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## The Panggoba Tradition as a Food Security Strategy: A Study of Hadith and Gorontalo Local Wisdom

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<b>Abstract:</b>	The Panggoba tradition in Gorontalo is a local practice related to food management and social solidarity, which has relevance to the concept of food security from an Islamic perspective. This study aims to explain how the Panggoba tradition can be understood as a food security strategy by linking it to the Prophet's hadith values regarding the importance of planting and maintaining the sustainability of food sources. The research method used is qualitative with descriptive analysis, through the study of hadith literature, text review, as well as observation of the cultural practices of the Gorontalo community. Data were obtained from primary sources in the form of hadiths related to the act of planting, as well as secondary sources in the form of academic literature, Gorontalo cultural archives, and research documents related to food security. The research results indicate that the Panggoba tradition not only functions as a mechanism for food distribution but also serves as a means to strengthen social solidarity and maintain the sustainability of local resources. The Hadith of the Prophet Muhammad (PBUH) concerning date pollination is one example that local wisdom can be aligned with religious teachings to produce sustainable food strategies. Integrating scientific approaches, policy, and local traditions will be key to ensuring food sovereignty and sustainable production across various regions of Indonesia.
<b>Keywords :</b>	Panggoba, food security, hadith, local wisdom, Gorontalo
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## Introduction

The phenomenon of food insufficiency in Indonesia is a dark reality and has long been a difficult problem for the country to solve. This phenomenon has become a crucial issue in the food crisis, as it continues to hinder the development of national food security. According to the latest data released by BPS in 2023, the regions recorded as experiencing food vulnerability are Papua 35,63% food insufficiency, followed by Maluku at 30.27%, and North Maluku at 29.56%.<sup>1</sup> This means that almost one-third of the population in these regions live with insufficient food consumption. Of course, this issue has central factors that cause certain regions to be weak in food security, ranging from geographical challenges that hinder farmers' activities, inadequate road access, and vulnerability to poverty, making it difficult for them to access food independently.

In addition to the factors mentioned above, there are several other factors that are also considered to contribute to the decline in food security stability. Among them is the conversion of agricultural land, which affects production yields due to repeated deforestation.<sup>2</sup> The land that is repurposed for residential use will only narrow the space available for production. Furthermore, the unpredictable changes in climate can make planting patterns increasingly difficult to predict and often threaten the success of harvests.<sup>3</sup> Not only that, another equally important factor is the increasingly massive modernization, which results in the marginalization of local knowledge. This dependent attitude leads to a decrease in farmers' productivity. These various factors are considered to contribute to the food crisis in Indonesia.

Reviewing the above factors, it appears that local knowledge, which is beginning to be forgotten by society, becomes the main focus of this study, by evaluating local wisdom as a manifestation of the relationship between humans and the environment through anthropological, ecological, and spiritual perspectives. This discussion serves as a comprehensive introduction to realizing sustainable food. Amid the currents of modernization that almost eliminate traditional values, local knowledge, in fact, becomes an adaptive strategy towards nature and climate change. In the Gorontalo region, there still exists a deeply rooted tradition that continues to be preserved to this day, known as *panggoba*. It originates from the community's ability to read natural signs such as stars and wind directions to determine the right planting time.<sup>4</sup> This study highlights *panggoba* through the perspective of hadith as a form of local wisdom that aligns

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<sup>1</sup>Badan Pusat Statistik. (2023). *Prevalensi ketidakcukupan konsumsi pangan menurut provinsi (%), 2023*. Badan Pusat Statistik. <https://www.bps.go.id/id/statistics-table/2/MTO3MyMy/prevalensi-ketidakcukupan-konsumsi-pangan.htm>.

<sup>2</sup>Dewinta & L. Warlina, "Dampak Alih Fungsi Lahan Pertanian terhadap Ketahanan Pangan di Kabupaten Cianjur," *Jurnal Wilayah dan Kota*, Vol. 4 No. 2 (2017): pp. 91-100.

<sup>3</sup>Mateos F. Pembuain, Marcus J. Pattinama & Ester D. Leatemia, "Strategi Adaptasi Petani Terhadap Perubahan Iklim untuk Mempertahankan Produksi Jagung di Desa Manuweri, Kabupaten Maluku Barat Daya," *Agrilan: Jurnal Agribisnis Kepulauan*, Vol. 10, No. 2 (2022): pp. 45-60.

<sup>4</sup>Ahmad S. Dunggio, "Tradisi *Panggoba* sebagai Pengetahuan Lokal Masyarakat Gorontalo dalam Sistem Pertanian," *Jurnal Humaniora dan Budaya*, Vol. 5, No. 2 (2022): pp. 77-79.

with the values of food welfare and ecological sustainability.<sup>5</sup> Therefore, this study is reviewed through the perspective of hadith concerning local knowledge of panggoba, which clearly supports local wisdom based on values of welfare related to food as well as ecology.

### **Research Methodology**

This research methodology employs a qualitative approach with descriptive analysis to understand the Panggoba tradition as a food security strategy from the perspective of hadith and local wisdom in Gorontalo. The study was conducted in the Gorontalo region involving communities that still practice this tradition. Primary data were obtained from relevant hadith texts. Data collection techniques included observation and document study, while analysis was carried out through stages of data reduction, data presentation, and drawing conclusions to connect the values of hadith with Panggoba practices. Data validity was ensured through source and method triangulation, so that the research results can provide a comprehensive picture of the relevance of the Panggoba tradition as a local wisdom-based food security strategy that aligns with Islamic teachings as contained in the Prophet's hadith.

### **Discussion**

#### **Portrait of the Dynamics of the Food Security Crisis in Indonesia**

Food issues seem never-ending as the human population continues to grow. The dynamics of the food crisis from year to year almost always follow the same pattern, namely the failure to provide food consumption evenly.<sup>6</sup> According to data from the Central Statistics Agency released in 2022, and updated again in 2023, several regions were recorded to predominantly experience food shortages, including Papua at 35,63%, Maluku at 30.27%, and North Maluku at 29,56%.<sup>7</sup> Indirectly, these figures indicate that almost half of the population in these regions faces serious problems. The food crisis in Southwest West Papua, particularly in Konda Province, is caused by complex factors related to its challenging geography, mountainous areas, steep valleys, and dense forests.<sup>8</sup>

The diverse climate in this region, ranging from humid lowlands to cold highlands, also limits the cultivation of staple crops such as sago and sweet potatoes.<sup>9</sup> In Timika, prolonged land disputes have caused communities to lose access to farmland, resulting in decreased harvest yields and dependence on

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<sup>5</sup>Fathul Amin & Nur Laili, "Kearifan Lokal dalam Perspektif Islam: Integrasi Nilai Tradisi dan Ajaran Agama," *Jurnal Al-Adyan: Studi Lintas Agama*, Vol. 17, No. 1 (2023): pp. 45-47.

<sup>6</sup>Krisna Fransina Lermating, Hendry Jems Yoel Aidore & Franklin D. Paiki, "Ketersediaan dan Aksesibilitas Pangan Lokal: Implikasinya Terhadap Ketahanan Pangan di Distrik Konda, Kabupaten Sorong Selatan Provinsi Papua Barat Daya," *Jurnal Agribisnis Terapan (JAT)*, Vol. 3 No. 1 (2023): pp. 15-28.

<sup>7</sup>Badan Pusat Statistik. (2023). *Prevalensi ketidakcukupan konsumsi pangan menurut provinsi (%)*, 2023. Badan Pusat Statistik. [Prevalensi Ketidakcukupan Konsumsi Pangan - Tabel Statistik - Badan Pusat Statistik Indonesia](#)

<sup>8</sup>Krisna Fransina Lermating, dkk. pp. 17-18.

<sup>9</sup>Yossa AP Nainggolan, "Problematika Mewujudkan Kedaulatan Pangan di Papua", *Jurnal HAM*, Vol. XII (2015): pp. 98-113.

external supplies. According to research by Rizal Syaief et al., this situation has led to productive land no longer being utilized optimally.<sup>10</sup> In North Maluku, food vulnerability is largely driven by poverty and high distribution costs. The limited agricultural land also affects the limited food production.

Extreme weather and logistical obstacles in this island province disrupt supply chains, making communities more reliant on imported food. Low purchasing power, minimal infrastructure, and geographical isolation collectively hinder food self-sufficiency and deepen local dependence.<sup>11</sup> This regional food insecurity reflects broader national challenges that are interconnected with economic, social, and cultural factors. Beyond issues of production and distribution, modernization has transformed traditional agricultural values and human relationships with nature.<sup>12</sup> Although technological advancements increase efficiency, they also distance communities from ecological harmony.

As noted by Kenneth Worthy in *Invisible Nature*, the separation of modern society from the environment encourages humans to exploit nature rather than coexist with it.<sup>13</sup> This shift in mindset has replaced the simplicity and balance once embedded in traditional agricultural systems as a reminder of local wisdom in maintaining food security. This change has altered the way humans interact with nature, replacing the values of simplicity and harmony with a greater emphasis on outcomes and efficiency. However, local wisdom such as the *panggoba* tradition in Gorontalo continues to uphold the principles of food security. As demonstrated in Momy Hunowu's research in *Molamahu*, Gorontalo, this adaptive local knowledge effectively addresses agricultural issues such as corn pests while maintaining ecological balance.<sup>14</sup> For the people of Gorontalo, this tradition is still maintained because it is believed and proven to be able to maintain stability as well as the success of the harvest. The *panggoba* tradition becomes a tangible representation that local knowledge still possesses vitality, even capable of becoming an alternative strategy in realizing food self-sufficiency amidst increasing pressures of modernization. From the perspective of the Gorontalo people, *panggoba* is not merely an agricultural ritual, but a manifestation of awareness of the harmonious relationship between humans, the

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<sup>10</sup>Rizal Syarief, Sumardjo, Agit Kriswantriyono, & Yulia P. Wulandari, "Pengembangan Ketahanan Pangan Melalui Pemberdayaan Masyarakat di Kawasan Rawan Konflik Timika, Papua," *Jurnal Ilmu Pertanian Indonesia (JIPI)*, Vol. 22 No. 3 (2018): pp. 163-171.

<sup>11</sup>Kantor Ketahanan Pangan Kabupaten Mimika dan Badan Pusat Statistik Kabupaten Mimika, *Neraca Bahan Makanan Kabupaten Mimika: Statistik dan Laporan Sektor*, Mimika: BPS Kabupaten Mimika, 2023, accessed through the official website of the Mimika Regency Government, <https://mimikakab.go.id/opd/18>

<sup>12</sup>Yudha, Eka Purna, Viorensa Tedjalaksana, and Cindy Kaori Eka Putri, "Dampak Modernisasi Terhadap Kesejahteraan Petani." *Prosiding Seminar Nasional Hasil Penelitian Agribisnis*. Vol. 7, No. 1 (2023).

<sup>13</sup>Kenneth Worthy, *Invisible Nature: Healing the Destructive Divide Between People and the Environment* (Amherst, NY: Prometheus Books, 2013): p. 23.

<sup>14</sup>Momy A. Hunowu, Yowan Tamu, Muhammad Obie, dan Hatim Badu Pakuna, "Modernisasi dan Pergeseran Praktik Kearifan Lokal pada Pertanian Jagung di Provinsi Gorontalo," *Sodalitas: Jurnal Sosiologi Pedesaan* Vol. 9, No. 2 (2021): pp. 189-212.

land, and the Creator.<sup>15</sup>

The value of respect for nature, the sense of responsibility for agricultural produce, and the belief that every harvest is a form of divine blessing, make Panggoba more than just a tradition; it is also a spiritual aspect that teaches the balance of life. Therefore, understanding Panggoba means tracing back how local communities interpret food security as part of cultural heritage and as a human endeavor passed down across generations.

### **The Local Knowledge System of Panggoba in Addressing the Food Crisis**

Various dynamics concerning the food crisis in Indonesia serve as clear evidence of the country's food vulnerability. One of the causes is the increasingly dominant use of technology in the agricultural sector. On one hand, technology in agriculture can increase productivity and minimize farmers' working hours, but on the other hand, it can also change the perspectives and behaviors of the community in managing agricultural land.<sup>16</sup>

As stated by Emilio F. Moran in his book *People and Nature: An Introduction to Human Ecological Relations*, he argues that agriculture in modern life seems to become a sort of mass suicide tool due to technology and the excessive use of pesticides.<sup>17</sup> This view reflects the reality that modern progress often sidelines the values of togetherness, simplicity, and respect for nature that once thrived in local community cultures. However, amid the rapid waves of change, there are still local heritages that continue to endure and support community life, one of which is the Panggoba tradition in Gorontalo.<sup>18</sup> From several previous literatures, it has been discussed that local knowledge actually shows a different perspective; it is considered capable of providing beneficial outcomes for farmers, while simultaneously maintaining the relationship between humans and ecology.<sup>19</sup>

This tradition is not merely a form of inherited habit, but serves as a reflection of how local communities perceive food as part of spirituality, togetherness, and an effort toward the earth that provides life. The term 'panggoba' is understood to mean 'elder' or 'respected person' within a village. 'Panggoba' itself is a designation for those considered to possess the ability to read the signs of nature.<sup>20</sup> This tradition originated from the extensive experience of previous generations in observing the movement of stars, wind directions, and

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<sup>15</sup>Amir Fadhilah. "Kearifan Lokal dalam Membentuk Daya Pangan Lokal Komunitas Molamahu Pulubala Gorontalo." *Buletin Al-Turās*, Vol. 19, No. 1 (2013): pp. 23–38.

<sup>16</sup>Maulida, P. "Dampak Perkembangan Teknologi Pertanian terhadap Perubahan Sosial Masyarakat di Kabupaten Madiun," *Social Science and Community Journal*, Vol. 1, No. 4 (2023), pp. 362–373.

<sup>17</sup>Emilio F. Moran, *People and Nature: An Introduction to Human Ecological Relations*, (West Sussex: Wiley-Blackwell, 2016): p. 142.

<sup>18</sup>Amir Fadhilah, p. 12,

<sup>19</sup> Arsyam, M., Zakirah, Z., & Ibrahim, S. (2021). Transmigration Village and Construction of Religious Harmony: Evidences From Mamasa of West Sulawesi. *Al-Ulum*, 27(1), 205-221.

<sup>20</sup>Hunowu, Momy, Yowan Tamu, dan Hatim Badu Pakuna, 'Forbidden' Ritual as a Mechanism of Social Resilience in the Gorontalo Farming Community in Indonesia." *KnE Social Sciences*, Vol. 10, No. 10 (2025): pp. 83–102.

weather changes, which served as guidelines for determining the appropriate planting and harvesting times. The role of the panggoba is not only limited to determining planting schedules but also serves as a guardian of ecology and social communities.<sup>21</sup> This ability emerged due to circumstances that were extremely minimal and limited, resulting in a harmonious relationship between humans and the environment.

In determining the appropriate day and time for planting, the panggoba positions it using the Islamic lunar calendar system such as Hijri, Muharram, and so on.<sup>22</sup> The cropping calendar system in Gorontalo is divided into four parts according to the intensity of rainfall. To clarify this calendar system, the following table presents the division of planting seasons according to the Panggoba community in Gorontalo.

Season	Month Period	Planting Dates	Types of Crops Planted	Season Notes
Tauwa (main planting season/flooded rice period)	October-December	21 Oktober-8 November	Types of Crops Planted	The main planting season with high rainfall
Tualanga Afternoon (second rainy season)	February-March	February 23 - March 16, March 23 - April 8	Rice and secondary crops	The extended rainy season is suitable for medium-aged plants
Hulita-Pobole (Dry Season 1)	April-June	April 21-May 6	Short-lived plant	The transitional period during the dry season, when rainfall begins to decrease

Figure 1. Planting Season Distribution Table<sup>23</sup>

Based on the data in the table, the panggoba determines the planting time by observing the positions of four main stars as a traditional calendar, namely *totokiya*, *ta'adata* or *tutupito*, *otoluwa*, and *maluo*. The *totokiya* star (Altair, in the constellation Aquila) serves as an indicator of the transition from the rainy season to the dry season, marking the time for land preparation. Next, the *ta'adata* or

<sup>21</sup>Hunowu, Momy, dan Yowan Tamu. "Modernization and Shifting Practices of Local Wisdom on Corn Farming in Gorontalo Province." *Sodality: Jurnal Sosiologi Pedesaan*, Vol. 9, No. 2 (2021): pp. 1-15.

<sup>22</sup>Yowan Tamu, "Sistem Penanggalan Musim Masyarakat Gorontalo: Kajian Sosio-Kultural," *Jurnal Ilmiah Mandala Education*, Vol. 4, No. 1 (2018), p. 105

<sup>23</sup>Yowan Tamu, p. 106.

tutupito star (Pleiades, in the constellation Taurus) marks the period for planting corn and rice. The otoluwa phase indicates the time for crop care to prevent pests and drought, while the maluo star signifies the harvest period. The observation of the stars is carried out diligently by the panggoba and farmers at 6:00 AM before going to the fields, and at 6:00 PM upon returning from work.<sup>24</sup> This precision in timing enables the community to adjust each stage of cultivation in accordance with natural changes accurately and effectively.

In addition, panggoba also considers the age of the moon as a traditional planting season calendar passed down through generations. When the moon is one day old, the community plants tubers; on the second day, they plant corn; and on the third day, they plant fruit-bearing plants at the ends, such as coconut and papaya.<sup>25</sup> This system serves as an important guideline for the community in maintaining the balance and sustainability of local agriculture. More than just a tradition, this practice becomes a symbol of the wisdom and spirituality of the Gorontalo people, teaching that a successful harvest is not only the result of hard work but also the fruit of human harmony with the signs of the universe.

### **Integration of Panggoba in the Perspective of Hadith Efforts to Build Sustainable Food**

The panggoba tradition is understood as a figure who adheres firmly to experience and natural knowledge, and has been passed down through generations. This role not only preserves the continuity of tradition but has also been proven capable of minimizing crop failures. In the context of modern scientific knowledge, this practice aligns with the principles of agro-astronomy, which link celestial phenomena with seasonal cycles on Earth.<sup>26</sup> In addition, the panggoba also serves to guide farmers in organizing planting patterns collectively, thereby stabilizing agricultural yields. Therefore, this tradition is considered an important part of the community's self-reliant food security strategy. This understanding finds legitimacy in the hadith of the Prophet (peace be upon him), by allowing space for humans to rely on expertise and experience in technical matters. This hadith becomes evident when the Messenger of Allah (peace be upon him) advised date farmers not to carry out pollination, but after their results failed, he emphasized that worldly affairs are more governed by human experience and expertise.

حَدَّثَنَا أَبُو بَكْرِ بْنُ أَبِي شَيْبَةَ، وَعَمَرُ بْنُ النَّاقِدِ، كِلَاهُمَا عَنِ الْأَسْوَدِ بْنِ عَامِرٍ، - قَالَ أَبُو بَكْرٍ حَدَّثَنَا الْأَسْوَدُ بْنُ عَامِرٍ، - حَدَّثَنَا حَمَادُ بْنُ سَلَمَةَ، عَنْ هِشَامِ بْنِ عُرْوَةَ، عَنْ أَبِيهِ، عَنْ عَائِشَةَ، وَعَنْ ثَابِتٍ، عَنْ أَنَسٍ، أَنَّ النَّبِيَّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ مَرَّ بِقَوْمٍ يُلْقِحُونَ فَقَالَ " لَوْلَمْ تَفْعَلُوا لَصَلَحَ " . قَالَ فَخَرَجَ شَيْصًا فَمَرَّ بِهِمْ فَقَالَ " مَا لِنَخْلِكُمْ " . قَالُوا قُلْتَ كَذَا وَكَذَا قَالَ " أَنْتُمْ أَعْلَمُ بِأَمْرِ دُنْيَاكُمْ "

<sup>24</sup>Yowan Tamu, pp. 106-108.

<sup>25</sup>Yowan Tamu, p. 109.

<sup>26</sup>Intan Purnama Sari dan Ahmad Zuber, "Kearifan Lokal dalam Membangun Ketahanan Pangan Petani", *Journal of Development and Social Change*, Vol. 3, No. 2 (2020): pp. 25-35.

Abu Bakr bin Abu Syaibah and 'Amru An Naqid have narrated to us, entirely from Al Aswad bin 'Amir. Abu Bakr said: Aswad bin 'Amir narrated to us; Hammad bin Salamah narrated to us from Hisham bin 'Urwah from his father from 'Aishah and from Thabit from Anas reported that Allah's Messenger (ﷺ) happened to pass by the people who had been busy in grafting the trees. Thereupon he said: If you were not to do it, it might be good for you. (So they abandoned this practice) and there was a decline in the yield. He (the Prophet) happened to pass by them (and said): What has gone wrong with your trees? They said: You said so and so. Thereupon he said: You have better knowledge (of a technical skill) in the affairs of the world.<sup>27</sup>

The Prophet's statement above has a historical background that took place in the city of Medina. When the Messenger of Allah (peace be upon him) passed by a group of farmers who were about to pollinate date palm trees, he advised them not to do so. However, after the Prophet's advice was followed, the harvest actually failed, and they reported this to the Prophet, and he said: "You know your worldly affairs better." The context of this hadith explains that this statement arose within the context of social interaction between the Prophet and the farmers, not in matters of worship or religious law. This aligns with the view of Ibn Hajar al-Asqalani in his book *Fath al-Bari*, where he explains that the above hadith concerns worldly matters such as agriculture, medicine, and trade, which rely on human expertise, while the prophetic mission focuses on explaining religion, permissible and forbidden matters.<sup>28</sup> In line with the views of Imam al-Nawawi in *Syarh Shahih Muslim*, he explains that the use of the word (أَعْلَمَ) indicates the acknowledgment of the Prophet Muhammad (peace be upon him) regarding the capacity of his ummah in worldly matters, such as agricultural practices, trade, and technology; each person has the freedom to utilize knowledge and skills as long as they do not contradict Sharia.<sup>29</sup> Thus, the integration of the Prophet's (peace be upon him) hadith and practical experiences

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<sup>27</sup>Abi Husain Muslim bin Al-Hajjaj Al-Qushairy Al-Naisaburi, *Shahih Muslim*, (Riyadh: Daarul Mughni), The Book of Virtues, Chapter 'The Difference Between Religious Matters Taught by the Prophet (Peace Be Upon Him) and Worldly Matters', chapter 38, no. 2,363, page 1,286. This hadith is narrated by Imam Muslim through two companion chains, namely Aisha (may Allah be pleased with her) and Anas bin Malik (may Allah be pleased with him). The first chain comes from Aisha through the isnad of Abu Bakr bin Abi Syaibah and 'Amr an-Naqid from al-Aswad bin 'Amir, from Hammad bin Salamah, from Hisham bin 'Urwah, from his father 'Urwah bin Zubair. The second chain comes from Anas bin Malik through Thabit al-Bunani. All narrators in these two chains are considered trustworthy (thiqah) as explained in *Tahdzib al-Kamal* by al-Mizzi. Because all the chains of transmission are strong, connected, and free from defects, this hadith is classified as sahih li dzatihi. Moreover, the presence of two companion chains narrating it makes this hadith reach the degree of mutawatir in meaning, as the substance of the message is the same and mutually reinforces each other. Thus, this hadith possesses authenticity and validity as a source of the teachings of the Prophet (peace be upon him).

<sup>28</sup>Ibn Hajar al-'Asqalani, *Fath al-Bari bi Syarh Shahih al-Bukhari*, Juz 1 (Beirut: Dar al-Ma'rifah, 1379 H), p. 219.

<sup>29</sup>Imam al-Nawawi, *Al-Minhaj bi Sharh Sahih Muslim* (Damaskus: Dar al-Kutub al-'Ilmiyyah, 1992), p. 23.

demonstrates the continuity between revelation and human expertise.

However, there are also hadiths that may seem contradictory if one incorrectly connects the meaning of their context with the Panglima tradition. Caution is needed when considering the context of these hadiths, as there is concern about raising questions regarding the legitimacy of the Panglima tradition within the framework of Islamic teachings. There are several hadiths of the Prophet (peace be upon him), one of which is a hadith narrated by Imam Muslim regarding the belief that certain stars can cause rainfall, which is considered an act that can contradict creed and categorizes someone as an unbeliever. The Prophet (peace be upon him) said:<sup>30</sup> *The Messenger of Allah (ﷺ) led the morning prayer at Hudaibiya. There were some marks of the rainfall during the night. At the conclusion of prayer he turned towards people and observed: Do you know what your Lord has said? They replied: Allah and His Messenger know best. Upon this he (the Prophet) remarked: He (Allah) said: Some of My bondsmen entered the morning as My believers and some as unbelievers. He who said: We have had a rainfall due to the Blessing and Mercy of Allah, he is My believer and a disbeliever of stars, and who said: We have had a rainfall due to the rising of such and such (star) disbelieved Me and affirmed his faith in the stars.*

The above hadith can be concluded to indicate that the panggoba tradition is understood as local wisdom that is legitimate according to sharia, because its practice emphasizes human effort in determining planting times and harvest success, rather than being based on the assumption that stars determine agricultural outcomes. This confirms that panggoba is not a form of shirk, but rather a rational effort to face the uncertainties of nature. Meanwhile, in Islam, stars have valid functions, such as guiding directions, determining time, and reading weather signs, so natural observation is still permissible, as long as it does not violate the principle of tawhid.<sup>31</sup> Panggoba becomes a logical agricultural planning practice with the awareness that the harvest is a blessing from God. This tradition educates the community to understand the natural cycle, the interconnection between humans and the environment, and awareness of agricultural sustainability. Thus, this practice not only preserves culture but also harmoniously integrates Islamic principles, agricultural science, and the sustainability of natural resources.

In line with the principle of food security, the Prophet (peace be upon him) also emphasized the importance of human effort in maintaining the sustainability of life through planting activities.

42 *إِنْ قَامَتِ السَّاعَةُ وَبَيَدِ أَحَدِكُمْ فَسِيلَةٌ فَإِنْ اسْتَطَاعَ أَنْ لَا يَقُومَ حَتَّىٰ يَغْرَسَهَا فليُفْعَلْ*

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<sup>30</sup>Abi Husain Muslim bin Al-Hajjaj Al-Qushairy Al-Naisaburi, *Shahih Muslim*, (Riyadh: Daarul Mughni), Book of Faith, Chapter 'Explanation about Rain Caused by Certain Stars', chapter 32, no. 71, p. 54.

<sup>31</sup>See QS. Al-An'am (6): 97, "And it is He who has made the stars for you, that you may use them as guidance in the darkness on land and at sea." Ibn Katsir in Tafsir al-Qur'an al-'Azim emphasizes that this verse indicates the permissibility of using stars as a guide for direction and time.

If the Day of Judgment occurs while one of you possesses a date palm seed, if possible, he should not stand until he has planted it.<sup>32</sup>

This hadith emphasizes that planting is a symbol of sustainability and the effort to meet the basic needs of humanity. Even under extreme conditions, the Prophet (peace be upon him) continued to encourage people to plant, as if sending a message that social responsibility should not disappear even when life opportunities are very limited. The continuity of sustaining human life through food security is also in line with Bukhari's narration on the virtue of preserving food, where every plant utilized by humans or other creatures will become a continuous reward for its planter.<sup>33</sup> Imam Ibn Hajar Al-'Asqalani in *Fath al-Bari'* affirms that even if the results are enjoyed by others or animals, it still counts as charity.<sup>34</sup> Imam An-Nawawi adds that this activity encompasses both worldly benefits and spiritual rewards.<sup>35</sup> In this context, the tradition of *panggoba* can be positioned as a manifestation of human effort that aligns with Islamic values. Through the ability to read the signs of nature, the *panggoba* not only maintains the continuity of agricultural yields but also reflects the community's ecological wisdom in ensuring food sustainability.

## Conclusion

The structural problems from the above study indicate that food security in Indonesia faces complex challenges, ranging from geographical factors, land conversion, to climate change that affects planting patterns and food distribution, especially in eastern regions of Indonesia such as Papua and North Maluku. This situation is exacerbated by poverty rates, limited agricultural infrastructure, and modernization that displaces local knowledge, making communities increasingly dependent on supplies from outside the region.

Amid these challenges, local wisdom such as the *Panggoba* tradition in Gorontalo demonstrates the importance of integrating local knowledge with adaptive agricultural practices. This tradition utilizes natural signs to determine the appropriate planting time, thereby illustrating a sustainable and effective way of farming. Studies of hadith also reinforce the relevance of this practice, as the values of food welfare and ecological sustainability align with Islamic principles that encourage the prudent use of natural resources.

Thus, strengthening food security does not only rely on technological interventions and policies, but also on the preservation and integration of local knowledge that has proven to be adaptive. The Prophet Muhammad's (peace be

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<sup>32</sup>Ahmad bin Muhammad bin Hanbal, *Musnad of Imam Ahmad bin Hanbal* (Beirut: Mu'assasah Ar-Risalah), book: Remaining Musnad of the Companions which Narrates Many Hadiths, chapter: Musnad of Anas bin Malik r.a, vol. 20, no. 12,981, p. 296.

<sup>33</sup>Abu 'Abdullah bin Isma'il bin Ibrahim al-Mughirah bin Bardizbah al-Ja'fari al-Bukhari, *al-Jami' Shahih Bukhari* (Cairo: Al-Mathba'ah As-Salafiyah), Book of Agriculture, chapter on the Virtue of Farming and Planting, no. 2.320, chap. 1, p. 306.

<sup>34</sup>Ibn Hajar al-'Asqalani, *Fath al-Bari bi Syarh Shahih al-Bukhari* (Beirut: Dar al-Ma'rifah, 2004), Juz 5, p. 23.

<sup>35</sup>Yahya' ibn Sharaf al-Nawawī, *Al-Minhāj bi Sharh Şahih Muslim ibn al-Ḥajjāj* (Beirut: Dār Iḥyā' al-Turāth al-'Arabī, ṭab'ah ke-2, 1392 H / 1972 M), juz 11, p. 8.

upon him) hadith regarding the pollination of dates is an example that local wisdom can be combined with religious teachings to produce sustainable food strategies. Combining scientific approaches, policies, and local traditions will be key to ensuring food sovereignty and sustainable production across various regions of Indonesia.

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