



# Empowerment of the Lentora Turtle Care Group in Mapane Tambu Village, Balaesang District, Donggala Regency

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## Abstract

The Mapane Tambu Village community group has long pursued Lentora Turtle Conservation. However, these conservation activities still have various obstacles to their implementation, especially in the buildings and infrastructure that support the conservation of Lentora turtles. These obstacles are related to funding problems, which are permanent in nature. The long-term existence of Lentora turtle conservation can benefit the people of Mapane Tambu Village if it is managed well, especially if it is used as a turtle conservation ecotourism area. Low public awareness and knowledge and a lack of concern for turtle conservation are the main problems in turtle conservation activities. This service aims to help empower the Lentora Turtle Care Group to raise funds for the Mapane Tambu Village, Balaesang District, Donggala Regency community. The stages of this service activity include preparation and implementation (training and socialization). The achievement of the service was an increase in donors for turtle conservation fundraising from 4 donors to 6 donors. The Lentora turtle care group initially had problems providing turtle food, but through this service, it was able to obtain permanent donors to provide lentora turtle food. Furthermore, the sustainability of community service activities requires assistance in developing turtle conservation ecotourism as a new business opportunity to increase additional income and as a new source of Village Original Income through the tourism sector.

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## INTRODUCTION

Turtles are reptiles that live in the sea and are able to migrate long distances throughout the Indian Ocean, Pacific Ocean, and Southeast Asia (Harnino *et al.*, 2021). Its existence has long been threatened by nature and human activities that directly or indirectly endanger its population. Of the seven species of turtles in the world, six species of turtles are recorded living in Indonesian waters, namely green turtles (*Chelonia mydas*), hawksbill turtles (*Eretmochelys imbricata*), gray turtles (*Lepidochelys olivacea*), flatback turtles (*Natator depressus*), leatherback turtles (*Dermochelys coriacea*), and loggerhead turtles (*Caretta caretta*) (Departemen Kelautan dan Perikanan Republik Indonesia, 2019).

Land use shifts that cause damage to coastal habitats and feeding areas, turtle deaths due to fishing activities, inadequate management of conservation techniques, climate change, disease, the taking of turtles and their eggs, and the threat of

predators are factors causing the decline in turtle populations. In addition, the characteristics of the turtle life cycle are very long (especially green turtles, hawksbill turtles, and loggerhead turtles), and achieving a "stable" condition (constant population abundance for the last 5 years) can take quite a long time around 30-40 years, so the preservation of this rare animal should be urgent. This condition is what causes all types of turtles in Indonesia to be given protected status by the State, as stated in PP Number 7 of 1999 concerning the Preservation of Protected Plant and Animal Species (Departemen Kelautan dan Perikanan Republik Indonesia, 2019).

Internationally, turtles are included in the IUCN red list and CITES Appendix I, which means that their existence in nature is threatened with extinction, so all forms of their use and distribution must receive serious attention. So far, various policies related to turtle management have been implemented quite a lot by the Ministry of Forestry, the Ministry of

Environment, and the Ministry of Marine Affairs and Fisheries. In fact, the government is continuously developing appropriate policies to manage turtle conservation by carrying out regional cooperation such as IOSEA-CMP, SSME, and BSSE. The emergence of Law No. 31 of 2004 concerning fisheries and Government Regulations (PP) No. 60 of 2007 concerning Fish Resource Conservation brings a new nuance to the management of turtle conservation ([Departemen Kelautan dan Perikanan Republik Indonesia, 2019](#)).

As an archipelagic country, Indonesia has high marine biodiversity and various protected turtle species. With more than 17,000 islands, Indonesia has the second longest coastline in the world, an important habitat for turtles, where they lay eggs and breed. Sulawesi, one of the islands with a wide coastline and rich coastal ecosystem, is an important habitat for turtles, especially in Central Sulawesi. Pasoso Island has been designated as one of the turtle conservation areas. However, several surrounding areas have begun to realize and participate in turtle protection efforts. Mapane Tambu Village, Balaesang District, Donggala Regency, has initiated turtle conservation since 2017. The protection efforts include two types: the hawksbill turtle and the green turtle. To preserve turtles' existence, conservation efforts can be carried out so that turtles will not become extinct. Conservation is one of the activities that is expected to prevent the extinction of turtle habitats, prevent the use of turtles for commercial purposes such as the sale of eggs, meat, or shells, and can be a means of sharing knowledge or education to the wider community about the importance of turtle conservation in order to maintain turtle habitats in Indonesia so that they do not become extinct ([Ario \*et al.\*, 2016](#)).

Turtle conservation activities in Mapane Tambu Village are a form of village government concern for the environment. According to [Nurhayati \*et al.\* \(2020\)](#), Turtle conservation can be carried out in line with environmentally friendly tourism. Through the turtle protection program, Mapane Tambu Village is the first step to be known as a conservation tourism area so that the tourism sector can grow and drive the wheels of the community's economy and even become a source of village funds. Efforts to realize Mapane Tambu Village as a turtle conservation tourism area still have facility constraints, especially related to the safety of turtle eggs, which are still vulnerable. Because the natural turtle nesting place is limited by a 15-20 centimeter high board and is still far from ideal, there are obstacles to funding issues. Funding comes from collaboration between the village government, the private sector, and people who care about the environment ([Pintara, 2023](#)).

Turtle conservation also considers the welfare of fishermen. It is realized through the Turtle Guardian

program. Every fisherman who finds turtle eggs or baby turtles hands them over to conservation management, and then the fishermen receive compensation of IDR 150,000 for each hole containing turtle eggs. The compensation money comes from the village budget donations from parties who care about turtle conservation and the welfare of fishermen in Mapane Tambu Village. In addition to the turtle guardian program, there is also the formation of a turtle care community group in Mapane Tambu Village called Lentora. In this program, the management and group members work together to carry out turtle conservation for the welfare of the surrounding community ([Pintara, 2023](#)).

Lentora Turtle Care Group of Mapane Tambu Village was formed on September 23, 2021, with 10 people. After conducting socialization of turtle breeding/conservation for tourism development, in 2022, around 700-800 hatchlings were successfully hatched and released back into the sea, 9 adult turtles were released back into the sea. In 2023, around 400-500 hatchlings were successfully re-released, around 10 adult turtles were re-released, and 2 turtles that were released in 2022 were caught in fishermen's nets and re-released. In 2024, until February 15, 4 turtles were found laying eggs and kept in the hatchery, and 2 adult turtles were re-released.

With turtle conservation, empowerment can be done by building several supporting facilities and infrastructure for conservation areas and training human resources (turtle conservation groups) in terms of hatching and caring for turtles ([Budiantoro & Wijayanti, 2014](#)). Furthermore, according to [Jannah \*et al.\* \(2022\)](#), empowerment activities are not enough to conduct training but also to develop ecotourism for the community's welfare around conservation. Community empowerment is generally carried out through a technical approach and a socio-cultural approach that can stimulate changes in attitudes, behavior, and work patterns ([Yunus \*et al.\*, 2017](#)). Meanwhile, the purpose of empowerment in general can impact improving education, accessibility, actions, institutions, businesses, income, environment, life, and society ([Suiran, 2024](#)).

This community service concept is implemented based on the empowerment of groups by assisting in obtaining funds or sponsorship so that turtle conservation activities start from activities to guarding turtle eggs until they hatch. Several forms of empowerment have been implemented, namely empowerment in the form of fundraising for turtle guardians, empowerment of Turtle Guardians, and empowerment of Fishermen to care for turtles until they lay eggs and hatch and then spread back into the sea. This empowerment activity can motivate other villages to protect turtle habitats along the coast of Donggala Regency.

Referring to the analysis of the situation and identified problems, the main problems faced by partners and the commitment between partners and the team, namely the still low funding sources for Turtle Conservation Activities carried out by the Lentora Turtle Care Group in preserving turtles and how these activities can empower fishermen in Mapane Tambu Village, Balaesang District, Donggala Regency. By considering these problems, it was agreed that the community service team would assist in raising funds for turtle conservation activities and provide training to the Lentora Turtle Care Group regarding independent fundraising and providing training to fishing communities on how turtle conservation activities can empower the Mapane Tambu Village community and its surroundings.

For the formulated problems to be resolved, the community service team offers several solutions, namely providing fundraising training from the government, NGOs, LSMs, or independently. In addition, training is provided to fishing communities to take advantage of opportunities from turtle conservation activities such as ecotourism. This service aims to help empower the Lentora Turtle Care Group in fundraising and the community in Mapane Tambu Village, Balaesang District, Donggala Regency.

## **MATERIALS AND METHODS**

Based on the previous description, as well as the results of discussions with partners, the priority problems that must be resolved together with the Lentora Turtle Care Group partners consisting of 10 people and the fishing community are the low funding sources for Turtle Conservation Activities and How to empower fishermen in Mapane Tambu Village, Balaesang District, Donggala Regency. The empowerment activity began with a discussion with the Lentora Turtle Care Group, Fishing Community, Mapane Tambu Village Head, Mapane Tambu Village Secretary, BUMDes Management, and BPD Chairperson through limited FGD.

### **Preparation of Provisions**

Preparation includes preparing training materials by the community service team on how to raise funds, accompanied by images and several examples of the flow of making fundraising proposals and ecotourism-based training materials.

### **Implementation of Activities**

The empowerment activity was carried out in Mapane Tambu Village, precisely at the location of the Lentora Turtle Care Group, which was carried out face-to-face with all group members and fishermen accompanied by the village head, village secretary, BUMDes administrators, and BPD Chairperson. Based

on the partner's problems regarding the still low funding sources for Turtle Conservation Activities and how to empower fishermen in Mapane Tambu Village, Balaesang District, Donggala Regency, the community service team provided solutions to the problems to partners through Empowerment activities with training on fundraising from the government, NGOs, or independently. In addition, socialization was carried out among the fishing community to take advantage of opportunities from turtle conservation activities such as ecotourism.

The first activity is to provide training on preparing a fundraising proposal. The goal is to increase the knowledge and understanding of the Lentora turtle care group about the procedures for preparing/making a good and correct fundraising proposal and how to find fundraising donors.

The second activity is the socialization of ecotourism for the fishing community and its surroundings, which is carried out through FGD (Focus Group Discussion). The aim is to educate the Mapane Tambu Village community and increase understanding of ecotourism among local fishermen from turtle conservation activities. In addition, the Community Service Team discussed how to design conservation locations into tourist attractions and promote ecotourism products with interesting sentences.

## **RESULTS AND DISCUSSION**

### **Lentora Turtle Care Group Profile**

The Lentora Turtle Care Group is located in Mapane Tambu Village, Balesang District, Donggala Regency, which was formed on September 23, 2021, with a group of 10 people who are mostly fishermen. This group was first initiated by Mr. Drs. Saiful Bakri, MM, who was known as the initiator of turtle conservation in Mapane Tambu Village and the head of the Village Community Empowerment Institution (CEI). However, the initiative to conserve turtles in Mapane Tambu Village began in 2017. Two types are included in the protection efforts: the hawksbill turtle and the green turtle. The goal is to program conservation activities as a form of village government concern for the environment. Turtles need protection right now because out of 1,000 baby turtles released into the sea, only one can grow to adulthood. If they do not get significant protection, the next generation will not be able to see turtles, especially since turtles are increasingly rare and seen in coastal areas.

After the socialization of turtle breeding/conservation by the Lentora Turtle Care Group in 2022, around 700-800 hatchlings successfully hatched and were released back into the sea, and 9 adult turtles were successfully released back into the sea. In 2023, around 400-500 hatchlings were successfully re-released, around 10 adult turtles were re-released,

and 2 turtles that were released in 2022 were caught in fishermen's nets and re-released. In 2024, until February 15, 4 turtles were found laying eggs and kept in the hatchery, and 2 adult turtles were re-released.

Based on the Decree of the Head of the Central Sulawesi Province Maritime Affairs and Fisheries Service Number 800/003/DOBOTO/2024 concerning the Establishment of the Lentora Beach Turtle Conservation Community Group, Mapane Village, Balaesang District, the list of names of the group's administrators (Table 1).

**Table 1.** Name of Lentora Turtle Care Group administrators

Name	Position	Task
Hasbi	Village head	Advisor
Samlin B	Chairman of BPD	Protector
Arsyad Sanudin	Customary Chief	
Saiful Bakri	Head of LPM	Mentor
Noble	Village Secretary	
Moh. Aidil	Chairman	Lentora
Zulkifli	Secretary	Turtle
Herman	Treasurer	Care
Hamdali	Member	Group
Hamdani	Member	
Wayne	Member	
Hamid	Member	
Mercy	Member	
Ahmad Hi. L	Member	
Irwan	Member	

### Empowerment of Lentora Turtle Care Group Fundraising proposal preparation training

Training materials on preparing good and correct proposals and finding donors or fundraising from the government, NGOs, or independently. Training materials are made simple using easy-to-understand language. The goal is to provide an understanding of the importance of preparing proposals for fundraising activities for the Lentora Turtle Care Group. Fundraising is an effort to build turtle conservation facilities and infrastructure and preserve turtles so that the turtle habitat is maintained and sustainable, from raising turtles to laying eggs and hatching and then being distributed back into the sea. This community service activity is carried out using a persuasive approach to implement turtle conservation in Mapane Tambu Village.

In addition to training, community service activities also conducted Focus Group Discussions (FGD) with the Lentora Turtle Care Group to discuss problems in managing turtle conservation (Fig. 1). The FGD discussed the funding targets to be targeted and facilitated by the community service team. In

addition, the FGD activities also discussed the construction of facilities and infrastructure that are still incomplete and have not been optimally used for turtle breeding activities.



**Fig. 1.** Training and FGD activities

### Multi-party fundraising

Lentora Turtle Care Group activities that began in 2021 still have many problems, especially funding for building turtle conservation facilities and infrastructure. Based on these problems, the Community Service Team carries out community service based on the concept of empowerment in the form of assisting in how to obtain funds or sponsorship so that turtle conservation activities, starting from activities to guard turtle eggs until they hatch, run smoothly. The purpose of this community service is to provide solutions to the problems faced by turtle conservation groups. Several forms of empowerment have been implemented, namely empowerment in the form of fundraising for turtle guardians, empowerment of Turtle Guardians so that turtles are sustainable, empowerment of Fishermen to care for turtles until they lay eggs and hatch and then spread back into the sea.

The first empowerment activity in 2019 was fundraising through the Turtle Guardian program, which was the forerunner to forming the Lentora Turtle Care Group in 2021. In this program, the administrators and members of the group work together to carry out turtle conservation for the welfare of the surrounding community. The funds collected come from various partners, but the amount is still relatively very limited and is only used as compensation for fishermen of IDR 150,000 per turtle for fishermen who get turtles through fishing gear or trawls to be released back into the sea. The goal is to avoid the extinction of turtle habitat due to turtle consumption.

Over time, fundraising continues to be carried out by Guardian Turtles, including through collaboration with the Regional Government to improve turtle conservation and promote turtle conservation.



However, the Regional Government and various community groups have not fully cared about the importance of turtle conservation, so activities carried out by the Lentora Turtle Care Group are often hampered, especially regarding the development of turtle conservation facilities and infrastructure. From 2022 to 2023, fundraising came from the Central Sulawesi Provincial Marine and Fisheries Service the Central Sulawesi Provincial Environmental Service. The funds were used to build hatchling and turtle hatcheries managed by the Lentora Turtle Care Group (Fig. 2).



**Fig.2.** Turtle conservation building

This turtle conservation building was built in 2023 through funds from the Central Sulawesi Provincial Marine and Fisheries Service and the Central Sulawesi Provincial Environmental Service. However, it has not been used because the supporting facilities, such as electricity, clean water, and various other facilities related to turtle conservation, are not yet complete. The turtle hatchery pool for raising hatchlings still uses a simple hatchery (Fig. 3). It is not equipped with protective wire to protect the hatchlings from human disturbance and wild animals such as dogs.



**Fig. 3.** Turtle breeding pool

The number of hatchlings and turtles in the breeding pond is 1 pond containing up to 350

hatchlings. This pond was made from funds from the Central Sulawesi Provincial Environmental Service. This breeding pond is very simple and still vulnerable to external disturbances. The turtle conservation community group still needs to build 2 breeding ponds to avoid when many turtle eggs will be hatched at the same time. The goal is to avoid the number of hatchlings dying because the capacity of the pond is relatively small, and the hatchlings have difficulty getting oxygen. According to [Damayanti & Junianto \(2023\)](#) the statement, the height of the seawater in the pond to keep the hatchlings from dying is 5-10 cm so that the hatchlings can take oxygen to the surface. Water changes are carried out every 24 hours. However, at the service location, the water changes in the hatchling pond are carried out every 3 days.

In addition to the breeding pond, the Lentora Turtle Care Group also built a turtle egg nesting and hatching place (Fig. 4). The building was built through funding from the village budget and donations from parties who care about the environment. However, the building is still relatively simple and cannot be used because it is still unsuitable for the turtle egg-laying and hatching process. The construction of this artificial nesting place still needs to be repaired, and adequate equipment such as fences and protective roofs must be equipped. [Ghazali \(2018\)](#) stated that the turtle egg hatching is naturally located in the supratidal area, which is an area that is not influenced by the highest tide. This hatching place is considered safe because it is protected from the ebb and flow of the sea waves. However, in addition to turtle egg hatching and hatching building, temperature is another factor that needs to be considered. According to [Mansula & Romadhon \(2020\)](#), the temperature of the sand, both on the surface and inside the nest, is a factor that influences the process of laying and incubating turtle eggs. At the service location, the discussion results were that the hatching of turtle eggs depends on the sun's heat. If it is summer, turtle eggs hatch quickly; if it is rainy season, they are slow to hatch.



**Fig. 4.** Turtle egg nesting and hatching place

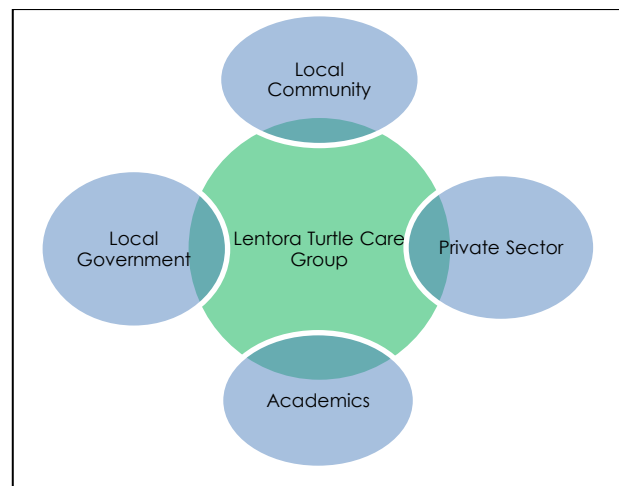
Until now, the Lentora Turtle Care Group still has facility constraints. One of them is related to the security of turtle eggs, which are still vulnerable. Because the place where the turtle eggs will be incubated naturally is only limited by a 15-20 cm high board and is still far from ideal, sometimes, it is also due to wind exposure because it is still open, so it is directly released into the sea. To achieve a high rate of turtle egg hatching, adequate shelter is needed. The Lentora Turtle Care Group still needs some funds to build it, and is supported by the Mapane Tambu Village government, which contributes by providing land, which is completely different from the old hatchery and safer from high tides, for the new hatchery.

Various problems faced by the Lentora Turtle Care Group in Mapane Tambu Village are related to funding issues. In 2024, through Community Service activities, the Lentora Turtle Care Group will help find additional donors for funding for developing Lentora turtle conservation in Mapane Tambu Village. Through this community service activity, the Community Service Team obtained 2 (two) donors from academics and the private sector. Funding from the two donors was used to buy turtle feed. Feeding is done once a day in the afternoon. The fish used to feed the turtles are mackerel, katombo fish, and several types of fish cut into small pieces. The pond containing hatchlings is fed two small cups, and the pond containing turtles is fed two cups, but what makes it different is the pieces of fish. The fish for hatchlings are cut into small pieces, and the fish for turtles are cut into three parts. In [Rachman \(2021\)](#), feeding is done twice a day by providing small fish from fishermen's by-catch that has been chopped into small pieces because turtles are carnivores that usually eat shellfish, shrimp, jellyfish, and crabs. According to [Lazaren \*et al.\* \(2018\)](#) feeding, it will affect the rate of body weight growth. The greater the value of feeding efficiency, the better it will be for turtle growth and the greater the turtle weight. [Harnino \*et al.\* \(2021\)](#) said that feeding turtles high protein will increase their growth and health. However, [Ginting \*et al.\* \(2020\)](#) stated that feeding 100 percent tuna fish showed better specific growth in weight, carapace length, and width compared to other feeds.

In addition to being used to purchase turtle feed, the funding is also used as compensation for fishermen of Rp. 300,000 per turtle weighing around 50-6 kg. Initially, the compensation fee was only IDR. 150,000 per turtle. In addition, the Lentora Turtle Care Group also provided fishing equipment for fishermen who donated some of their catch to the Lentora Turtle Care Group for turtle feed. The funds used to purchase the fishing equipment came from assistance from environmentalists who visited the Lentora turtle conservation location.

The involvement of local governments, the private sector, local communities, and academics in the conservation of lentora turtles has created a multi-stakeholder partnership ([Fig. 5](#)). However, stakeholders such as the private sector are diverse in the conservation and management of biodiversity. According to [Sharma \*et al.\* \(2020\)](#), local communities are the most important, and government institutions act as facilitators or regulators. There are six classifications of stakeholders in the management, development, and policies regarding tourism in an area related to biodiversity: 1. Public sector (local, national, regional, and global government agencies); 2. Private sector; 3. Bilateral and multi-lateral donor agencies; 4. Non-Governmental Organizations (NGOs); 5. Local communities and isolated residents; and 6. Consumers. Furthermore, stakeholders from academics have a role in educating the community about the function of ecosystems or conservation areas ([Ardiansyah, 2021](#)).

In the Lentora Turtle Care Group in Mapane Tambu Village, Turtle Guardians, with several stakeholders, contribute to protecting turtles as one of the endangered animals and promoting conservation groups to the public so that many people are interested in caring both as donors and as people who care about the environment. The local fishing community informs the Lentora turtle conservation group when they find turtle eggs. Academics (service team) and lecturers at Tadulako University guide the Lentora turtle conservation group to develop innovations, protect biodiversity, and help find donors. By synergizing, all stakeholders ensure that turtles survive along the Donggala coast in general and Mapane Tambu Village in particular.



**Figure 5.** Empowerment in the form of multi-stakeholder partnerships

The involvement of the Community Service Team in the conservation of Lentora turtles in Mapane Tambu Village has established a multi-

stakeholder partnership. Empowering the lentora turtle conservation group is very important in preserving turtles. Regarding socialization, the lentora turtle conservation group often attends several opportunities, such as district and city meetings, to educate the community on the importance of preserving turtles. One is involved in releasing hatchlings at Tanjung Karang Beach, Donggala Regency, which was attended by various RAOs of Donggala Regency. During the field review, the Community Service Team also released hatchlings at Lentora Beach, Mapane Village. By carrying out these activities, the younger generation is expected to build a strong foundation for sustainable conservation. As previously stated, the lentora turtle conservation group appealed to the community in Mapane Village to report all turtles that lay eggs, nests, and hatchlings during the turtle nesting season. If a turtle is seen laying eggs, local residents must contact the Lentora turtle conservation group and remain at the location until one of the Lentora turtle conservation group members arrives. Undoubtedly, the portrait is a real change in the local community and community behavior about turtle protection in Mapane Tambu. More specifically, they have accepted this species as one of the protected animals and are responsible for preserving it as well.

#### **Turtle ecotourism socialization**

Mapane Tambu Village has a beach tourist attraction, namely Lentora Beach, which has great potential to be developed as one of the natural beach tourism destinations. The existence of Lentora turtle conservation is one of the tourist attractions in Mapane Tambu Village. This location also has a mangrove area, which is a tourist attraction at Lentora Beach. On this occasion, the Community Service Team conducted socialization about turtle ecotourism at the turtle conservation location. The Community Service Team provides encouragement or motivation to the turtle conservation group as a bridge for community empowerment around Lentora Beach. The Community Service Team is willing to provide assistance and technical guidance to the turtle conservation group and the Mapane Tambu Village community. With this stimulus, it is hoped that community empowerment through turtle ecotourism can run slowly. In addition, support is also needed from both the village government and the Donggala Regency government to play a role in the success of the turtle conservation ecotourism program in Mapane Tambu Village or Lentora Beach.

The government supports the development of community empowerment for the benefit of the community by providing aid funds in the form of money and equipment to help promote turtle conservation activities. Support for turtle protection efforts and preserving the ecotourism environment

can be developed gradually. Through the development of turtle conservation, it is also seen that if this kind of turtle conservation ecotourism can be created, the community will be empowered. The community can become business actors, parking attendants, security teams, and others at the Turtle Conservation Ecotourism location. Community participation in this turtle conservation ecotourism is also a form of community empowerment.

The Community Empowerment Budget at Lentora Beach, Mapane Tambu Village, through turtle conservation ecotourism, has not been fully implemented due to limited funding sources. Funds from the village government are only IDR 400,000, a very small amount to support the sustainable operation of turtle conservation ecotourism. Other funding is uncertain and depends on voluntary donations from visitors who come to the conservation location. These budget limitations are caused by several factors, including the low allocation of village funds for environmental programs, village development priorities more focused on the infrastructure sector and community economic welfare, and lack of access to external funding such as environmental grants or assistance from the private sector. [Maleni \(2022\)](#) that the budget and lack of community participation are the main inhibiting factors in turtle conservation activities. In addition, the local community still lacks participation in developing the turtle conservation location as a tourist attraction. Another obstacle is that the tourist attraction facilities and infrastructure are still inadequate, especially roads and bridges, which are several supporting attributes of the Lentora Beach turtle conservation ecotourism. According to [Afriza \*et al.\* \(2018\)](#), obstacles in managing conservation ecotourism include limited knowledge of the local community, the arrangement of the buffer environment of the area, and the packaging of tourism products.



**Fig. 6.** Lentora beach turtle conservation ecotourism condition

Access to turtle conservation ecotourism at Lentora Beach is still inadequate ([Fig. 6](#)). Road access is still narrow, and it is difficult for four-wheeled vehicles to pass. The location around Lentora



Beach still looks dirty and shabby, so it is not attractive to visitors when visiting Lentora Beach. Seeing this condition, the Community Service Team conducted socialization and education about the importance of supporting tourism facilities to support ecotourism and turtle conservation on the edge of Lentora Beach. The inadequate integration of facilities and infrastructure that empower the community around Lentora Beach has not been achieved. The goal of community empowerment is to improve the welfare of the community, but traders have not sold around the beach because they do not have enough capital to start a business, such as building huts, providing sales equipment, and so on. Direct community participation in the implementation of community empowerment is still lacking. The community does not feel empowered by the existing empowerment program. In addition, much empowerment is carried out on turtle protection, an activity the community feels is in vain because it does not generate economic value. The lack of coordination and communication between the community and conservation groups results in a lack of concern for each other, even though they are related to practices in the field.

According to Jim Ife, empowerment is needed to preserve turtles. It means that empowerment provides communities with resources, opportunities, knowledge, and skills to increase their capacity to determine their future and participate in and influence community life. Empowerment can be in the form of ecotourism, where the environment is maintained, and the welfare of local communities can be improved. Making turtle conservation ecotourism a community empowerment activity to make communities independent in managing sustainable tourism and environmental conservation in the hope of preserving turtles (Arwani, 2021).

Referring to Jim Ife's opinion that in an effort to improve the standard of living of the community and improve the economy of the Mapane Tambu Village community, the Community Service Team must develop a strategy to attract community interest so that they can manage the potential of Mapane Tambu Village together, especially Lentora Beach which is a turtle conservation location. Community empowerment is achieved by increasing knowledge, attitudes, skills, behavior, competence, awareness, and utilization of resources to develop community independence and welfare. In the long term, turtle conservation activities can be integrated with the concept of ecotourism to provide economic benefits to the surrounding community in general and turtle conservation groups in particular.

#### **Obstacles Faced and Efforts to Sustain Activities**

The obstacles faced by all Community Service activities, namely several activities that were carried

out technically, were not optimally implemented because most of the group members, village government, and community were busy carrying out their professions as fishermen, gardening, and selling. In addition, the relatively limited financial support caused the community service activities to be carried out for only one day, and accessibility to the community service location was very far. However, the Community Service Team also carried out activities on other days, such as correcting the funding proposal submitted by the Lentora turtle conservation group. The Community Service Team also helped socialize and find new donors to increase funding for constructing the Lentora turtle conservation site.

Efforts to sustain community service activities based on the results of discussions and exchanges with the Lentora turtle conservation group, they really want there to be coaching activities in the development of turtle conservation ecotourism and the management and arrangement of the environment around Lentora Beach. The locations that still look like slums are very possible to be built and arranged so that they become places that do not endanger visitors to Lentora Beach. Therefore, this community service activity needs to be carried out to sustain the turtle conservation-based ecotourism program. Citing the concept of the principles of coastal ecotourism development, which include 5 (five) principles: 1. Based on nature (*Nature Based*); 2. Maintaining the sustainability of the ecological environment (*Ecologically Sustainable*); 3. Having an element of education towards environmental conservation for both guests/tourists and organizers of tourism activities and the community (*Environmentally Educative*) 4. Providing benefits to the local community (*Locally Beneficial*) 5. Providing elements of satisfaction to tourists or still containing elements of pleasure during tourism for tourists (*Generates Tourist Satisfaction*) (Prihadi, 2017).

#### **Impact of Activities**

The empowerment carried out by the Lentora Turtle Care Group Community Service Team is still in the form of training and socialization, which can generally increase public knowledge about preparing structured fundraising proposals (Table 2). The socialization about ecotourism is able to increase the knowledge and insight of the Lentora Turtle Care Group and the local community to develop turtle conservation tourism. The empowerment objectives carried out now and in the future will impact improving education, accessibility, actions, institutions, businesses, income, environment, life, and society (Suirlan, 2024).

Based on the results of the training and socialization that the Community Service Team has carried out it shows that there is an increase in the



**Table 2.** Solutions and dedication

Problem	Solution	Outer
The low funding sources for turtle conservation activities and how to empower fishermen in Mapane Tambu Village, Balaesang District, Donggala Regency.	Empowerment through training on fundraising, whether from the government, NGOs, LSMs, or independently. Socialize with fishing communities to take advantage of opportunities from turtle conservation activities such as ecotourism activities.	Preparation of Structured Fundraising Proposals and Registering as Turtle Guardians

**Table 3.** Changes resulting from community service activities

Initial Conditions	Intervention	Conditions of Change
The low funding sources for turtle conservation activities and how to empower fishermen in Mapane Tambu Village, Balaesang District, Donggala Regency.	Conduct training in preparing proposals and socializing ecotourism to educate the Lentora Turtle Care group and the Mapane Tambu Village community.	<ul style="list-style-type: none"> <li>• There was an increase in donors from 4 donors to 6 donors.</li> <li>• The creation of a structured fundraising proposal draft.</li> <li>• There is awareness and enthusiasm from the Lentora turtle conservation group and the Mapane Tambu village community after an interesting conservation ecotourism intervention was carried out.</li> </ul>

number of fundraising donors and an increase in the knowledge of the Lentora turtle conservation group and the surrounding community about turtle conservation ecotourism through oral delivery of materials and discussions (FGD) that are carried out. It can be seen from the increase in the number of donors, which initially consisted of 4 donors to 6 donors. The donors include the Regional Government (Central Sulawesi Provincial Marine and Fisheries Service, Central Sulawesi Provincial Environmental Service, Private Companies, Mapane Tambu Village Government, and Academics). The most important thing impacting this community service activity is that the Lentora turtle conservation group and the village community are very enthusiastic and want other similar activities, such as the development of turtle conservation ecotourism, to be carried out again (Table 3). According to the community, this activity is useful for increasing sustainable turtle conservation tourism for Mapane Tambu Village and its surroundings.

## CONCLUSION

Community Service is carried out through training and socialization stages through FGD with the Lentora Turtle Conservation Group and the Mapane Tambu Village community. Community service activities are carried out through empowering the Lentora Turtle Care Group and have succeeded in increasing donors for turtle conservation fundraising and educating through knowledge transfer to the community about turtle

ecotourism so that it becomes a new source of income for the Mapane Tambu Village community through Lentora Turtle Conservation at the Lentora Beach tourist location. Through this empowerment activity, the main contribution was that the number of donors for turtle conservation fundraising increased from 4 to 6. The Lentora Turtle Care Group, which was initially constrained by the procurement of turtle feed, was able to obtain regular donors to provide Lentora Turtle feed through this community service.

The limitations in this service are constrained by the technical implementation of activities that are not optimally implemented, financial support, which is still relatively limited, and accessibility to the service location, which is very far away. The plan to continue this activity is to hold a special PKM for the Mapane Tambu Village community by developing turtle conservation ecotourism, which can be used as a reference and implemented by the Mapane Tambu Village community and other villages in an effort to increase additional income and also as a new source of Village Original Income through the tourism sector.

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