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Hendrik 19600923 198601 1 002 <hendrik@lecturer.unri.ac.id>

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Hendrik 19600923 198601 1 002 <hendrik@lecturer.unri.ac.id> 15 Agustus 2021 pukul 13.22
Kepada: zoobiomag2004@yahoo.com

Dear Petrescu-Mag Ioan Valentin, Ph.D
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We send you a manuscript/paper entitled "Lombada, Local Wisdom in Sharia and Sustainable Fish Catching in Aia Bangih Island, West Sumatra, Indonesia," and hoping that the manuscript can meet the standard to be accepted and published in the AACL Bioflux Journal.

Please find the document attached. We are looking forward to your positive/affirmative response. Thank you very much.

Best regards,
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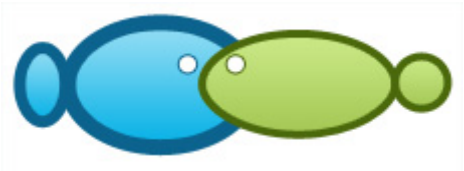

Lombada, Local Wisdom in Sharia and Sustainable Fish Catching in Aia Bangih Island, West Sumatra, Indonesia

Hendrik[1*], Ridar Hendri[1], Elizal[2], Eni Yulinda[1]

[1]Department of Socioeconomics, Faculty of Fisheries and Marine, University of Riau, Pekanbaru, Indonesia
[2]Department of Marine Science, Faculty of Fisheries and Marine, University of Riau, Pekanbaru, Indonesia

[*]Corresponding author: hendrik@lecturer.unri.ac.id

Abstract. Research on local wisdom of lombada aims to determine local wisdom values related to sharia values, social values, and sustainable fishing. Data collection was carried out through the Snowball sampling technique by conducting in-depth interviews with various stakeholders. The results showed that lombada is a local wisdom developed by the community for more than 100 years in sustainable fishing. The value of sharia in lombada is infaq where 5% of the value of the catch of each fisherman is donated to the construction and operational costs of the mosque, another sharia value is alms where the fisherman with the most catch will pay for other fishermen's food and drink when gathering at the tavern. Alms are also given by fishermen who build and repair boats on the island in the form of donations of diesel fuel for lighting the mosque. In addition to having sharia values, lombada also has social values such as praying together for a new fishing boat to be operated, willing to sacrifice its time if one of the vessels is damaged in fishing, please help in finding a boats that was washed away due to large waves. Another social value is the value of togetherness and sharing in making arrests. Lombada wisdom in catching anchovy regulates the use of the size of the boats, the number of light aids, and the size of the scoopnet as fishing gear. Based on these circumstances, the catch of fishermen has increased every year, so that local knowledge of lombada carries out sustainable fishing.

Key Words: lombada, local wisdom, sharia value, social value, continuous arrest

Introduction. Lombada are values that are applied in catching anchovy in marine waters in the form of local wisdom. According to Widarmanto (2018) local wisdom is proven to be able to save resources and change people's behavior towards using these resources. The implementation of local wisdom is proven to be able to guide the community to a consistent attitude in enforcing regulations and is transparent in every stage of natural resource management. Some communities carry out illegal practices in utilizing resources, such as fishing that is not environmentally friendly and uncontrolled fishing without thinking about its sustainability. Various regulations regarding resource use have actually been implemented both through laws and regulations at the village level, however, because fishery resources are open access and become common property, as well as supported by the demands of the needs which tend to continue to increase encouraging some parties to behave less wisely in utilizing it. Based on these conditions, the aquatic resources become damaged, therefore efforts are needed to prevent the destruction of these fishery resources from spreading. The effort that must be done is by combining the desires of the community with the goals to be achieved by the government in order to protect and save fishery resources from damage. Another effort that can be done is to explore and re-function the community's customs in managing existing and

effective hereditary resources in the area, which is commonly referred to as local wisdom. Local wisdom plays a role in the management of natural resources and the environment. The prospects for local wisdom in the future are strongly influenced by public knowledge, technological innovation, market demand, utilization and preservation of biodiversity in the environment as well as various government policies that are directly related to the management of natural resources and the environment. according to Humaida et al., (2018) Local wisdom in several local communities in Indonesia is used as the basis for managing natural resources and the environment. This assessment of local wisdom is in line with the goals of sustainable development rather than today's modern policies that often ignore environmental sustainability. The principles and concepts of local wisdom can actually coexist with modern culture and become a reference for sustainable development policies by strengthening the empowerment of local communities. Ilhami & Riandi (2018) said that, local wisdom is the idea or ideas of the local community with wise and wise values that the community has maintained from generation to generation in the utilization of fishery resources. Local wisdom traditionally comes from the need to conserve resources in order to be sustainable. Sukmawati et al., (2015) say that, local wisdom is an ancestral heritage that has the values of life and combines in the form of religion, belief, culture, habits and customs.

Local wisdom in the use and protection of fishery resources / practices can be found in various regions in Indonesia with the form and implementation adapted to local environmental conditions. Sasi in Maluku is a form of local wisdom that protects areas and natural resources that are managed by customary or religious institutions. Sasi is applied to marine resources with high economic value and is the target of community consumption, such as lompa fish (Thryssa baelama), sea cucumbers (Holothuria) and lola snails (Trochus niloticus). The role of sasi in terms of ecology is to regulate natural resources so that they can be used sustainably from generation to generation and do not become extinct due to excessive exploitation activities. The role of sasi in terms of socio-culture is the management of natural resources together, including in supervision so that it can be sustainable. Sasi also has challenges such as decreased public awareness of the rules of sasi, lack of attention from the government, and limited public knowledge in regulating the use of fishery resources (Persada, Mangunjaya, & Tobing, 2018). Panglima Laot in Aceh is an institution that leads the customs, practices that apply in the field of fishing and dispute resolution. In general, Panglima Laot has the authority, namely in the field of development, enforcement of marine customs, and regulations at sea. Panglima Laot has the authority to regulate fishermen, including determining the fishing order and production sharing system, the day of not going to sea, resolving disputes among fishermen, coordinating the implementation of marine customary law, and advocating for policies in the maritime and fisheries sector to improve fishermen's welfarec (Raihan & Ahmad, 2017). Awig-awig in Bali regulates the social structure of indigenous peoples as well as prohibitions and sanctions for those who violate it, including the use of fishery resources. Awig-awig in Lombok regulates the social life of the community regarding rights, obligations and sanctions for violations, including social sanctions. In managing fisheries resources, awig-awig regulates several things such as fishing zones, areas, fishing gear and types of fish that can be caught, prohibitions on fishing gear that are not environmentally friendly, protection of mangroves, beach sand, coral reefs and other biota. In the management of fishery reserves, awig-awig regulates fishery reserve areas, the rights and obligations of fishermen in these areas, and sanctions for those who violate them. In the management of marine culture awig-awig regulates the coverage of marine cultivation areas, commodities that can be developed, and imposes sanctions for those who violate the rules (Widarmanto, 2018). Mane'e in Talaud Islands, North Sulawesi Province is a long tradition of mass fishing. The mane'e ceremony is carried out using customs which have been carried out every year from the past until now. Mane'e is a tradition of catching fish using rattan circled with coconut leaves which the local community calls sam'mi. The mane'e ceremony is held in May-July during the full moon. Where at that time the sea water experienced the highest and lowest tides. Manes local wisdom has been hundreds of years old and is still being preserved today. Mane'e is a form of sustainable and sustainable fisheries resource management, besides that mane'e

also contains social and togetherness values (Laira, 2016). Indo Bwau in South Kalimantan Province is the local wisdom of people who think that their ancestors were saved by whale sharks, indo bwau means the mother of all fish. Therefore, the appearance of the whale shark has an important meaning for fishermen, so that when they meet whale sharks while at sea they will feed and caress the whale shark's body parts while hoping to the Almighty so that their catches will be abundant. Those who catch whale sharks will have the bad luck of catching a small amount of fish and their families will get bad luck. The local wisdom of Indo Bwau has been trusted by fishermen for a long time and is still believed by all fishing communities. This local wisdom is a form of conservation efforts for whale sharks, which are already in danger of extinction (Junaidi, Alkadrie, & Malik, 2018). Friday kliwonan (Javanese calendar) in Cilacap, Central Java is local wisdom in the form of a ban on fishing on Friday kliwon, fishermen believe that the prohibition is passed down from generation to generation. Fishermen believe that if they go to sea on Friday Kliwon, they will get an accident due to the lack of guardianship from the "guards" of the southern sea. This is what makes all fishermen afraid of breaking the rules that have been embedded in their hearts. This prohibition does not only apply to small fishermen, but also applies to large fishermen. Even on Friday Kliwon, fishing activities including loading and unloading of fishing products and supplies must be stopped. These activities can only be resumed at the earliest after the Friday prayers. Fishermen in Cilacap Regency think that it is necessary to have a form of action and respect for the rules of their ancestors that have been passed down from generation to generation. Respect is an obligation that is directly related to custom that must be obeyed and lived up to. A person or group of fishermen who keep departing will usually receive social and natural sanctions. Fishermen who continue to go to sea will be tried and then their boat may be destroyed or may be punished for not being allowed to go to sea for a certain period of time. So if an accident occurs at sea on Friday Kliwon, it will be very difficult to search for victims, so that whatever the reason, the fishermen must obey the prohibition. The fishermen still adhere to it, because it is a hereditary rule. Apart from that, within them there is also a high sense of awareness about the prohibition so that they will never break it. Local wisdom on Friday Kliwon relates to limiting fishing time on certain days so that it can be of conservation value for sustainable fishing (Wiranto, 2018). Prohibited fish in West Sumatra have major ecological, social and economic functions. Ecologically, it can protect the existence of local fish species, become a breeding ground for fish and maintain the cleanliness of the aquatic environment. In socio-cultural terms, the community also preserves the local wisdom of their ancestors and as a means of social responsibility for the preservation of natural resources. Economically, income from the fish harvest contributes to infrastructure development and village operational costs. Local wisdom on fish prohibited stipulating protection zones, use zones, and determining fishing times. The local wisdom that has been described is related to conservation issues, social problems, and sustainable management of fishery resources (Ilhami & Riandi, 2018). Lombada's local wisdom is different from local wisdom in other regions in Indonesia, because in addition to the sustainable use of fisheries resources it also contains social values and Islamic values.

The local wisdom of lombada has been practiced for a long time and is still held firmly by all people and fishermen to this day. In many cases, local wisdom has undergone an adaptation process that has been implemented for a long time. The practice of lombada in catching anchovy contains sharia and sustainability values. This local wisdom is unique when compared to several other examples of local wisdom. However, research on lombada with its value has never been done before. The purpose of this study is to further explore local knowledge of Lomboda in terms of Islamic values, social values, and sustainable fishing.

Material and Method. This research was conducted in Pulau Panjang Village, Aia Bangih District, West Pasaman Regency, West Sumatra Province, Indonesia. The method used in this research is descriptive method. Descriptive methods use appropriate techniques, communication, and data visualization to translate raw data into reported findings in a

format useful for achieving objectives (Loeb et al., 2017). The field survey was conducted in mid to late 2019, data collection was carried out through the Snowball sampling technique with in-depth interviews and focus group discussions (FGD) with fishing communities, mosque administrators, village heads, fish traders, drink shop owners, community leaders and religious leaders. The total number of respondents interviewed was 43 people. This technique is used because the population under study is 'hidden' due to low number of potential participants and topic sensitivity (Browne, 2005). Secondary data were obtained from the Aih Bangih Fisheries Office and the Aih Bangih District office. Data on the number of infaq collected in the last 5 years were obtained from mosque management records, while data on fish prices were obtained from collector traders. Based on these data, it can be estimated that the amount of anchovy production in the last 5 years in this area.

Results

Local Wisdom History of Lombada. The local wisdom of lombada comes from Panjang Island, which is one of the nine islands in the Aia Bangih Islands District. This archipelago has 9 islands with an area of 25-250 ha. Of the nine islands, only Pulau Panjang with an area of 220 ha. inhabited by a population of 1,520 people with 325 households (West Pasaman Regency Government, 2019). As many as 90% of the population of this island work as fishermen: both owner fishermen and catch fishermen. Fishing gear used by fishermen include gill nets, long lines, lift nets and scoopnets with light aids (Brand, 2005). In 2019, 4 units of vessels used for gill net fishing gear were 5 gt vessels, 2 Long Line units with 4 gt vessels, and 46 units used light fishing as a fishing aid. There are two types of catching by using lighting aids, namely: 7 net lifts with a boats size of more than 60 gt and 39 scoopnet units using vessels under 5 gt (West Pasaman Regency Government, 2019). Lift nets over 60 gt make catches over 12 miles from the shoreline and Scoopnet with vessels under 5 gt make catches 1-6 miles from the shoreline. The entire Scoopnet fishing gear is operated by long island fishermen. According to the fishermen's statement, fishermen outside Panjang Island cannot operate the scoopnet. This is presumably because they do not know the contour and depth of the waters of the Long Island, besides that they do not know the trajectory of the anchovy hordes in these waters. Some of the catch of anchovy are handed over by fishermen for the construction of a local mosque called Lombada.

Lombada is one of the local wisdoms that has been agreed upon and followed by the local community. Lom means infaq (alms) and Bada means "anchovy", a type of small pelagic fish in the Stolephorus sp. Lombada is a form of infaq paid by fishermen to mosque administrators to build and maintain local mosques. Lombada has its roots in 1918 and was formed based on meetings and agreements between religious leaders, community leaders, traditional leaders and formal leaders. This arrangement was aimed at providing funds for the construction of a mosque because there were no houses of worship available at the time. Based on the agreement, 5% of the fish catch is used for the construction of a mosque. This provision continues today. Although the practice is now more than a century old, to this day, the island's people do not violate the lombada agreement which has been stipulated in the form of local wisdom. Local wisdom is knowledge that is inherited from generation to generation by village communities in processing their environment, namely knowledge that gives birth to behavior as a result of their adaptation to their environment, which has positive implications for resource preservation. Local wisdom requires efforts to protect the environment and maintain its existence. This effort must be accompanied by public awareness of the role of local wisdom in managing natural resources, including fishery resources in Aih Bangih waters. Local wisdom is knowledge that is inherited from generation to generation by village communities in processing their environment, namely knowledge that gives birth to behavior as a result of their adaptation to their environment, which has positive implications for resource preservation. Local wisdom requires efforts to protect the environment and maintain its existence. This effort must be accompanied by public

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Lombada's local wisdom allows for the allocation and safeguarding of resources from overexploitation of local and outside communities through the enforcement of customary rules. Furthermore, Lombada's rules are in line with sustainable and environmentally friendly development. Sustainable development is a conscious effort by the local community by paying attention to environmental, social and economic aspects for present and future generations.

The concept of local wisdom is all forms of wisdom based on the values of goodness that are believed, applied, and maintained from generation to generation for a long time by a group of people in a certain environment or area where they live. Local wisdom is also the wisdom of a society that comes from the noble values of cultural traditions to regulate the order of community life. Even though these values are not determined by the government, they are still adhered to by the whole community as noble values. These values come from traditions, customs and culture. In addition, local wisdom values come from religion and belief such as sharia values for Muslims (Saputri & Setiawan, 2020).

Sharia Value in Lombada. Sharia is a collection of commands and laws related to belief (faith and worship) and relationships between people in social life which are required by Islam to be applied in everyday life to achieve the benefit of society and prevent hostilities. In order for the existence of sharia to be organized into enforceable provisions in the form of orders and prohibitions, it is closely related to legal provisions and everyone can obey them because sharia involves orders and prohibitions for every Muslim (Saputri & Setiawan, 2020). Sharia values are those included in Islamic law established by Allah and revealed through His Messenger to His servants. The definition of sharia in a general sense includes almost all activities carried out by humans. Starting in terms of faith, morals, worship, work, politics, law, power, inheritance, giving including zakat, infaq, and alms (Nurhayati, 2018). Infaq comes from Arabic, namely anfaqa, which means to take out something (property) for the sake of something. Meanwhile, according to sharia, the term infaq means removing part of the assets or income for an interest in accordance with Islamic teachings (Taher, Sarib, & Bukido, 2016).

The sharia value contained in Lombada can be seen in the form of infaq and alms. In the form of infaq, the sharia value is that each fisherman will use 5% of the catch he gets for the construction and operational costs of the mosque. Infaq lombada fund collection is carried out through mosque administrators, where every fisherman who has received money from his catch is directly handed over to the mosque administrator. The funds are recorded in the infaq lombada book by the mosque management, while the infaq donors are given receipts as evidence. Fishermen usually donate funds privately, but other people who frequently visit the mosque are also sometimes entrusted with handing over the funds. The amount of infaq paid is calculated by the fishermen themselves. If the catch is less than operating costs, then 40% of fishermen choose not to pay infaq, while

another 60% choose to pay infaq after the catch exceeds operating costs. The operational cost for one catch is IDR. 300,000.

Even though the practice of lombada is more than 100 years old, every fisherman still pays infaq according to the stipulated provisions. Every year the number of infaq received by mosque administrators continues to increase. Where in 2015 the amount of infaq paid by fishermen to mosque administrators was IDR 62,749,000, in 2019 it increased to IDR 74,527,000 as seen in Table 1. Over the last 5 years the increase in infaq was 15.8%. This increase is thought to be due to an increase in fish catch and fish prices as well as the obedience of the community in paying infaq Lombada.

According to information gathered from fishermen, the regulations regarding infaq payments have been set and implemented by all fishermen, so far not one fisherman has violated it. The fishing community has the belief that by paying infaq lombada their catch will increase and be avoided from accidents both in the implementation of fishing and in daily life.

Infaq is proof of one's devotion to the Almighty, cultivating solidarity with others, to open the door of sustenance, and be kept away from calamities. The concept of infaq can be understood as a term in the Koran which represents the urgency of property as a medium of connection between fellow human beings that must be used proportionally because ownership of property not only has the potential to bring someone to happiness, but can also result in misery in the afterlife (Rosmini, 2016). According to the information provided by the fishermen, the infaq they provide is the main source of income for the construction and operation of the mosque. The amount of infaq paid by fishermen is calculated by the fishermen themselves, usually they will pay more than what they should have paid to mosque administrators.

The amount of infaq lombada received by mosque administrators is announced every Friday before prayer time, if the collection is more than IDR. 40 million, the mosque management asked the congregation for advice on where to use the infaq funds. The infaq funds can only be used for the construction of mosques and mosque operational costs, such as the payment of salaries and fees for kiai who provide religious classes to the community. The maximum monthly operational cost is IDR. 3 million per month. The mosque has an area of 500 m2 and is in very good condition because the funds raised exceed the operational and construction costs of the mosque. In some cases, excess funds were used for renovation and repair of nonessential mosques. The use of excess funds in this way is considered inefficient and ineffective and would be better channeled for other purposes.

Apart from being infaq, lombada's sharia value is also in the form of alms. Almsgiving comes from shadaqah, which means honest or true. According to the terminology of sharia, the meaning of alms is the same as infaq, including the law and its provisions, it's just that if infaq is related to material, alms has a broader meaning, concerning non-material matters (Taher et al., 2016). The form of alms in Lombada, which has become a habit for the local community, is to pay for food and drink for fishermen who get the most catch at night. Usually in the morning fishermen will gather at the tavern while telling stories about the catch, and other stories with the aim of maintaining friendship with the social values that exist in fishermen. The amount paid in this alms ranges from 100,000 IDR - 150.

Another form of sadaqah is the provision of diesel for the needs of the mosque, derived from donations from fishermen who build and repair boats on the island. Fishing boats operating on Panjang Island are made in the area by artisan who is also from this area. The wood used for shipbuilding comes from islands located on 9 islands in the Aih Bangih Archipelago. According to the mosque management, all fishermen who build and repair boats on the island provide 20-30 liters of alms diesel depending on the length of time the boats was built and repaired. The community and fishermen agreed that almsgiving diesel to be used as fuel for power plants because in this area there is no electricity

provided by the government. The amount of diesel needed per day for an electric power plant is 15 liters with an average usage time of 14 hours, while the amount of diesel that is obtained each month is around 600 liters. The excess diesel fuel will be sold by the mosque management and the funds will be put into the mosque treasury and used to pay for the needs of the mosque.

Lombada's Social Values. Social value is a measure or assessment that is used as a reference in the life of people who have a spirit of cooperation, love to help, love, harmony, like to give advice, care about the fate of others, and like to pray for others. (Aisyah, 2015). Social value is something that is valuable (useful / useful) that is related to human relations, and emphasizes the noble human aspect and shows basic self-sacrificing behavior. according to Umar (2017) The social value of lombada can be seen at various stages, starting before catching, at the time of catching, and after being caught.

The social value before fishing can usually be seen when a new boats is built and will be operated, there is a prayer of safety. At this time the boats owner will invite the entire fishing community in the framework of prayer and congratulations because the boats is finished and ready to operate. In the event all fishermen congratulate and pray together so that the boats to be operated can bring blessings, for example, will get a lot of fish catches, the owner of the boats is always under the protection of God Almighty and is kept away from all distress when operating the boats in ocean. At that time, it will also be introduced who will operate this boats, including those who assist in fishing operations. So that they know each other and help each other when fishing. The inauguration ceremony of the new boats will be closed with a group meal and prayer. These social values can be used as life guidelines for community members and are considered good and true and must be obeyed. Nurika (2018) said that social values in society are practical and effective in fostering togetherness and are obeyed by the whole community. Furthermore, it is explained that social values are not in the form of writing but in oral form and are known and agreed upon by every member of society.

The social value at the time of fishing can be seen when one of the boats is damaged. At the same time the boats that are nearby will help to repair the damage until the boats can operate again. If the damaged boats cannot be repaired, another boats will help to pull the boats to berth. The fishermen who helped the damaged boat were willing to sacrifice their fishing time as a form of community social solidarity in fishing (Karim, Durand, & Dien, 2020). Social solidarity is built on the basis of unity, friendship, mutual trust that arises from shared responsibility and interests among its members. Furthermore, it is explained that high solidarity can also be seen from the solidarity to share and ease each other's burdens, including when accidents at sea such as boats damage occur. This effort is made to maintain good relations, social interaction, and increase a strong sense of brotherhood among fishermen.

The social value at anchoring can be seen when a moored boats is washed away due to the influence of large winds and waves. All fishermen will try to find the drifting boats together until the boats is found. this situation describes the attitude of helping in happy and difficult situations. according to Iriani (2019) in socio-cultural terms, fishing communities have strong interactions with one another, marked by effective face-to-face communication. This situation can be seen from the very close relationship between them, so that it can build up a family relationship. In earning a living they emphasize the nature of mutual cooperation and mutual assistance. This can be observed in the fishing mechanism both at the time of fishing and in determining the area of operation.

In addition to the above social values, lombada also has a social value of togetherness when catching and finding schools of anchovies. Of all fishermen who catch, only a small proportion can find hordes of anchovy. Meanwhile, those who do not find anchovies will join the fishermen who found them. In this fishing area, 4 to 5 vessels can be filled,

depending on the number of schools of anchovy found in the fishing area. This situation shows that the fishermen on this island have the value of togetherness and sharing. Simon (2015) said that the value of togetherness is the basic asset in society at various levels of society in their environment. Furthermore, it is explained that the togetherness of the community will be able to help each other, share, and grow a sense of empathy.

According to the information of fishermen during the anchovy fishing season, in one month fishermen will find hordes of anchovy 3 to 4 times. Fishermen who find the herd of anchovies are the first to reap the largest catch, reaching 700 kg - 1.8 tons. Fishermen who join after that will get a catch of 25-500 kg, depending on who joined first. This situation shows a high sense of togetherness among fishermen who make arrests. according to Afryanto (2012) the value of togetherness lies in humility, the value of service, the value of thought, sharing and helping. Like what fishermen do in this area when fishing by sharing with other fishermen who have not found fish hordes.

Sustainable Fishing. Sustainable fishing is an effort that is carried out so that the results of fish resources can be utilized by current and future generations in a sustainable and sustainable manner. In URI Office of Publications and Creative Services (2014) Sustainable fisheries is defined as producing fish in such a way that it can be sustainable, while paying attention to ecological health, minimizing side effects that disrupt ecosystem diversity, structure and function, and being managed and operated fairly and responsibly in accordance with local laws and regulations. The MSC Fisheries Standard consists of three main principles viz. Sustainable fishing, the environmental impact of fishing, and effective management. Sustainable fish stock targets, fishing practice should be carried out in a manner that does not lead to overfishing or a decline in a population, and for fish populations that are declining, fishing should be carried out in a manner that ensures the recovery of these declining fish populations. The environmental impact of fishing is characterized by a fishing operation that must be able to maintain the structure, productivity, function and diversity of the ecosystem (including habitats and ecologically related and related species) on which the fish target depends. Effective management where the fishery applies an effective management system that respects local laws and standards, national and international regulations and combines institutional and operational frameworks that require responsible and sustainable resources. The practice of lombada in fishing has been carried out by fishing communities by considering ecological, socio-economic and sustainability aspects. It was agreed that the vessels used by the community should be 2-4 gt in size, with 7-9 number of lamp aids with a voltage of 50 watts per lamp. Based on these conditions, the fishing community has thought that when fishing should pay attention to fish stock and potential. where with a bigger boats and the number of lights more will cause fish stock and potential will quickly decrease. This can be seen from the increasing fish catch during the last 5 years. Table I shows an increase in production and catch value each year, as well as an increase in the number of vessels which shows the sustainability of local fishing practices.

Table 1. Number of fishing boat, fish production, and infaq value of fishing in Panjang Island

Year	Number of Boat (unit)	Fish Production a year (ton)	(IDR ,000)	Infaq value (IDR ,000/year)
2015	34	95.2	1,240,000	62,749
2015	35	103.7	1,340,000	67,832
2017	37	106.15	1,380,000	69,782
2018	39	115.31	1,509,000	74,241
2019	39	115.34	1,512,000	74,527

Based on Table I, the number of catches for the last 5 years has increased by 17.4%, the number of vessels in the same year has increased by 12.8%, meaning that the number of catches per unit of fishing gear (CPUE) continues to increase. This situation shows that the fishing effort in this area is still sustainable and has not experienced over fishing (Hidayah, Nuzula, & Wiyanto, 2020). Over fishing is characterized by a decrease in the production of the catch (CPUE) due to the imbalance between the available fishery potential and the fishing effort. The number of fishing vessels / units is increasing, and exceeds the limit of fishery potential and the ability to restore fish resource stocks. The over-fishing phenomenon occurs due to massive exploitation of fishery resources to improve the economy. The use of destructive and environmentally unfriendly fishing gear as well as damage to land on the coast also contributes to the decline in fisheries resources. This condition does not occur fishing on Panjang Island, although the number of boats increases by 1 unit each year, the catch continues to increase.

According to the fishermen, the investment for 1 unit of boats that is ready to operate measuring 4 gt is worth 90-100 million. In catching anchovy, the average number of crew members is 4 people and the owner of the boat is counted as 1 crew member. In fishing operations, net income will be divided by 5, namely 20% for boats owners and 80% for boats crew. Furthermore, it is explained that the net income of each boats unit fishing is 30 million per year on average and the income outside the fishing is an average of 20 million. The payback period of capital for 1 unit of boats has an average of 2 years with an average economic age of the vessel of 10 years. economically, the fishing business of anchovy is very feasible and profitable, but it is not followed by a significant increase in the number of vessels. This is because the local wisdom of the people of each fisherman only has 1 boats with the aim of exploitation and sustainable fishing. According to Stafford (2019) sustainability aims to prevent ecological damage to an ecosystem which is an assumption that underlies much of the research on fisheries and conservation. Furthermore, it is explained that sustainable fishing must be beneficial ecologically, socially and economically.

Pressure on fishing through increased vessels and fishing gear results in risk of failure of the fishery itself (Brosset et al., 2016) an increase in the number of vessels and fishing gear will reduce the catch, but in Panjang Island the addition of vessels and fishing gear does not decrease the catch, but increases the catch. Studies on the exploitation of anchovy fishery resources have never been carried out here, but based on the indicators, the addition of boats and fishing gear does not reduce the catch. This situation can describe the level of exploitation of anchovy resources in this area is still low. Patterson (2004) said that the rate of exploitation is defined as a share of the potential level of fishing in an area, indicating whether the stock is excessive or not. sustainable yields are optimized when the exploitation rate reaches 0.5. However, with this level of exploitation, the optimization of fishing rates tends to reduce the abundance of small pelagic fish stocks in their natural habitat. Furthermore, it is suggested that an exploitation level of 0.4 is suggested as a sustainable fishing exploitation. Based on this, it can be said that the exploitation rate of anchovy in Panjang Island waters is still below 40%. This situation can occur because in catching anchovy the fishing gear used is the scoopnet and the auxiliary tool is a light (light fishing). Furthermore, it is suggested that an exploitation level of 0.4 is suggested as a sustainable fishing exploitation. Based on this, it can be said that the exploitation rate of anchovy in Panjang Island waters is still below 40%. This situation can occur because in catching anchovy the fishing gear used is the scoopnet and the auxiliary tool is a light (light fishing). Furthermore, it is suggested that an exploitation level of 0.4 is suggested as a sustainable fishing exploitation. Based on this, it can be said that the exploitation rate of anchovy in Panjang Island waters is still below 40%. This situation can occur because in catching anchovy the fishing gear used is the scoopnet and the auxiliary tool is a light (light fishing).

According to the information from fishermen, catching anchovy in this area occurs every year from July to January. outside that month, catching anchovy is rarely done

because the catch is relatively small (Imron, Kusnandar, & Komarudin, 2020). The fishing season for anchovy in the waters of Tegal, Central Java can be done from November to May and catching anchovy occurs in January, May, and July. During the fishing season for anchovy in Panjang Island, the largest catch for one boats is 1.8 tons in one operation, the average catch is 825 kg and the lowest catch is 25 kg. The vessels used to catch anchovy are 3-4 gt fishing boats with 7-9 light aids with a voltage of 50 watts per lamp. In the fishing process, fishermen use light to attract fish attention, because anchovy is phototaxis positive. The intensity of the light is 3500-4000 lux. (Guntur, Fuad, & Muntaha, 2015). The light intensity at 3900 lux is very suitable for catching anchovy (Stolephorus sp). (Nuraga, Jayanto, & Setiyanto, 2018) said that anchovies are small pelagic fish that are phototaxis positive and swim in schooling. according to Susanto et al., (2017) Anchovy is an economically important fishery commodity that is caught using light-assisted fishing technology. The use of light in anchovy fishing has experienced rapid development with various types and strengths of lamps.

In catching anchovy, fishermen try to find hordes of anchovy assisted by light. After finding the fish, the fishermen direct the fish hordes to a shallower area with a depth of 6-9 meters. After being in shallower waters, the anchovy is caught using a scoopnet with a diameter of 80-90 cm, keeping the size of the scoopnet relatively the same. Other fishermen around the area can catch 3 - 4 boats in the same location, depending on the number of fish around the waters. This situation shows that fishermen on this island have understood about common ownership. According to Ridwan & Gunawan, (2019) marine/ capture fisheries natural resources are common natural resources and are open access, meaning that all individuals in the community can access or exploit marine/ capture fisheries natural resources without any restrictions.

To maintain the sustainability of fishery resources, fishermen on Panjang Island have agreed to stop using destructive fishing tools such as bombs, putas, stunks, and others. Fishing gear that is permitted is environmentally friendly such as Gill Net, Long Line, Lift Net and Scoopet with light fishing. According to Subehi et al., (2017) Environmentally friendly fishing gear has features such as high selectivity, does not damage the habitat, does not endanger fishermen, produces good quality fish and has a minimum wasted catch. Scoopnet which is assisted by using light is one of the most environmentally friendly fishing gears, because its fishing gear is small so that it only catches a small part of the anchovies school. Apart from that, it only catches one particular type of fish. Each anchovy fishing usually consists of one type of the same species; The catch is dominated by anchovies (Engraulis sp.) with a catch percentage of 75%, followed by anchovies (Stolephorus tri) (15%), and flat anchovy (*Stolephorus commerrsoni)* (10%). According to information from collectors in the regions, the price of anchovy in the last 5 years has not changed much, the price of anchovy ranged from IDR. 100,000-15,000., Anchovy ranged from IDR. 25,000-35,000, and*Stolephorus commerrsoni* flat anchovies between IDR. 7000-11000, with relatively constant price fluctuations leading to a balanced price.

Anchovy marketed by fishermen to collector traders in fresh form. collector traders sell anchovy to processing fishermen to be turned into dried anchovy. The marketing of anchovy in this area as well as in various regions in Indonesia is in the form of dried anchovy. So it is not easy to rot and longer durability. this situation will keep fish prices relatively constant. Although the price of anchovy in the last 5 years has been relatively constant, fishing practices and infaq lombada have continued to increase every year. This illustrates that the fishing efforts carried out by the community are sustainable. On UU RI Nomor 45 2009 Fishery management is aimed at achieving optimal and sustainable benefits, as well as ensuring the sustainability of fish resources. Adam & Surya, (2013) said that Management of fishery resources must be carried out holistically by taking into account ecological, socio-economic aspects, distribution of fishery resource supply. Jennings et al., (2016) said that Fishery production and equitable distribution determine the food supply that comes from fishery resources to the community. Food security of fishery resources is achieved when the supply of fish is sufficient, safe, sustainable, shock-resistant and healthy: sufficient, to meet people's needs and preferences; safe, to

provide nutritional benefits while minimizing health risks; sustainable, to provide food now and for future generations; shockproof, to provide shock resistance in the production system and supply chain; and healthy, to meet legal and ethical standards for the welfare of animals, humans and the environment.

Conclusions. Lombada is local wisdom that contains Islamic values, social values, and sustainability in fishing that has been developed and implemented by the community for more than 100 years. The lombada sharia value consists of an infaq of 5% which is calculated by every fisherman who catches anchovies. Infaq is used for the construction and operational costs of the mosque. Other lombada sharia values are alms; the fisherman with the most catch will pay for food and drink for other fishermen at the tavern. Other alms include the donation of 20-30 liters of diesel by fishermen on Panjang Island who build and repair boats; the fuel is used to illuminate the mosque.

The social value of lombada can be seen when they pray for each other for a new boat, are willing to sacrifice their time to repair other fishing boats that were damaged during fishing, and help each other find boats when one of their boats drifts due to the influence of wind and waves. Another social value is in the form of togetherness, where when one fisherman finds a herd of anchovies, other fishermen can join to catch fish in the same place.

The value of sustainability in lombada practice can be seen when determining the size of the 2-4 gt boats and 7-9 light aids with a voltage of 50 watts per lamp, and the scoopnet as a fishing tool with a maximum diameter of 90 cm. This condition will cause the exploitation level and potential utilization of anchovy to be low, it will not experience over fishing, so that the fishing can be sustainable.

Until now, local lombada wisdom has been obeyed and implemented by fishing communities on Panjang Island, because they believe that the values in Lombada will get blessed sustenance, increased catches, and be kept away from disaster. In addition, the value of lombada can increase a sense of solidarity, togetherness, helping each other among fishermen and the community.

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[1*]Hendrik, [1]Ridar Hendri, [2]Elizal, [1]Eni Yulinda

[1]Department of Socioeconomics, Faculty of Fisheries and Marine, University of Riau, Pekanbaru, Indonesia; [2]Department of Marine Science, Faculty of Fisheries and Marine, University of Riau, Pekanbaru, Indonesia. *Corresponding author: Hendrik, hendrik@lecturer.unri.ac.id

Abstract. The present study aims to analyze local wisdom about sharia values, social values, and sustainable fisheries principles developed in the fishing communities of Panjang Island, Aia Bangih, West Sumatra, Indonesia. Data collection was carried out using the Snowball sampling technique by conducting in-depth interviews with various stakeholders. The study results show that the local wisdom of *Lombada* has developed for more than 100 years. The sharia value in *Lombada* is *infaq* (charity fund), which is money donated by fishermen to the poor or mosque. There are three forms of *infaq* paid by fishermen, namely: all fishermen donate 5% of the proceeds from the sale of their fish for the construction and operational costs of the mosque; the fisherman who gets a lot of fish pays the food and drink bills for all the fishermen who hang out at the local coffee shop; fishermen who are building or repairing boats on the island, donate 30 liters of diesel fuel a day while they are there to operate the electricity generator for village lighting. *Lombada* also has social values, such as praying together for the safety of every newly built and operated fishing boat, helping to repair damaged fishing boats, searching for fishing boats that were washed away or lost due to accidents at sea, and togetherness in fishing. The principles of sustainable fisheries in the local wisdom of *Lombada*, among others, regulate the use of boat size, the number of light fishing gear, and the size of the scoop net as fishing gear. The impact of this policy is that the catch of fishermen increases every year, and its sustainability is maintained.

Key Words: local wisdom, lombada, sharia value, social value, sustainable fishing.

Introduction. The sea nature is open-access, and the increased need for fish causes fishermen in Indonesia to catch fish uncontrollably. Some fishermen do illegal practices and are not environmentally friendly. Various regulations regarding the ideal use of fishery resources are not obeyed by fishermen. As a result, aquatic resources become damaged.

Therefore, efforts are needed to prevent the destruction of fishery resources from spreading. One of the ways the government is doing this is reviving the values of local wisdom related to fisheries that are developing in the community. Fishery local wisdom is the wise and wise values that grow in community groups in the context of utilizing an aquatic and fishery resource (Ilhami & Riandi 2018). Local wisdom grows out of the need for resources to be sustainable. It is an ancestral heritage of life values and is combined in the form of religion, belief, culture, customs, and traditions (Sukmawati et al 2015).

Local wisdom related to the use and protection of fishery resources can be found in various regions in Indonesia. One of them is *Sasi* in Maluku, which is managed by traditional and religious institutions. Sasi is a restriction on catching fish of high economic value, especially lompa fish (*Thryssa baelama*), sea cucumbers (*Holothuria*), and lola snails (*Trochus niloticus*). The goal is that these fishery resources can remain sustainable from generation to generation (Persada, Mangunjaya, & Tobing 2018).

Furthermore, the local wisdom of *Panglima Laot* was developed in Aceh. *Panglima Laot* is a customary leader who is authorized to settle disputes overfishing by fishermen. *Panglima Laot* is a traditional figure who has the authority to enforce customary marine law