


Environmental Care Character Education Based On Local Wisdom For Marine Resource Management

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ARTICLE INFO	ABSTRACT
<p>Article History: Received: 2023-08-05 Accepted: 2023-09-28 Published: 2023-09-30</p> <p>Keywords: Education; Geography; Human; Learning; Social</p> <p>Corresponding author: Marlina Email: marlinamalaia@gmail.com DOI: 10.34312/jgej.v4i2.21920</p> <p>Copyright © 2023 The Authors</p>  <p>This open access article is distributed under a Creative Commons Attribution-NonCommercial (CC-BY-NC) 4.0 International License</p>	<p>The character of caring for the environment can be built by cultivating attitudes and increasing knowledge about the local wisdom of the community that has lived and become a cultural characteristic of a society. However, the concept of integrating local culture in forming an environmentally caring character in managing marine resources has not been implemented. Meanwhile, environmental awareness is important to realize good environmental quality. The Bajo people, with their unique characteristics as marine communities, must have the character of caring for the environment in supporting the conservation of the Wakatobi National Park area. The aim of this research is to examine the local wisdom values of the Bajo Mola community, consisting of the local wisdom of Duata Sangal, Parika and Pamali according to indicators of character education that cares about the environment which is activated through high school geography learning. This research method uses descriptive qualitative with data collection through interviews, observations and library observations which are analyzed using the triangulation model. The results of the research are that character education that cares about the environment can be developed through geography learning in schools by integrating local wisdom values in geography learning. Bajo Mola local wisdom values in class XI Geography learning. Educators can apply it by integrating it into learning material, so that they can form environmentally. Caring characters in students. As a community with a maritime culture, local wisdom values contain indicators of environmentally caring character that can be integrated into geography learning. Through environmental care character education based on local wisdom of the Bajo Mola community in Wakatobi National Park which is integrated in geography learning at school, it is hoped that it can foster an attitude of caring for the environment in the community.</p>

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1. Introduction

Human behavior in utilizing nature determines environmental conditions. However, currently the problem of human relations with the environment has become a global issue. Natural factors such as natural disasters and low human awareness of preserving sustainability are factors that cause environmental damage. There have been several cases of environmental damage on land and at sea due to unwise human activities which have had a major impact on conservation efforts. So ongoing efforts are needed to provide education to humans so that they are always aware and care about the environment. Environmental problems are caused by humans' ability to control nature by exploiting it excessively for their own interests without paying attention to the environment. Successful management of natural resources is built by human beings who are competent, intelligent, sustainable and long-term oriented (Syarif, et al. 2023).

Environmental education can be carried out formally or informally. Environmentally caring character education in formal schools is an effective strategy to increase community awareness of the environment which supports sustainable development (Sitorus and Lasso 2021). Increasing education about nature and the environment through coaching and training in formal and non-formal channels as a form of love for nature, the environment and each other (Anazifa and Hadi 2016). Therefore, formal and non-formal education is very necessary to change people's attitudes. All levels of society have the right to receive environmental education, so that awareness of environmental conservation can grow within them. It is important to form an environmentally caring character based on Indonesian culture. Placing a cultural paradigm in environmental

education can be used as an effort to instill environmentally caring character education based on local wisdom. This is in accordance with one of the main designs for building national character in 2010-2025, namely building national character is a must for a multicultural nation. The building character requires the involvement of several parties such as family, government, formal and non-formal institutions and the wider community in accordance with their respective local wisdom.

Character education is the study of changing human attitudes towards their environment to be more caring accompanied by forms of caring actions in daily life and trying to repair all natural damage that has occurred. (Purwanti 2017). The formation of an environmentally caring character can start from the school environment by maintaining school cleanliness (Ismail 2021). Instilling an environmentally caring character is one effort to make people care about the environment. This effort is in order to preserve nature and the environment so that damage does not occur, namely by protecting the environment. Humans are expected to care about the environment, but in reality there are still many people who do not care about the environment, especially the younger generation as agents of change. Character education in schools is an academically conducive environment, both physically or non-physical. The importance of promoting environmentally caring character education to instill an attitude of caring for the environment in the community, this is closely related to the region. Apart from that, environmental education is the key to preparing people to have an environmentally caring attitude that is able to solve environmental problems (Muslich 2015).

Considering the importance of efforts to manage Wakatobi National Park as a marine conservation area, the environmental care movement must grow together in people's lives. Management must be carried out as a form of human responsibility towards nature. Marine resource conservation can be integrated by involving local communities (Sumarmi et al, 2020; Marlina et al. 2021). Exploring traditional knowledge or local wisdom in management plays an important role in maintaining sustainability while still considering the welfare of coastal and marine communities. The characteristic of the Bajo people, who have long been close to the sea, is that they have ways of using the sea that have an impact on marine conservation (Wani and Ariana 2018; Bennett 2019). Apart from that, the character of the Bajo people who are very friendly towards the marine environment needs to be used as a basis for building a character that cares about the environment (Yunus et al. 2022). The challenge of limited contextual geographic learning has the potential to create gaps and conflicts among students. Meanwhile, ideal geography learning comes from the environment around students. So that the knowledge gained is meaningful, useful and contextual (Ikhsan and Haris 2022).

The novelty of this research is that there is no research that links local Bajo wisdom and marine management in building environmentally caring character in students at school through learning geography. While Wakatobi Regency's position is that it is a marine protected area, it must incorporate the local wisdom of the local community in managing the area. The character of caring for the environment must grow in every student. Implemented in schools at every level of education. Environmentally caring character education can help educators instill environmentally caring character in students which will underlie their behavior in everyday life. Instilling the character of caring for the environment is one effort to make people care about the environment. Humans are expected to care about the environment, but in reality there are still many people who do not care about the environment, especially the younger generation. The younger generation as agents of change.

2. Methods

This research uses a qualitative descriptive method with data collection techniques through in-depth interviews, observation and literature review. Data collection was carried out in May-August 2022. Informants in this research were the local government, Bajo community leaders, cultural figures and geography teachers at 3 high schools. This is intended to obtain in-depth information about the existence of local community wisdom in managing marine resources. Meanwhile, the geography teachers we interviewed aimed to obtain information on how the integration of local wisdom in learning is included in the context of implementing environmentally caring characters in students.

Data from interviews with traditional leaders, the community, the head of Bajo Mola village and geography teachers on Wangi-Wangi Island, Wakatobi Regency. Data analysis uses a triangulation model to examine the values of Bajo Mola local wisdom contained in environmental care character education, then integrated into class XI high school geography learning material 1) Flora and Fauna in Indonesia and the World, 2) Natural Resource Management in Indonesia in geography learning at school. The research location is in Wakatobi Regency, South Wangi-Wangi District. The research location can be seen in [Figure 1](#).

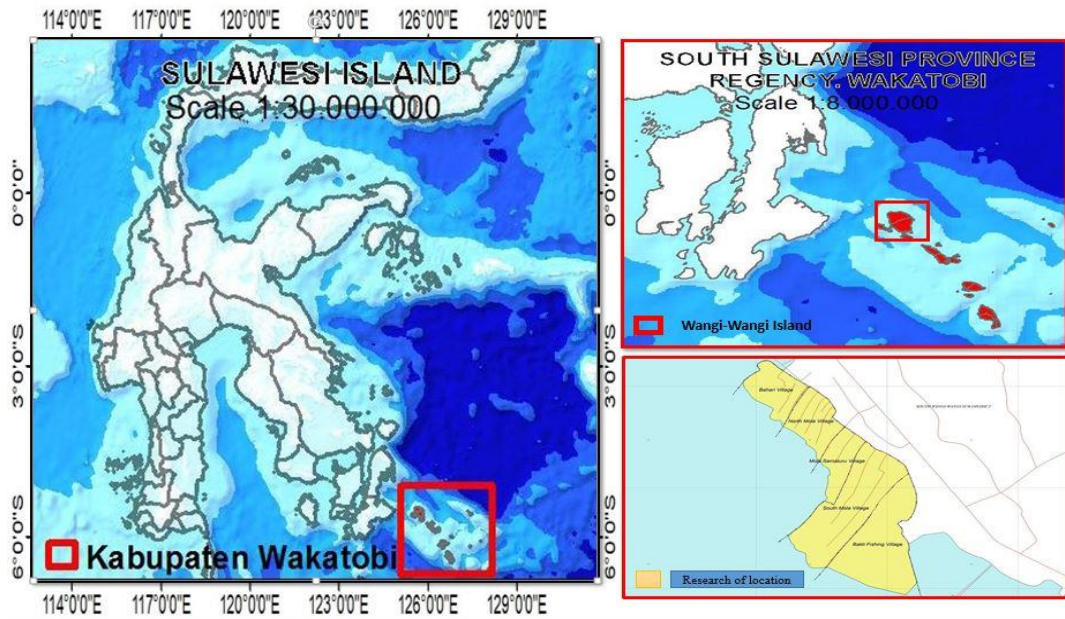


Figure 1. Research Location (Bajo Mola Residential Area)

3. Results and Discussion

Bajo Mola Village is the name for 5 villages in Bajo, namely Mola Nelayan Bakti Village, South Mola Village, Mola Samaturu Village, North Mola Village and Mola Bahari Village. The area of the Bajo Mola settlement is $\pm 8.3 \text{ km}^2$ and is divided into 5 villages with the majority of the population making a living as fishermen. The total population distribution in [table 1](#).

Table 1. Number of residents in each village in the Bajo residential area 2021

No	Village	Number of Family	The Total Population		The Total Population
			Laki-laki	Perempuan	
1	Mola Selatan	626	1041	1.052	2.098
2	Mola Utara	313	532	520	1.052
3	Mola Samaturu	2679	521	511	1.040
4	Mola Bahari	354	663	645	1.308
5	Mola Nelayan Bakti	644	1164	1.394	2.558
	Total	2.210	3.931	4.126	8.057

Source: Profile of 5 Villages of the Bajo Mola Community, 2021

Education is an important factor in developing the knowledge of the Bajo Mola community. Educational facilities such as schools, including Kindergartens (TK), Elementary Schools (SD), Middle Schools (SMP) and High Schools (SMA), should be given attention so that they can facilitate the community to pursue education in the hope that the next generation will be able to follow suit. the current development of the times without losing knowledge of local cultural wisdom. The progress of a society can be measured by the level of education of citizens and is a driving factor for the development of new ideas that are able to stimulate change in various areas of life. The level of education of the people of Bajo Mola is relatively low, several factors that influence this are the very lack of community motivation, where life at sea has an impact on the public's perception that education is not an important thing. According to them, going to high school is useless if you end up working as a fisherman.

Table 2. Condition of education level of the Bajo Mola community

No	Education level	Village				
		Mola Selatan	Mola Utara	Mola Samaturu	Mola Bahari	Mola Nelayan Bakti
1	No school	1.571	193	171	677	-
2	Not yet at school	162	92	87	-	-
3	Graduated from elementary school	34	200	230	483	397
4	Finished junior high school	48	145	133	83	209
5	Graduated from high school	27	140	116	50	178

6	D3	-	-	-	1	2
7	Bachelor	9	31	27	14	69
7	Kindergarten student	-	23	39	-	-
8	Elementary student	158	102	123	-	-
9	Middle school students	52	66	96	-	-
10	Senior High School student	34	52	26	-	-
	Total Population	2.095	1.052	1.038	1.308	2.554

Source: Profile of 5 Villages of the Bajo Mola Community, 2021

The economic condition of the Bajo Mola people is one factor in the low level of education of the Bajo Mola people, the Bajo people have not yet mastered good financial management (table 2). Apart from that, the consumerist nature of society is also another factor causing the Bajo people's economy to be relatively low. In social life apart from Islamic religious law, belief in ancestors is still quite strong. They believe their ancestors guarded the sea. Apart from that, the sea for the Bajo people is a resource that will never run out and is always available for them to use.

3.1 Utilization of marine resources based on the local wisdom of the Bajo Mola community

The closeness of the Bajo Mola people to the Wakatobi sea has been around for a long time, they even call themselves the sea people. Since ancient times, the Bajo people's ancestors had an interrelated relationship with the sea, not only in Wakatobi, in other areas the Bajo people have unique and familial social characteristics. For example, the social interactions carried out by the Bajo people are generally good. Characterized by rural interactions that rely on cooperation and mutual cooperation to help fellow Bajo and Bajo tribes with the surrounding community (Kobi and Hendra 2020). Many studies have explained how the Bajo people live as sea nomads and live very closely with the marine environment (Yunus et al. 2022; Artanto 2017) Much of the life and livelihood of the Bajo people is spent at sea. Bajo culture is a sea culture, everything about Bajo is all about the sea.

Having a culture that is very close to the sea since being born by being immersed in the sea is a manifestation of how the Bajo people view the sea as life. There is a close relationship between society and the sea. For the Bajo people, marine life provides special meaning to their lives, the sea provides food and the sea provides protection. The meaning of the sea for the Bajo tribe has directly formed a unique culture so that even though the transformation of society towards modernization is very rapid, this does not mean that ancestral culture has been abandoned.

In their daily lives, the Bajo people spend more time gathering in front of the house and this is a symbol of togetherness and strong family ties. If there are neighbors (fishermen) who get excess sea products, usually the results are distributed to neighbors around their house. This has become a habit that continues to this day, and for the Bajo people, they never feel short of food supplies. Because according to the Bajo Mola people, the sea is their source of life and they never lack it.



Figure 2. The Portrait of people's daily lives in the afternoon

The Bajo people in Wakatobi consider whatever is in the sea to be food available to them (figure 2). Many Bajo Mola children enjoy life at sea. Moreover, since childhood they have been accustomed to enjoying seafood without cooking or grilling, and interestingly all of this is enjoyed by the children of Bajo Mola Wakatobi. The Bajo Mola community still respects and upholds the culture and customs of their ancestors, this is proven. The cultural order and local wisdom still apply in every wedding procession and going out to sea. The local wisdom of the Bajo Mola community in marine management which still exists today consists of: Duata Sangal, Parika and Pamali.

3.1.1 Duata Sangal

The duata sangal procession is carried out at sea by folding betel leaves (luppiseba) in which other ingredients such as areca nut, lime, gambier and tobacco are filled with 4 (four) betel leaves with the ends of the betel leaf line. must be in the top position. Four folds of areca nut slices inside a betel leaf (sangal) are then lowered into the sea with a prayer that has been recited previously. slowly coming back together.

Duata sangal merupakan prosesi menurunkan pinang di laut dengan tata cara oleh adat dengan doa yang telah dibacakan sebelumnya sambil mengamati gerakan sangal tersebut. Duata sangal which is understood by the Bajo people is putting areca nut in the sea, areca nut being lowered into the sea as a form of appreciation for the sea which has provided food for them, sangal or areca nut is a payment for the goodness of the universe and as a form of request to always be given safety while fishing. The Duata Sangal ritual is carried out to ask for good fortune from the ruler of the sea to provide lots of fish.

The existence of local tribal wisdom has become a record of how Indonesia is very rich in customs and traditions, including rituals related to environmental management. Not only the Bajji people, for example: Water resources in Kuta Village (Hilman and Sunaedi 2017; Wiyatasari and Lathifah 2019; Marlina et al. 2022), for example in protecting forests with the traditions of the Bulukumba indigenous community's pairsriakajang (Syarif et al. 2023). There are traditions and local wisdom of Bugis fishermen in the management of Lake Tempe which contains comprehensive dimensions of environmental conservation, togetherness (justice) and cultural values (S. Tabbu and Amrullah 2022). It cannot be denied that many traditions are born with a religious character. Phenomena that exist in people's culture are basically a stimulus to enrich scientific knowledge.

3.1.2 Parika

The emergence of a knowledge system is the result of a process of adaptation to nature and is a form of local wisdom. Local wisdom is intelligence/knowledge or way of life in the form of local community activities (customs, religion, science, economics, communication, and art) in responding to various problems to maintain, improve, develop elements of their needs by paying attention to ecosystems and natural resources. Humans. A parika is known as someone who has supernatural powers and high knowledge to catch lots of fish. The knowledge of a parika is a gift from God to protect the sea and use it wisely and wisely.

The intelligence and knowledge of the Bajo people in utilizing marine resources is reflected in the intelligence of the parika (fisherman leader). Parika is a knowledgeable Bajo person and is trusted by Bajo fishermen to lead fishing activities in the hope of abundant fish catches. The requirements to become a parika are (1) having knowledge and experience in leading fishing activities, (2) having a leadership spirit, (3) being responsible, and (4) being trustworthy.

3.1.3. Pamali

Pamali is a sentence that is often interpreted as a prohibition or silent abstinence. Not only in social life, the term pamali is widely used to conserve resources as an unwritten rule passed down from generation to generation by the community. For example, the existence of Pamali culture in the management of the Reban Bela Traditional Forest has been proven to preserve the ecosystem within it, so that the water resources within it are also well maintained, local wisdom in the form of Pamali culture has succeeded in preserving it. forest and water resources in Lenek Daya Village. This local wisdom is a form of implementing forest and water conservation (Amalia, et al 2023), including in Wakatobi the term Pamali is also used for cave water conservation in community life. Bajo Pamali tribal community for marine sustainability (Marlina et al. 2020).

Pamali means taboo, namely a prohibited area designated by traditional leaders for fishing, and sanctions are set for those who violate it. A person who carries out fishing activities in this zone is an offense and can be given sanctions in accordance with applicable regulations. Pamali Bajo is a form of rule that must be obeyed by all Bajo people, especially fishermen who carry out fishing activities.

In the Bajo Mola community, the known location of Pamali the are 3 Pamali locations, namely maduangalo (yard or front of the house), mabulisapa (back of the house) and torosapa (a rock marked by a large coral in

the shape of a fisherman on a boat). The location of Madungalo is the Pamali area around the tip of the Kapota and Mabulisapa reefs to the Kaledupa reef. Activities that are prohibited from being carried out at the Pamali location include swearing, shouting, engaging in immoral relations and throwing rubbish carelessly. The Bajo people do not dare to carry out activities in this zone. According to them, even screaming is prohibited, let alone carrying out bombs, using potassium or anesthesia

3.2 Values in the utilization of marine resources Based on local wisdom Bajo Mola To Grow Environmental Care Character Education

The policy regarding character education is contained in Law Number 20 of 2003 concerning the National Education System Article 3 which states that " The national education functions to develop abilities and form dignified character and national civilization in order to make the life of the nation intelligent, aiming to develop good character. dignity and civilization of the nation in order to educate the life of the nation, which aims to develop the character and civilization of the nation. the potential of students to become human beings who believe and are devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent and become democratic and responsible citizens." related to character.

Based on these regulations, the obligation to instill the character of caring for the environment is important in learning at school, especially in geography learning at high schools in Wakatobi Regency. Environmentally caring character education is one of the eighteen characters established by the Curriculum Center of the Ministry of National Education The aim is for the environmentally caring character to form an attitude and action to prevent damage to marine management in Wakatobi. so it must be implemented in schools at every level of education. Through the results of interviews with geography teachers at high schools in Wakatobi Regency, they said that character education that cares about the environment can help students become aware of the environment which can underlie their behavior in everyday life. For example, raising awareness by not throwing rubbish into the sea has created an issue about cases of destruction of the marine environment that will be detrimental in the future. In the end, character education that is always sought to be instilled in students' minds is to care about their environment. Formulating the goals of character education, namely creating a conducive school environment, forming emotional and spiritual intelligence, strengthening positive behavior, correcting various negative behaviors, motivating and familiarizing students with realizing various knowledge about goodness (Najib 2016). The values contained in the wisdom of the Bajo Mola people contained in the character of caring for the environment can be seen in more detail in [table 3](#). [Table 3](#) The value of the local craftsmanship of the Bajo Mola community as contained in the Character of Caring for the Environment

Table 3 The value of the local craftsmanship of Bajo Mola community

Bajo Mola local wisdom (Duata Sangal, Parika, and Pamali)	Value and Meaning	Environmental Care Character Indicator	
		Damage Efforts to Repair Damage	Damage Efforts to Repair Damage
Prohibited activities: It is prohibited to engage in non-environmentally friendly fishing activities such as booming, trawling and fishing.	The ecological value that this prohibition implies is to protect forests from destruction	√	√
Allowed activities: Permitted activities are: catching fish at certain times to get more fish by using environmentally friendly fishing traps	- The value of balance which contains the meaning of living in harmony with nature can be seen from the rules for using the sea - Sustainability values - The value of mutual cooperation, when utilizing marine products as a group chaired by Parika	√	√
Activities to do: Required to carry out activities such as: securing and protecting the sea	- Ecological value which implies a prohibition on fishing in the Pamali area - The sustainability value of seafood remains sustainable with wise use of the sea	√	√
Sanctions consist of medium light and heavy	The value of balance contains the meaning of living in harmony with nature and the rules that have been	√	√

mutually agreed upon for the purpose of preserving the environment. Natural sanctions are believed to mean that there will be misfortune in sailing if you violate customary rules.

Developing character in students through the values contained in local wisdom (Permatasari and Hakam 2018). For example, the wisdom of the Bajo Mola people in the use of the sea (customary rules/law) regulates the behavior of indigenous peoples in the use of sea resources by containing several prohibitions aimed at preserving them. One of the prohibitions is that you are not allowed to fish in the Pamali area in accordance with customary law. This rule contains indicators of environmental care character. Indicators of environmentally caring character are attitudes and developing efforts to repair natural damage.

Based on table 1, it provides an explanation of the value of the local wisdom of the Bajo Mola people in marine use, containing indicators of environmentally caring character. Therefore, character education that cares about the environment can be developed through the use of marine resources based on local wisdom which contains the values of ecology, balance, mutual cooperation and sustainability. This research analyzes the use of knowledge and conducts community-based participatory communication to propose a communication framework for protecting Wakatobi National Park. The value of local wisdom contained in the environmentally caring character indicator can also be integrated into geography learning in high school. Integration of the values and meaning of Bajo Mola wisdom in Class XI High School Geography learning in Table 4.

Table 4. Integration of Values and Meanings of Bajo Mola Local Wisdom in Class XI Geography Learning

Local Wisdom of the Bajo Mola Community	Value and Meaning of Materials	Flora and Fauna in Indonesia and the Material World	Natural Resource Management in Indonesia
Duata Sangal Parika, Pamali contains a deep meaning regarding the wise use of marine resources - Ecological and sustainability values contained in the knowledge of the Bajo Mola community in managing, preserving and protecting the sea for the sustainability of its functions.	- Ecological and sustainability values are found in the knowledge of the Bajo Mola people in managing, preserving and protecting the sea for the sustainability of its function. - The value of balance and mutual cooperation from the obedience of the Bajo Mola community	Basic competencies: 3.2 Analyze the distribution of flora and fauna in Indonesia and the world based on ecosystem characteristics.	Basic competencies: 3.3 Analyze the distribution and management of forestry, mining, marine and tourism resources according to the principles of sustainable development.

Table 4 explains the integration of Bajo Mola local wisdom values in class XI Geography learning. Educators can apply it by integrating it into learning material, so that they can form environmentally caring characters in students. Learning that involves the environment as a learning resource can shape character and increase students' awareness of the environment (Fua et al. 2018).

4. Conclusions

Based on the research results, it can be concluded that environmental care character education can be developed based on the local wisdom of the Bajo Mola Community in managing the marine environment of Wakatobi National Park. The wisdom of the Bajo Mola Community contains indicators of the character of caring for the environment in the aspect of character education. The potential for local wisdom in Duata Sangal Parika, Pamali contains deep meaning regarding the wise use of marine resources. Ecological and sustainability values contained in the knowledge of the Bajo Mola people in managing, conserving and protecting the sea for the sake of its continued function. High school teachers in Wakatobi Regency make local wisdom values a geography learning topic, namely in class XI high school geography learning material about 1) Flora and Fauna in Indonesia and the World, 2) Management of Natural Resources in Indonesia in geography learning at school. The values and meanings contained in the local wisdom of the Bajo Mola Community are integrated into geography learning in high school to continuously educate and develop the character of caring for the environment. Apart from providing input on how local wisdom can be integrated in learning to instill environmentally caring character, this research needs to be carried out further regarding effective learning methods or models to achieve learning objectives with the main aim of instilling attitudes.

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