



STRENGTHENING ECOLOGICAL CITIZENSHIP THROUGH LOCAL WISDOM NGAHA AINA NGOHO IN BIMA REGENCY, INDONESIA

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Abstract:

Strengthening ecological citizenship through the local wisdom of Ngaha Aina Ngoho by the Oi Oi Seli group in Bima Regency has given positive results in realizing environmental preservation. The purpose of this research is to analyze the strengthening of ecological citizenship through the local wisdom of Ngaha Aina Ngoho in the Bima community through the programs of Desa Oi Seli Desa Maria, Kecamatan Wawo as a group that upholds the value of local wisdom of Ngaha Aina Ngoho. This research uses a case study research type. They were collecting data using observation, interview, and documentation techniques. Data analysis used interactive analysis techniques consisting of data reduction, data presentation, and data verification. The results showed the strengthening of ecological citizenship through local wisdom of Ngaha Aina Ngoho, which was carried out through the Oi Seli Community consisting of; socialization of environmental awareness, reforestation of deforested forests and planting of protected and productive trees, empowerment of environmentally conscious groups, workshops and seminars and formulation of environmental protection regulations. The results of strengthening the value of Ngaha Aina Ngoho's local wisdom in the Bima community positively impact the environment, economy, and tourism. Meanwhile, the challenges and obstacles are still the minimum levels of public education and the ups and downs of members' enthusiasm in preserving the environment.

Keywords: local wisdom, Ngaha Aina Ngoho, ecological citizenship

1. Introduction

As a fundamental part of a country, citizens have rights and obligations in preserving nature (Sari, Samsuri & Wahidin, 2020). The development of the times and the increasing flow of globalization resulted in the number and quality of water resources decreased (Amri, 2011). In line with Rosegrant et al. (2002), environmental degradation will impact

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food scarcity in the future. This will affect the survival of human life, especially for people who depend their lives on natural resources as a livelihood (Silfiana & Samsuri, 2019). Several cases of citizen behavior are damaging the environment, namely forest logging, out-of-place waste disposal, and mining that damage biodiversity on land, rivers, and sea, as well as air pollution (Gusmadi & Samsuri, 2019). The description explains that environmental damage is required regulation and involvement from various parties, such as governments, communities, environmentally concerned communities, and law enforcement agencies. However, based on the research results, the ecological crisis experienced by the State of Indonesia resulted from a lack of environmental awareness among citizens (Prasetyo & Budimansyah, 2016). Therefore, the ecological crisis should be of concern to all citizens.

Ecology becomes an integral part of the symbolic process of living things and the surrounding environment. Ecology believes in the principle of balance, the harmony of the surrounding nature that provides a mutual benefit (Effendi, Salsabila & Malik, 2018). The world's recent ecological crisis has the potential for damage to the conditions that sustain human life on earth (Vasan, 2018). From fao data in 2014-2015, deforestation damage increased every year and reached 1.09 million hectares/year. This resulted in a scarcity of renewable natural resources such as water, forests, and fertile land, resulting in distressing conflicts in various developing countries (Homer-Dixon et al., 2015).

Meanwhile, the ecological crisis, including in Indonesia, is closely related to the increasing ecological disasters. Throughout 2017 there were 220 environmental cases from 13 provinces, consisting of land transfer cases of oil palm plantations, forests, industrial crops, pollution, mines, infrastructure, reclamation, tourism, property, urban, and water (Walhi, 2018). The data proves the importance of citizen awareness in preserving the environment.

People must learn to understand nature by not being greedy and avoiding conflicts of interest (Armawi, 2013). In line with the concept of ecological citizenship, Dobson (2007) states that citizens should preserve the environment to realize an equilibrium system. Ecological citizenship is an idea that fosters moral identity through continued involvement in constructive traditions to develop ecological identity through the practices of ecological movements (Curtin, 2002). The concept of ecological citizenship has implications for the birth of new communities and young groups that solve environmental problems.

The ecological citizenship movement is part of citizens' demands to develop an ecological identity and be involved in conducting pro-environmental activities. In this case, the ecological movement governs the management of the environment and natural resources realized through regulation (Fahrudin, 2019). One of the regions in Indonesia that are experiencing the impact of the lack of handling environmental problems that are not maximal resulting in an ecological crisis, namely Bima Regency, West Nusa Tenggara. Information data on ecological performance management of West Nusa Tenggara Province (2017) Bima Regency is the area that experienced the worst critical land in West Nusa Tenggara Province with a forest area of 161,120.5 ha. This is due to the

encroachment of forests, illegal logging, forest fires, utilization of forest resources that are not based on sustainability, and land management patterns that are not conservative with various interests.

The report of the post-flood study of the Ministry of Agrarian and Spatial Affairs/National Land Agency in 2016 mentioned the occurrence of ecological disasters in Bima Regency such as flash floods in Bima City and Bima Regency in 2016 and 2017 due to illegal felling of trees that are inevitable by the community for the clearing of agricultural land. The incident resulted in losses totaling 2,998 40 trillion. Moreover, Bima regency is an area that often experiences drought with a moderate and prone classification level, each covering an area of $\pm 218,300.38$ ha and $\pm 105,819.29$ ha. Faizah & Buchori, (2019). The Bima District Disaster Management Agency in 2018 recorded about 3,165 families with 57 points in 33 villages in Bima Regency experiencing a clean water crisis. The problem causes unrest for the community if not immediately addressed.

Bima Regency Government in the Medium Term, Regional Development Plan in 2016-2021, affirmed, the implementation of Bima district development in the medium-term priority adjusts local characteristic and prioritizes aspects of environmental sustainability through the management of water use, forests, and other natural resources. However, it needs to be supported by various parties in realizing the sustainable development of the Bima regency. (Rachman & Al Muchtar, 2018) explains that environmental preservation requires the participation of citizens in the ecological community. Another thing in preserving the environment is necessary regulation through top-ups from the community and bottom-up from the government certomà & Notteboom (2015). Thus, environmental conservation efforts involving all parties are realized by prioritizing aspects of the local wisdom of the community.

Local wisdom is an integral part of ecology to shape human survival (Andini, Sulistyaningrum & Darmahusni, 2019). About 80% of the Earth's population has local wisdom (Keraf, 2010). Putu Oka Ngakan in Andi M. Akhmar and Syafrudin (2007) explained that local wisdom is wise wisdom in the community's behavior to interact with the environment. Bima people have local wisdom in environmental conservation called *Ngaha Aina Ngoho*. In Bima *Ngaha Aina Ngoho* language means demanding and in the form of an invitation for people to save in the economy and make use of natural resources in the same level and not greedy as in the use of water, forests, and the environment for tomorrow and posterity (Nurjumiati et al., 2020). In line with that, (Munir, 2018) explains *Ngaha* means eating or utilizing, *Aina* which means no or no prohibition, *Ngoho* means deforestation or extravagance so that society is required not to damage nature because of individual greed so that the community should pay attention to the future and posterity. Thus, *Ngaha Aina Ngoho* is an ecological value of the Bima people (Dou Mbojo) who teach to respect each other's surroundings as a part of mutual need to realize justice between generations.

Based on previous research related to ecological citizenship and local wisdom, which became the object of this research, namely in the group Oi Seli, North Maria Village Wawo District Bima. The research related to strengthening ecological citizenship through

local wisdom *Ngaha Aina Ngoho* conducted by Sufia, Sumarmi & Amirudin (2016) shown in the indigenous people of Kemiren Village, Glagasari Subdistrict, Banyuwangi regency explains the local wisdom of providing peace and harmonious life between people and nature through buyu cili site. In addition, buyu Cili site is a manifestation of the local wisdom of indigenous peoples kemiren in preserving the environment in the region. Further previous research by Darusman (2017) stated that environmental preservation is essential for the sustainability of human life. The local wisdom of the indigenous peoples of Naga human village and nature can be integrated into mutual respect behavior put forward environmental ethics. In the aspect of ecological citizenship, research conducted by Fatmalasari, Yuliandri & Gunawati (2019) explains the strengthening of ecological citizenship awareness of the importance of environmental concern through the village selo action so that it can change the behavior of environmentally conscious people. In addition, Halimah, L., & Nurul, S. F. (2020) state, ecological citizenship becomes a movement that forms civic responsibility of the rights and obligations of citizens in environmentally conscious behavior.

Previous studies on strengthening ecological citizenship shed more light on aspects of meaning and concepts applied through ecological movements. So this study describes the Oi Seli Group as part of implementing the strengthening of ecological citizenship through the local wisdom of *Ngaha Aina Ngoho* in the Bima community with various programs that have been done. So that with the presence of this research, it can be a reference for other communities and ecological movement groups in Bima Regency in seeking to realize environmental sustainability through the *Ngaha Aina Ngoho's* Local wisdom.

Thus, ecological citizenship is realized in various efforts to realize a harmonious and prosperous society in the aspect of environmental harmonization. This research focuses on strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in Bima regency by looking at the program of Oi Seli group, North Maria Village Wawo Subdistrict as one of the groups that represent the form of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* for the community in Bima Regency so that there is difference and renewal with previous research.

Therefore, the strengthening of ecological awareness is considered necessary in people's lives. This is done by implementing ecological awareness inherent in the local wisdom of the local community (Niman, 2019:94). Respect for the natural environment is now reduced due to the fading understanding of the values of local wisdom. So that the strengthening of ecological citizenship needs to be realized through local wisdom. In Bima society, the strengthening of ecological citizenship through local wisdom *Ngaha Aina Ngoho* became central in seeking back the beautiful and peaceful Bima district. Background and previous research encourage researchers to obtain empirical data on strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in Bima Regency.

2. Research Methods

This study uses a qualitative approach with a case study design to interpret the interaction between the Oi Seli group, North Maria Village Wawo subdistrict with the reality of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* the program implemented. The research location is in the group Oi Seli in Maria Village, Wawo District, Bima Regency. As a research site, the Oi Seli group became the ecological citizenship strengthening program developer through local wisdom *Ngaha Aina Ngoho* in Bima Regency. The research location was chosen because it is an area in Bima Regency that upholds the philosophy of local wisdom *Ngaha Aina Ngoho*. In 2012, Oi Seli Desa Maria group received kalpataru award from President Susilo Bambang Yudhoyono in 2012, (Data of Oi Seli Desa Maria Group in 2020). Data collection is done through observation, interviews, and documentation of informants. The research was conducted from August 18, 2020 to September 20, 2020. The informant consists of the chairman of the group Oi Seli, members of the group Oi Seli, North Maria Village Community, and the government of North Maria Village Wawo Subdistrict, Bima Regency. Researchers observed the program applied by the Oi Seli group in strengthening ecological citizenship through the local wisdom of *Ngaha Aina Ngoho* as a form of growth of ecological citizenship of the community in Bima Regency. Data analysis uses interactive analysis techniques consisting of data reduction, data presentation, and data verification (Miles & Huberman, 2012). The data obtained is then validated using source triangulation techniques and techniques in data collection.

3. Results and Discussion

3.1 Strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho*

Some cases of ecological crisis in Indonesia due to lack of public awareness in caring for the environment are seen as necessary as a serious thing to solve. The implementation of local wisdom is one of the keys to solving environmental problems. Still, the performance of ecological movements that are not maximal will result in an increasing level of ecological crime. So it is appropriate to be realized through ecological movements through local wisdom by local groups and communities in the community.

The geographical condition of Mbojo (Bima land) fund almost 80% of mountainous and forest areas and bima people who are primarily farmers and depend on nature make the beginning of the birth of local wisdom *Ngaha Aina Ngoho* Dzumardin & Mawardi (2001) Wawo Subdistrict as one of the areas in Bima Regency experienced the problem of the clean water crisis, landslides, and lack of community concern in preserving the environment. Community unrest over environmental conditions became the beginning of the formation of the Oi Seli Group with the name Ncau A'u Maria Village in 1992 by upholding the philosophy of the value of local wisdom *Ngaha Aina Ngoho*.

Public knowledge in understanding local wisdom as a unity that is interconnected with nature needs to be realized through ecological citizenship. The idea of ecological

citizenship comes as a form of environmental preservation (Dobson, 2007), so it needs to be realized with a pro-environment strengthening program. In line with that, the community should be instilled good morals in the environmental field through environmental groups and movements (Ardiyansari, Saryani & Muhamad, 2019).

Oi Seli Group of North Maria Village conducts environmental conservation by conducting various programs. The program is part of efforts to strengthen ecological citizenship through the local wisdom of *Ngaha Aina Ngoho*. These efforts are the best solution in addressing environmental damage in the region (Ikhtiar, 2016). Oi Seli group understands the growth of the community's ecological citizenship is realized by applying programs that connect with local wisdom *Ngaha Aina Ngoho*. Local wisdom can be interpreted as wisdom in the noble values of the community that is the motto of local people's lives (Nasiwan, et al., 2012) if reviewed from local wisdom in the country of Indonesia. There are various categories: food, herbal medicine, natural resources management and environment, trade, cultural arts, regional languages, philosophy, religion, culture, and traditional food (Wagiran, 2012).

Ngaha Aina Ngoho is the local wisdom of Bima people in managing natural resources and the environment as a strengthening of ecological citizenship. *Ngaha Aina Ngoho* means foraging but does not overdo it and advises to live economically and use natural resources (Zulharman & Prayadi, 2020). In line with that, in the sense of the royal poem Bima *Ngaha Aina Ngoho* ecological ethics worth "*we can utilize existing natural resources according to the needs not based on willpower or greed*" (Hendry, 1982).

Hasnun (2020) explains the local wisdom *Ngaha Aina Ngoho* considered an unwritten basic face-to-face convection for regulating the mechanism of communication between the ruler and the people in environmental aspects. There are noble values of local wisdom Bima culture known by the community, including *Maja Labo Dahu, Edesi Ndai Sura Dou Labo Dana, Ngaha Aina Ngoho*.

Ngaha Aina Ngoho's local wisdom relates to the theory of Winter (2013) social balance (socio-proportionality), especially in protecting the rights of citizens against the government against ecological balance. Maintaining the balance of nature is an obligation for the community. The community has the right to use natural products and must be able to preserve them. There are four indicators of public awareness in *Ngaha Aina Ngoho*, namely, not cutting down trees indiscriminately, not greedy in taking natural products, maintaining ecological relationships between humans and nature, and conducting reforestation movements, awareness of fahzurizki environmental conservation (2020). Therefore, the need for ecological awareness is poured into the form of real attitudes and behaviors that consider ecological capacity and give birth to a loyal attitude of human friends with nature.

As for the Oi Seli group's program in strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* seen since 2012, Oi Seli group managed to get kalpataru award from President Susilo Bambang Yudhoyono as the category of environmental rescue.

Strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* as a form of ecological awareness of bima community by the group Oi Seli Village Maria Wawo Subdistrict has been realized by efforts to do the process planting trees (reforestation) that began from 1997 to 2020. The Oi Seli Group carried out the activity based on seeing the people of North Maria Village mostly have a livelihood as farmers and the condition of the community that can not be separated from nature. In addition, the need for economic improvement and water availability for the community is significant to irrigate agricultural land and meet the needs of people's lives.

The response of the people of North Maria Village is very positive with the reforestation program of trees that have been bald by the Oi Seli group it awakens the people of North Maria Village to behave well with nature. In addition, a large number of public and environmental organizations in the Bima Regency are cooperating with the Oi Seli group to conduct activities related to environmental management and greening. The visit of various circles such as teachers, students, and lecturers at various campuses in West Nusa Tenggara conducted research and studied the concept of environmental preservation conducted by the Oi Seli group.

Environmental education is a step of the Oi Seli group in providing knowledge to the community about environmental conservation. This is done by cooperating with the government of North Maria Village and DLH (Environment Office) of Bima Regency to provide awareness to the community in understanding the essence of environmental preservation by upholding the local wisdom of *Ngaha Aina Ngoho*.

In addition, the establishment of environmentally conscious groups through the empowerment of young people (taruna coral), PKK mothers, farmer groups by breeding productive trees and herbal medicinal plants in agricultural land and yard. Program one tree one family became a symbolgotong royong community in strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho*. Oi Seli group drafted regulations prohibiting the felling of trees indiscriminately in cooperation with the Village government and indigenous institutions within. The result of the design gave birth to Perdes No. 4/19 of 2015 on the prohibition of felling trees and maintaining a good ecosystem with the environment and making the local wisdom of *Ngaha Aina Ngoho* as the philosophy of bima community which is upheld in preserving the environment. In addition, the regulation provides a deterrent effect for the community when illegally lumberjacks, so the community's obligation must replant other trees and care for them for 10 years. Oi Seli group considers the local wisdom "*Ngaha Aina Ngoho*" is the concept and principle of bima people's natural philosophy, which aims to direct people to live and utilize the natural resources provided by the living in an equilibrium.

Environmental conservation activities next Oi Seli group held seminars/workshops and out bond environmentally conscious to the community and youth who have been determined as members of greening volunteers in each group. Volunteers in each group have the task to conduct surveillance and conduct environmental in various circles.

Meanwhile, the Oi Seli group of North Maria Village conducted a tourism development program with an ecological approach. Since 2013 Oi Seli group manages Sakolo, Riamau, and Sambu waterfalls as natural attractions in Wawo Subdistrict. In addition to being a cultural area in Bima, District Wawo is a cultural tourism area of Bima and natural tourism in Bima Regency developed by the Oi Seli Group.

3.2. Results of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in Bima regency community

Important policies of the government in saving the environment, especially the Environment Agency and institutions and communities such as the group Oi Seli Maria Village Wawo District Bima district, show that the community must know about managing, maintaining, and preserving the environment known as ecological citizenship. The concept of ecological citizenship will not arise spontaneously but must be created by involvement in political activities that support global environmental issues. Ecological citizenship is broadly defined by efforts to expand social welfare discourse and recognize universal principles relating to environmental rights and centrally include them in law, culture and politics (Dobson, 2003). Smith & Pangsapa (2008) argue that ecological citizenship relies on humans' obligations to animals, trees, mountains, and biotic communities. The opinion assumes that humans are obliged to maintain forest damage, animal ecosystems, mountain sustainability and be careful and wise to start any development that may adversely impact the ecosystem.

Ecological citizenship provides an understanding of citizens (individuals) living life by reducing adverse impacts on the surrounding environment. (Wolf, Brown & Conway, 2009). Individuals in line with ecological citizenship have an environmentally friendly attitude compared to other individuals (Dobson, 2007). Those who belong to ecological citizens will prioritize environmental responsibility rather than demanding the right to exploit the environment. Thus the ecological citizenship approach is supported by the moral and ethical responsibilities resulting from the environment. Ecological citizenship requires internalizing values that rest on self-control and informal control rather than normative control (Biagi & Ferro, 2011). So, in realizing the community that forms the attitude of the environment can not be done easily. Special measures are needed, engagement facilities and sacrifices beyond the individual capacity need to be made (Martinsson & Lundqvist, 2010).

Oi Seli group has carried out environmental care activities with various efforts in providing community awareness of the importance of preserving and preserving nature as part of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* gives positive results both to the people of North Maria Village, as well as to the people of Bima Regency generally. The result of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* with several activities carried out has a positive impact on several areas, such as the environment.

Oi Seli group with a bald tree planting program gives positive results for Wawo sub-district people. The preservation of 12 eye sources provides positive benefits, since

2010, the Oi Seli Group managed to drain clean water for the needs of 2,500 families or 5,800 people in 5 villages in Wawo subdistrict. The movement carried out by the Oi Seli group successfully rehabilitated 435 hectares of critical land and protected forest.

On the welfare aspect of society in improving the economy, the movement of the Oi Seli group gave positive results. An area of 500 hectares of community rice fields was converted into irrigation originally unfit for use. The increase in agricultural products of the village community increased by 70% from the previous year. This makes North Maria Village the largest rice producer in Bima Regency.

The growing public awareness in preserving the environment begins at the RT level with the planting of herbal medicinal plants in the yard of the house that is used as a traditional medicine of the community. In addition, the change in people's mindset in maintaining environmental cleanliness by disposing of waste in its place became the fruit of the strengthening of ecological citizenship through the local wisdom of *Ngaha Aina Ngoho*.

With various environmental awareness efforts and programs conducted by the group, Oi Seli changed the way people think in transformative land management, uphold the value of mutual assistance, and put forward deliberations *Mbolo Ro Dampa* (deliberation) before the opening of agricultural land. In addition, the *pamali* ceremony (prohibition) as a form of belief from the ancestors of the people of Maria Village Wawo Subdistrict will be a ban on taking all-natural products without thinking about the impact and future of posterity, it will result in the wrath of the Earth and reduced agricultural products.

In tourism, the Oi Seli group developed natural tourism to increase the original income of Maria Village. The development of other tourist areas in North Maria Village is carried out by opening new photo spots in the village tourist area. The development of tourism provides space for the people of North Maria Village to set up small stalls around the natural tourism area. In addition to contribution in the field of environment, tourism and economic improvement, Oi Seli Group managed to scent Maria Village by getting the 1st rank of Terasri Village / Green Se Bima Regency in 2019.

3.3 Obstacles to implementing strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in realizing sustainable development in Bima society

Citizens have different characteristics in showing their concern for the environment (Marinson & Lundqvist, 2010). There are four categories of ecological practices and attitudes demonstrated by citizens. First believers show the consistency of citizens and a positive attitude in preserving the environment. Both types are diehards, citizens who act to harm the environment by not showing environmental impact. The three categories of citizen hypocrites in this category include hypocrites who show an awareness of ecological practices in the general environment. Still, after that, they do not show ecological awareness. The four categories cover the attitude of citizens who only provide motivation and feel that environmental preservation is an important aspect but still difficult (Marinson & Lundqvist, 2010).

The obstacle of the Oi Seli group in strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* that is still an indifferent society and consider the preservation of the environment and local wisdom is not essential in this day and age. The community is still clearing land by cutting down trees in secret to increasing economic needs and social status. In addition, the understanding of the community is minimal by believing that the forest and all its contents should be utilized thoroughly for human needs without thinking about the impact that will occur. The low level of education requires awareness efforts by the Oi Seli group together with the Village government and other environmental communities in Bima Regency on an ongoing basis. Another challenge in strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in Bima Regency is, there are some members of the Oi Seli group, as well as volunteers who sometimes the spirit of environmental preservation up and down becomes an obstacle in the process of strengthening ecological citizenship so that all parties must be involved and work together to enhance environmental awareness.

4. Conclusion

The application of ecological citizenship through the local wisdom *Ngaha Aina Ngoho* in Bima Regency gives positive results in preserving the environment. One of the tangible forms carried out by the group Oi Seli Village Maria Wawo Subdistrict in strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* in Bima district conducted in the North Maria Village Region Wawo Subdistrict with various programs that have been applied, namely: making draft environmental conservation decisions with the village government and indigenous institutions north Maria village so as not to cut down trees wildly, one tree one family program and village reforestation with productive tree planting and protective trees, as well as conducting environmentally conscious seminars. The program of strengthening ecological citizenship through local wisdom *Ngaha Aina Ngoho* has a positive impact on preserving the environment, economy, social and tourism. In addition, there are obstacles in the application of among others, the level of public education is minimal, and there are still indifferent communities and consider nature and local wisdom is no longer essential, and natural products should be used as much as possible, tree felling is still done secretly on the grounds of economic improvement. In addition, members' awareness in preserving the environment is experiencing ups and downs. Therefore, with the strengthening of ecological citizenship through local wisdom *Ngaha Aina Ngoho* can understand the community of the importance of maintaining the environment as a provision of life for children and grandchildren and become a symbol of the realization of ecological civility bima community.

Based on the results of the description above, it can be recommended several things as follows (1), Oi Seli Group must cooperate to the maximum with the government to realize ecological citizenship through local wisdom *Ngaha Aina Ngoho* both in the community, family and school. (2). The Oi Seli group should be more intense in campaigning for ecological citizenship through local wisdom through social media. (3).

Collaboration is required for all parties in caring for forests/trees planted as part of realizing Maria Village as an Ecotourism Village.

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Conflict of Interest Statement

The authors declare there is no conflicts of interests.

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