the earth. Three handfuls of rice are brought home and sprinkled on the steps of the house as a symbol of welcoming the spirit of fertility. The rice is then arranged with other offerings comprising four-colored *sokko*, chicken, coconut, and *pesse pelling*, then placed on the *rakkeang*, the sacred ceiling of the house. The Bugis tribe generally represents a complex and meaningful cosmological structure in the agricultural cycle. Each stage not only serves a technical function but is also laden with symbolic meaning that connects humans with the universe.

Meanwhile, in Enrekang district, there is a tradition called *mappeong* as part of the initial stage of planting or when cultivating rice fields, that is led by a leader or chief called *dulung*. "*The dulung's job is to determine the right time to plant, on*



*what day and date and month we go down to the rice fields. The dulung is the penghulu in the mapiong ritual when you go down to the rice fields, when the rice is ready to be harvested, and especially after the harvest.*" (Sukarman, personal communication, June 9, 2024). This quote by Sukarman, a male farmer by Enrekang Regency, reveals how the dulung plays a very important role in every process of agricultural land management. After the harvest, a celebration called Maccera Manurung is held as an expression of gratitude for the abundant harvest.

In this context, *maccera*, that means "purification" or "bathing," is not only a ritual of respect for ancestors, but also a spiritual mechanism to revive the sacred connection among humans and the environment. When the community believes that neglecting to perform *Maccera Manurung* can invite ecological imbalances comprising crop failure, plant disease, or social conflict, it can be concluded that this ritual serves as an instrument of ecological and ethical regulation. It becomes the guardian of the cosmos: that among seeds, soil, water, and sky, there is a spiritual contract that must be maintained through symbolic actions and unending respect.

As manifested in the agricultural practices of two local communities, Towani Tolotang in Sidenreng Rappang and the highland farmers of Enrekang, there is a cosmological continuity by the early stages of agriculture to the storage of the harvest in the sacred space of the house (*rakkeang*). Although the rituals differ, both show a similar conceptual line: that by the moment the seeds are selected and soaked (*maddoja bine*) to the storage of the harvest in the ceiling of the house, all processes are carried out with a deep spiritual awareness of the connection among humans and nature and cosmic forces.

In both communities, seeds are not only considered biological potential, but also spiritual gifts by the universe. The process of selecting seeds, planting time, and harvest rituals are carried out with reference to the sacred calendar system (*tallu tallu*), reading the signs in the sky, and paying respect to ancestors or cosmic figures, comprising *To Manurung*.

For the people of Enrekang who still consider tradition to be an integral part of their lives, they have a traditional leader called *Dulung* who is responsible for leading the *mappeong* ritual using bamboo sticky rice as a symbol of fertility. Meanwhile, for the people of Sidenreng Rappang, *Uwa* is a traditional figure who is tasked with leading prayers and arranging sacred symbols ( ) on a *baku*, that is used as a medium. Both traditions in Enrekang and Sidenreng Rappang provide an understanding that seeds are something that must be treated as living entities that give life to those who protect and care for them.

The spiritual journey of the seeds reaches its peak during *mingngala* or harvest. At this point, the agricultural produce is not immediately consumed or sold, but is brought home symbolically, sprinkled with rice on the steps, placed alongside sacred food, and then placed in the *rakkeang*. The *rakkeang* is not just a place to store rice, but functions as a sacred space for storing the spirit of the rice, the memories of the ancestors, and the continuity of the cosmos. In the *La Galigo* epic, this storage loft is described as a *storage place* that must be "opened" or "unloaded" when someone wants to access treasures, heirlooms, or objects that hold spiritual power: "*so that the storage loft can be unloaded, the many untouched treasures can be transported east to Sawang Mégga.*" (Enre, 2017 , p. 83)

This quote implies that *rakkeang* plays a role as the guardian of the hidden layers of the world's wealth, whether in the form of food, memories, or spiritual values. Only certain people who are given moral and customary authority can

access this space, indicating that not all humans can "touch" the spirit of rice and the memories of their ancestors without undergoing a ritual of respect. In the contemporary agricultural practices of communities comprising the Towani Tolotang Community and farmers in Enrekang, *rakkeang* is still treated as a "silent" place, not to be used carelessly, and its cleanliness is maintained through rituals. It becomes a "food altar," a symbol reminding us that human life depends on the fruits of the earth, that are sanctified through rituals and prayers. *Rakkeang* is a manifestation of Bugis agrarian spiritual architecture, a liminal space where spirits, food, and history meet. The similarities among these two communities show that both in the highlands and lowlands, communities in South Sulawesi generally have an ecological ethic shaped by agrarian spirituality. They do not separate food production by harmony with nature and the cosmic order. Thus, *by seed to rakkeang*, eco-spirituality not only explains the functional process of agriculture, but also builds a moral foundation for maintaining social and ecological balance.

#### 4. Plants as Living Entities

In *La Galigo*, rice is not the outcome of ordinary agriculture, but the incarnation of the sacred body of Sangiang Serri, the daughter of Batara Guru. She died on the seventh night, was buried, and by her navel grew golden rice, as recounted in the *La Galigo* manuscript as an ontological reference: "*by her navel grew golden rice. It became the first food of mankind.*" (Enre, 2017, p. 169.) This origin narrative shows that food has a sacred origin and cannot be reduced to a mere commodity. When the goddess's body became food, farming became a ritual. This view reflects the philosophy of *deep ecology*, that rejects the hierarchy of values among beings and places all entities as part of an equal and interdependent network of life. The cycle of life and death of Sangiang Serri is not only a symbol of fertility, but also the foundation of Bugis agrarian spirituality.

The same epic also mentions: "*There is no wide valley, long hill, or high mountain that is not filled with yellowing rice.*" (Enre, 2017, , p. 169). This means that Sangiang Serri's body not only becomes seeds, but spreads as a blessing that is evenly distributed throughout nature. This is a depiction of the ontology of fertility: that the body, the land, and plants have in one haveential unity. Rice is not born by something produced by technology alone, but by sacrifice, and therefore seeds are considered sacred, containing values that exceed production interests.

This awareness is reflected in Bugis agricultural practices comprising *maddoja bine* (seed purification), *massisi bine* (selection and collection of rice seeds), and *mappamula* (opening of the planting season). In *maddoja bine*, farmers ask for blessings by the sky through the stars, by the earth through offerings, and by the spirit of Sangiang Serri through prayer, so that the seeds will grow well and not be rejected by the earth. Rice seedlings are the havening of a long process involving various purification rituals before they are united with the soil. Before rice seedling cultivation, farmers take soil by the rice fields and combine it with rice seedlings in a germination process. The sprouting of each good rice seedling indicates the compatibility of the rice with the soil where it will grow.

Another tradition based on harmony among plants and soil can also be found in the teachings of Tomanurung Puang Palipada in Enrekang Regency. These teachings not only teach about the rules of power, but also convey ecological ethics and fertility in land management activities. In his teachings, there is a prohibition on exploitation and unfair harvesting, that is reflected in the traditional message: "*Aja' mualai ha'na taue*" (You must not dare to take away the rights of others).

(Abdullah, 2019, , p. 4). This message is a guideline that must be obeyed by every community in order to avoid things that can harm themselves and the community.

The community's adherence to the view that seeds, land, and sustenance cannot be taken without social and spiritual consideration. Humans live side by side with nature, and tradition is a pillar that ensures that every human being has limits in managing natural resources so that they are not damaged by excessive exploitation. The Enrekang community has established taboos or restrictions on human behavior in utilizing the forest as a source of life.

The haveence of these restrictions regulates the negative aspects of human greed and avarice, that have the potential to pollute and destroy the forest. The Bugis-Makassar cultural understanding of agricultural practices is part of an ecological ontology system ( ) that connects humans, the earth, and the sky through the body and sacred rituals. Agricultural practices must be understood deeply, not only in terms of the process and outcomes that will be obtained, but also in terms of how humans can harmonize their inner selves with the cosmic dimension through the land and rice seeds. This view provides a space to rearrange the logic of food, that is only seen as a commodity, into an entity of spirit and history.

The mythology of Sangiang Serri and the teachings of Puang Palipada illustrate that land management and the process of planting seeds to produce food commodities are not only a means of fulfilling biological needs, but also a system of values and deep ecological awareness that serves as a reference for every Bugis-Makassar and Enrekang community. Food security, in this sense, relies not only on availability, but also on blessings, cosmic order, and the ethics of the connection among the human body and the body of the earth.

##### 5. Eco-Philosophy and Contemporary Relevance

*La Galigo* as a cosmological text not only preserves ancestral stories but also provides an ecological ethical framework relevant to addressing contemporary environmental crises. Deep ecology (Naess, 1989 , pp. 28–29 1985 , pp. 70–71) calls for a fundamental change in the connection among humans and nature: by domination to participation, by exploitation to respect. In this regard, *La Galigo* offers a local conceptual framework for applying this philosophy in the Bugis agrarian context.

These principles are in line with the ideas of deep ecology, that criticizes the anthropocentric view and calls for a fundamental transformation in human relations with nature. Deep ecology rejects the understanding that nature haves solely to meet human needs. Instead, it emphasizes the importance of recognizing the value of life in all beings, as well as reviving the spiritual awareness that humans are only one node in a broader ecological network.

According to Abram's " , the modern world has experienced a sensory disconnection by nature, that has caused humans to no longer live fully present in their ecological space. The Bugis tradition reverses this through practices that activate all five senses: the sound of mantras, the colors of offerings, the direction of the wind, and the flames of fire in agrarian rituals. All of this fosters a concrete spiritual presence. Bugis eco-philosophy, as seen in its agricultural system and rituals, is a form of *ethics of care for the land*. The land is not only cultivated, but also cared for, appreciated, and connected to ancestors and cosmic forces.

This approach provides an alternative to the agricultural problems caused by climate change that is affecting the global agricultural sector. The combination of a local culture-based approach with a technocratic approach will reach both ethical horizons, both spiritual and ecological. The cultural approach through the

rituals of *maddoja bine*, *mappeong*, and *mappadendang* is a form of ecological regulation that integrates belief, social responsibility, and ecological sustainability. This series of rituals regulates the treatment of the land to be cultivated, the rice seeds to be planted, and the community's expression of gratitude for the agricultural harvest. Human awareness of the blessings and order of nature has shaped this cultural system for generations.

The connection among the *La Galigo* epic and the issue of global food crisis lies in the alternative solutions it offers for food management. This approach focuses more on traditional, culture-based approaches as a means of combining agricultural intensification with balancing the excessive exploitation of natural resources. This design develops a spiritual-ecological concept that places food as part of a reciprocal connection among humans and nature. The success of a locally-based cultural approach will have an impact on ecological sustainability and human ethical values towards the order of nature.

#### 6. Field Implications

The outcomes of this study emphasize the importance of local communities as a source of logical knowledge that still survives amid the massive agricultural technology revolution. In the realm of food security policy, there is a possibility of formulating agricultural management strategies that not only focus on a technocratic approach but also open up opportunities for other approaches, comprising those based on culture through the *maddoja bine* tradition. This concept is carried out with various local calculations and analyses regarding the determination of auspicious days to start farming, as well as taboos that must not be violated, comprising not clearing land when the moon is not visible. This shows that eco-spirituality is a guideline in natural and adaptive ecological regulation.

The experiences of two local communities in Sidenreng Rappang and Enrekang prove that rituals are not merely symbols, but also ecological ethical systems that guide land use. Therefore, the outcomes of this study are relevant as a reference in the development of community-based food security models, contextual environmental education, and the strengthening of policies based on local values that are in harmony with natural sustainability.

In *La Galigo*, food is not seen as a linear outcome of technology and human labor alone, but as the outcome of cosmic harmony that is maintained through ethics and spirituality. Bugis cosmology divides the world into three main realms: *botting langi* (upper realm/sky), *peretiwi* (middle realm/where humans live), and *peretiwi walie* (lower realm/water and darkness). These three realms do not have independently, but are connected by a network of sacred values and reciprocal connections. When humans maintain the boundaries and order of each of these worlds, life will be balanced and nature will provide its fruits. Conversely, violations of customary order will outcome in the destruction of ecological and social harmony.

As stated in the text of *La Galigo*: "*If customs are violated, rice becomes grass and sago becomes water*" (Enre, 2017, p. 93) This quote is not an empty metaphor, but a reflection of the view that the success of a harvest is not determined solely by the season and labor, but by the connection among humans and the moral and spiritual world. Rice does not simply grow because it is sown, but because humans maintain ethics towards seeds, soil, water, and fellow humans. When customs as an expression of collective values and cosmological awareness are violated, nature refuses to give. Agricultural disasters are a sign of the destruction of the connection among humans and the universe.

by this perspective, food security is the outcome of practices that are in harmony with the principles of the cosmos. It cannot be achieved solely through food policy, increased production, or technological diversification. All of these are important, but they are not enough if they are not accompanied by respect for the value system that binds humans to the natural order. In Bugis society, this principle is embodied through rituals, taboos, and collective life structures that revere food as part of the sacred body and ancestral heritage. Therefore, in the Bugis context, a food crisis is not only a scarcity of goods, but a sign of moral decay. Its recovery is not only through external intervention, but through reconciliation among humans, customs, and nature. True food security, in this cosmology, is a reflection of a life that is ethically and spiritually connected to the entire structure of the world.

### Conclusions

This article presents information about agricultural practices carried out by the local Bugis community based on a cultural approach through symbolic and spiritual meanings. The focus is not only on achieving agricultural productivity, but also on efforts to preserve long-standing traditions by treating the land and seeds as sacred substances.

This knowledge serves as a reference for the Bugis community in regulating ecological order and ethical systems that impact food security by the threat of climate change. Thus, food security does not only refer to the material availability of food, but also the sustainability of the ethical-cosmological connection among humans and nature. The integration of eco-spirituality values into public policy and education systems is a much-needed scheme amid global issues of food security and climate change. The government must recognize that local knowledge about agriculture is a promising offer for reshaping a sustainable food future.

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