



Proceedings of the Asian Academic Collaboration Forum (AACF)

Theme: Academic Collaboration Activities of the Research and Community Service Institute of Makassar State University and FSSK-UKM

2024, Volume 1: 69-75 (page)

DOI: ...

E-ISSN:

Published by Academic Collaboration Institute

The Influence of Community Behavior in Maintaining Mangrove Forest in Lantebung Makassar City

Ernawati SK¹, Bakhrani A. Rauf², Firdaus W.Suhaeb³, Noprianti M⁴

¹Agricultural Technology Education, State University of Makassar

²Architecture, State University of Makassar

³Sociology, State University of Makassar

⁴Automotive Vocational and Technology Education, State University of Makassar

*Corresponding author: ernawatisk@gmail.com

Abstract

The aim of this research is to determine: (a) Community behavior in maintaining mangroves, (b) environmental knowledge, motivation to maintain and attitudes towards mangroves (c) influence individually and collectively environmental knowledge, motivation to maintain mangroves and attitudes towards community behavior in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City. The research location is Bira Village, Kec. Tamalanrea, Makassar City. Type The research is quantitative research. The research approach is correlational. A sample of 86 heads of families was selected using systematic random sampling with the Krejcie approach. The variables considered are: (a) behavior to maintain mangrove forests (b), environmental knowledge (c), motivation to maintain mangroves (d), attitudes towards mangroves. Data collection is carried out by: a, giving a knowledge test to the sample, b. give motivation, attitude and behavior questionnaires to the sample. The analysis used is descriptive statistical analysis and inferential statistical analysis. Inferential analysis models are simple regression and multiple regression. The research results show that: (a) environmental knowledge, motivation, attitudes, And behavior public look after mangroves are classified as moderate, (b) environmental knowledge, motivation and attitudes have a significant influence both together and contribute to people's behavior in maintaining mangroves in Bira Subdistrict, Kec. Tamalanrea, Makassar City.

Keywords: Knowledge environment, attitude, motivation, behavior, mangroves.

Introduction

According to Law No. 32 of 2009, it is stated that, "The living environment can be defined as the unity of space with all objects, forces, conditions and living creatures, including humans and their behavior which influences the life and welfare of humans and other living creatures." This environment includes the mangrove ecosystem, as one of the important sub-parts of the environment. The environment is human intervention in the ecosystem order. Including the ecosystem structure in the waters. According to FAO (2007) Indonesia has the largest mangrove area in the world, around 19% of the world's total mangrove forests, and the largest in Southeast Asia, around 49% of its total area.

The area of the mangrove ecosystem in South Sulawesi in 1982 was around 66,000 ha, then in 1993 it increased by around 57.6% (around 104,030 ha). Meanwhile the results monitoring on year 1994 by the Directorate General of Reforestation and Land Rehabilitation Balithut Sul-Sel (1995), that exploitation forest mangroves in Sulawesi South around 75% or around 78,022 ha, generally this is caused by activities that do not pay attention to environmental sustainability and the ecological condition of mangrove forests.

Copyright © 2024 Authors.

OPEN ACCESS



This work is licensed under a Creative Commons Attribution-Non Commercial-Share Alike 4.0 International License

According to Bakosurtanal (2009) wide forest mangroves in Indonesia as big as 3,244,018 Ha. Mangrove vegetation in Indonesia has 45 species (not included species Which recognized) from 75 species mangroves true Which spread in in the world, this means that Indonesia is the country with the largest mangrove area and the highest level of biodiversity. These mangrove areas are spread along the coasts of Sumatra, Kalimantan, Java, Sulawesi, Bali and Papua (Ilman, et al, 2011).

From 78,022 Ha wide forest mangroves Which has exploited, around 40,000 ha or around 38 % in make it pond by society, whereas around 38,022 ha or 37% is used for other purposes such as firewood, industrial materials and other needs. Mangrove forests that have changed function It is estimated that only 30% of the pond land has a productive function, while the rest is neglected and always experiences erosion by waves due to the absence of reforestation or replanting in unproductive converted pond areas. Therefore, the condition of mangrove forests in Sulawesi The South, including Bira Village, Tamalanrea District, Makassar City, is very worrying.

The mangrove forest in Makassar City, precisely in Lantebung, Bira Village, Tamalanrea District, Makassar City has a mangrove forest covering an area of 25 Ha which grows with *Avicennia* sp (api-api) and similar plants. *Rhizophora* *apiculate* , administratively this area is included in the Bira Village, Tamalanrea District. Bira Village is the largest sub-district in Tamalanrea District with an area of 9.26 km² and includes a coastal area with an area height of 1-22 m above sea level (BPS Makassar City, 2019). Administratively, Lantebung is included in the Bira Village area, Tamalanrea District, Makassar City. Geographically, it borders Untia Village to the north, Parangloe Village to the south, Bulurokeng Village to the east and the Makassar Strait to the west. Bira Village is ward widest in Subdistrict Tamalanrea with wide 9.26 km² and includes areas beach with a height of 1-22 m in above sea level, Lantebung is domiciled by fishermen as their livelihood, (2015 data) with a population consisting of 5,699 men and 5,952 women (BPS Makassar City, 2019).



Picture 1.1 Map Delineation And Map Image Region Tour Mangrove forest

The mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City are artificial mangroves which were once filled with mangroves and were then cut down by residents who needed land to build houses. The residents cut down the mangroves so that the land could be sold to investors who were then encouraged by the community themselves who then did so. Replanting. Mangrove plants are unique because they are a combination of the characteristics of plants that live on land and sea. Generally, mangroves have a prominent root system called respiratory roots (pneumatophores). This root system is an adaptation to poor soil conditions. oxygen and even anaerobes.

Mangrove plants act as a buffer (natural shield) and stabilize the soil by capturing and simultaneously settling material from the land that is carried by river water and then carried out to sea by currents. Mangrove forests have a high tolerance for salt levels and can develop on land with high salinity where plants cannot grow. Mangrove plants are plants that can maintain the balance of coastal ecosystems (Idrus et al., 2018).

The extent of existing mangroves located in the big city, namely Makassar City, of course provides its own value to this area because it can be an attraction for visitors, both local and international tourists and has a high ecological function apart from being a protector of coastal abrasion, a place for fish spawning on the other hand, The mangrove

forest is also used as a tourist area. However, the use of mangroves for household needs also poses a threat to the preservation of mangrove forests. Mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City, on an ongoing basis, are largely determined by the community's knowledge of environmental knowledge, motivation to maintain mangroves, and their attitudes towards the mangrove ecosystem.

Mangrove forests are natural resources that are very important for the lives of humans and other species. Mangrove forests are a habitat for crabs and shrimp and other similar species. Therefore, mangrove forests are necessary maintained And preserved. To preserve forest mangroves adequate environmental knowledge, positive attitudes and high motivation are needed for communities in coastal areas. Therefore, environmental knowledge, attitudes towards the environment and motivation for people in coastal areas need to be known so that it makes it easier to carry out activities that can increase this knowledge, attitude and motivation.

Study about behavior in maintaining mangrove forests in Ward Tamalanrea District Bira has never been carried out. Likewise, the factors that influence people's behavior in maintaining mangrove forests, such as environmental knowledge, attitudes towards mangroves, motivation to maintain mangroves, have not yet been identified. is known. By because of that need assessment about community behavior in maintaining mangrove forests which produces data about this behavior and factors which influences it. Data it can be done used by the Makassar city government to foster community behavior in maintaining mangrove forests, especially in Bira Village, Tamalanrea District.

On the basis of all the descriptions above, research on people's behavior in maintaining mangroves and several influencing factors in the Bira sub-district, Tamalanrea District, Makassar City is interesting to study. This research produces data about people's behavior in maintaining mangroves. Data the can used by government city Makassar For take policies to preserve mangroves in the future, Apart from that, it can be used by future researchers as basic data for further relevant research.

Methods

The type of research used in this research is type quantitative research with a correlational approach. The time and place of this research was carried out from February 2021 to April 2021, This research was conducted on people who live around mangroves in the sub-district Bira District Tamalanrea, Makassar City. Location RW 06 Lantebung was chosen deliberately (purposive sampling) because this RW is the RW that has the most extensive mangroves and the people always interact directly with mangroves.

Results

The research results show that the environmental knowledge of the community in Lantebung, Bira Village, Tamalanrea District, Makassar City is in the medium category. Environmental knowledge (X1) has a very significant effect on people's behavior in maintaining mangroves both individually and collectively. The contribution of environmental knowledge (X1) to (Y) is quite significant, namely 4.87. This means that every time environmental knowledge is increased, (Y) will increase by 4.87. Therefore, to increase the environmental knowledge of the community in Lantebung, Bira Village, Tamalanrea District, Makassar City, environmental education is needed. This education can be provided by the Makassar City government, specifically the Environmental Service. Environmental education can also be carried out by various parties or environmental observers, so that the community's environmental knowledge can improve from medium to high or very high. If the environmental knowledge of the Lantebung community, Bira Village, Tamalanrea District, Makassar City, is high or very high, it will have a significant influence and contribution to the behavior of the community in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City, which will also be high or very high. These findings are supported by several theories of knowledge: Gadne and El Deci (2005) state that knowledge is a framework of information about facts that are arranged in

an orderly manner so that they have meaning and can be applied. Kosasih (2016) places knowledge as a series of basic principles, postulates, and theories related to a large amount of organized information. Notoatmodjo (2007) states that knowledge is all that is known and understood by humans about an object or environment. Seokanto (2007) states that knowledge is an impression in the human mind as a result of using the five senses.

The research results also show that the motivation to maintain mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City is in the medium category. Motivation to maintain mangroves (X2) has a very significant effect on people's behavior in maintaining mangroves both individually and collectively. The contribution of motivation to maintain mangroves (X2) to (Y) is quite significant, namely 3.26. This means that every time the motivation to maintain mangroves is increased, (Y) will increase by 3.26. To improve the motivation of people to maintain mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City, environmental education is needed to form their motivation to protect the environment. This education can be carried out by the Makassar City government, specifically the Environmental Service. Environmental education can also be provided by various parties or environmental observers, so that community knowledge can change from medium to high or very high. If the motivation of the people of Lantebung, Bira Village, Tamalanrea District, Makassar City, is high or very high, it will have a significant influence and contribution to the behavior of the people in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City, which will also be very high. These findings are supported by several theories of motivation: Danim (2012) states that motivation is the strength, drive, need, enthusiasm, pressure, or psychological mechanism that supports a person or group of people to achieve certain achievements. Winardi (2011) states that motivation is a potential force that exists within humans, which is developed by a number of internal or external strengths. Zhu and Jinxiu (2012) state that motivation is a psychological tendency and internal drive that stimulates and regulates the actions of an organism.

Apart from providing information about the environment, the community also needs to be encouraged to actively maintain the environment, including maintaining mangrove forests. Environmental education and encouragement to maintain the environment can change people's motivation to be high or very high. If the community's motivation to maintain mangroves is high or very high, it will impact increasing community behavior in preserving the environment, particularly mangrove forests.

The research results also show that the attitude of the community in Lantebung, Bira Village, Tamalanrea District, Makassar City is in the medium category. Attitudes towards mangroves (X3) have a very significant influence on people's behavior in maintaining mangroves both individually and collectively. The contribution of attitudes towards mangroves (X3) to (Y) is quite significant, namely 4.62. This means that every time attitudes towards mangroves are improved, environmental care behavior will increase by 4.62.

To improve the attitude of the community in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City, environmental education and attitude direction are needed, both by the Makassar City Government and by parties who want to improve the quality of the environment, especially mangrove forests. These findings are supported by several theories of attitude: Anwar (2012) states that attitude is a certain regularity in a person's feelings, thoughts, and predispositions for action towards an environmental object. Notoatmojo (2017) states that attitudes consist of various levels, namely accepting, responding, appreciating, and being responsible for everything that has been chosen. Sarwono (2000) states that attitude is a person's readiness to act, which can be positive or negative, and involves the tendency to approach or avoid a certain object. Likert (1932) and Azwar (2012) state that attitude is the willingness to interact (disposition to read) positively (favorably) or negatively (unfavorably) towards certain objects.

The research results show that environmental knowledge (X1), motivation to maintain mangroves (X2), and attitudes towards mangroves (X3) together have a very significant effect on (Y). These factors provide a significant contribution to mangrove

maintenance behavior. Therefore, both environmental education and motivational guidance for maintaining mangroves and attitudes towards mangroves are very expected and needed by the community in Lantebung, Bira Village, Tamalanrea District, Makassar City, in an effort to improve mangrove maintenance behavior.

Conclusion

Based on the previous description and discussion, the conclusions are drawn This research is as follows:

1. The behavior of the community in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City is classified as moderate seen from the aspects of seeding, planting and maintaining.
2. Environmental knowledge in Bira Village, Tamalanrea District, Makassar City, seen from cognitive, affective and psychomotor aspects, is classified as moderate. The motivation to maintain mangroves seen from the intrinsic and intrinsic aspects in Bira Village, Tamalanrea District, Makassar City is classified as moderate. Attitudes towards mangroves seen from the aspects of cognition, affection and conation are classified as moderate.
3. Environmental knowledge, motivation to care for the environment, attitudes towards mangroves each have a very significant influence on mangrove care behavior and each makes a very significant contribution in Lantebung, Bira sub-district. Tamalanrea, Makassar City

Together, environmental knowledge, motivation to maintain mangroves and attitudes towards mangroves have a very significant influence on behavior to maintain mangroves. Each variable makes a significant contribution to mangrove maintenance behavior

Recommendations

1. Community behavior in maintaining mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City needs to be improved by providing environmental education, directing motivation to maintain the environment and directing attitudes towards mangroves so that environmental knowledge, motivation to maintain mangroves and attitudes towards their mangroves will improve.
2. Environmental education is needed for the people of Lantebung, Bira Village, Tamalanrea District, Makassar City so that environmental knowledge the can increase. It's increasing knowledge This environment will have a positive effect on behavior in maintaining mangrove forests. Environmental education can be carried out by the Makassar City Environmental Service and environmental observers, by gathering them in a suitable place to provide education. Apart from that, counseling can also be carried out individually.
3. It requires directing motivation to maintain mangroves and even forming very high motivation to maintain mangroves. Very high motivation to maintain mangroves will have a positive effect on the behavior of maintaining mangroves in Lantebung, Bira Village, Tamalanrea District. Makassar city. Direction and formation of motivation to maintain this can be carried out by the Makassar City government, in this case the Environmental Service provides examples of ways to seed, plant and maintain mangroves.
4. Direction of attitude towards society is needed. A very high attitude will have a positive effect on the behavior of maintaining people's mangroves in Lantebung, Bira Village, Tamalanrea District, Makassar City. Direction and formation of attitudes towards maintaining mangroves can be carried out by the Makassar City government, in this case the Environmental Service provides examples of ways to seed, plant and maintain mangroves.
5. It requires fostering environmental knowledge, motivation to maintain mangroves and attitudes towards mangroves through scheduled counseling and training by the Makassar City government.

6. Seeing knowledge environment, motivation to mangroves and Attitudes towards mangroves have a very significant influence on mangrove maintenance behavior and also provide a very significant contribution. These three variables are of concern to the Makassar City government to improve people's behavior in maintaining mangroves.

References

- Azwar, Saifuddin. 2011. Human Attitudes : Theory and Measurement . Yogyakarta: Student Library.
- E Ariwidodo. 2014. Community Knowledge About the Environment and Environmental Ethics with Participation in Environmental Conservation . *ejournal.iainmadura.ac.id*
- Desrian Alfandi, dkk. 2019. Partisipasi Masyarakat Dalam Pengelolaan Mangrove. *Ilva Lestari*. (25)4: 30-40
- Donsu, J.D.T 2017. Metodologi Penelitian Keperawatan. Yogyakarta : Pustaka Baru Press
- Gadne, Marylene dan Deci, Edward, L. 2005. Self-determination theory and work motivation. *Journal of organizational behavior*, (online), Vol. 26, No. 331-362.
- Hungerfort, H.R, And Trudi L Volk., 1991b Changing Learner Behavior Trough Environmental Education. Unesco, UNDP, UNICEF, and Work Bank.
- Herianto Tuwongsekong, dkk. 2018. Kajian Ekologi Sistem Mangrove Untuk Ekowisata Di Bawoho Kota Manado. *Majalah Geografi Indonesia*. (25)4: 177-183
- IdrusAA, dkk. 2018. Sosialisasi Peran dan Fungsi Mangrove Pada Masyarakat di Kawasan Gili Sulat Lombok Timur. *UPT Mataram University Press*.(18)4: 52-59
- Indriyanto. 2012. Ekologi Hutan. Jakarta: PT Bumi Aksara.
- John, W. Santrock. (2007). *Development Child : Edition Seventh Volume Two* . Jakarta : PT. Erlangga
- KD Malakar . 2020. Rural Livelihood and Mangrove Degradation: A Case Study of Namkhana Block, West Bengal, India . *Kousik International Journal of Innovative Science*
- Kosasih, M. 2016. Knowledge about the Environment Environmental Concern and Work Eros with Employee Participation in Support Program Environment Health And Safety Work K3 at PT Karya Sukses Perkasa Bekasi, West Java. *Scientific journal of environmental education and development*, 17(01),42-61
- Martin Handoko. 1992. Motivational driving force of behavior . Yogyakarta: Kanisius
- Notoatmodjo, Soekidjo. 2010. Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta.
- Purnobasuki, H.2005. Tinjauan Perspektif Hutan Mangrove. Surabaya Airlangga University Press.
- Putrawan, I.M. 1996. Peranan Pendidikan Lingkungan Dalam Membentuk Warga Negara Berwawasan Lingkungan. Pusat Studi Lingkungan. Denpasar. Bali
- Rini, Isdradjat, Mukhlis. 2018. Kajian Kesesuaian, Daya Dukung dan Aktivitas Ekowisata di Kawasan Mangrove Lantebung Kota Makassar. *Jurnal Pariwisata*, Vol. 5 No.1 April. Badan Pusat Statistik (BPS) Kota Makassar. (2017). Kota Makassar dalam angka 2017. Makassar: BPS Kota Makassar
- Rahardian, dkk. 2019. Tinjauan Historis Data dan Informasi Luas Mangrove Indonesia. *Researchgate*. (18)4: 162-178
- Rauf A Bakharani, dkk. 2020. Upaya Peningkatan Perilaku Masyarakat Menyediakan Jamban Sehat Di Kabupaten Soppeng. DIPA Universitas
- Sara, A. 2018. Definition Characteristics Distribution And Utilization Forest Mangroves . [Http://www.pasberita.com](http://www.pasberita.com)
- Sarwono. 1995. Psychology Environment . Jakarta: Gramedia.
- Suriasumantri, Jujun. 1996. Philosophy Knowledge: A Introduction Popular . Jakarta; Sinar Harapan Library Publisher
- Suriasumantri, Jujun S. 2010. Philosophy of Science A Popular Introduction . Jakarta: Light of hope library
- Soemarwoto, O. 1983. Environmental Ecology and Development . Jakarta: Bridge.

- SK Ernawati, et al . 2013. Macrozoobenthos Succession in Natural Mangrove Forests and Rehabilitation in Sinjai Regency, South Sulawesi. Biology Department, Mathematics And Science Faculty University Country Makassar
- Swan, J.A, Stapp, W. P. 1974. Environmental Education; Strategy toward a More Livable Future, New York: John Wiley & Sons Co.
- Soekanto, Soerjono. 2007. Sosiologi suatu pengantar. Jakarta : P.T Raja Grafindo.
- Valentine Sarapang Batara. 2020. The Strategy for the Development of the Lantebung Mangrove Forest Tourism Area Makassar city
- Wattage, P. 2011. Valuation of Ecosystem Services in Coastal Ecosystems: Asian and European Perspectives. United Nation Environmental Program, Ecosystem Services Economics. Nairobi: UNON