



Analysis of Willingness to Participate from the Coastal Communities in Marine Waste Management at Kedonganan Beach, Bali

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ABSTRACT

Waste is now a global problem and Indonesia is no exception. Indonesia's litter problem, especially plastic litter in the marine environment, is closely related to community activities in coastal areas, including Kedonganan Beach. The purpose of this Willingness to participate analysis research is to find out the form of the Kedonganan community's willingness to participate in marine debris management as an observational study. The study was carried out in December 2021. The data collection method used in this study is the survey method, and the probability sampling method is used to study the community groups in Kedonganan Village. The result of this research is that most of the communities' waste management habits are well regulated, the community's willingness to participate in waste management is high, the people of Kedonganan Village have a good sense of identity, and the environmental protection standards also show good results. From the results of the questionnaire survey, it can be seen that rewards and punishments in the form of social norms are widely accepted at all levels of society, and all sectors of society have a good understanding of waste management. These data indicate that the Kedonganan coastal community has a fairly high interest and desire in waste management. Click here and insert your abstract text.

Keywords: Marine debris, Analysis of Willingness to Participate, Kedonganan Coastal Community

1. Introduction

Garbage is a problem faced by the world today, Indonesia is no exception. One of the most common categories of waste found both on land and at sea is plastic (Jambeck, 2015). The existence of plastic waste is a serious environmental problem, especially the marine environment on a global scale and negatively affects marine biodiversity, ecosystems, animal welfare, communities, livelihoods, fisheries, marine transportation, recreation, tourism and the economy (KLHK, 2020). Indonesia is a country that is in the fourth position with the largest population and the second largest plastic polluter in the world after China with a population of around 270 million. Indonesia produces 3.2 million tons of plastic waste in a year that is not managed, of which around 1.29 million tons ends up in the sea (KLHK, 2020).

The problem of waste in Indonesia, especially plastic waste in the marine environment, is closely related to community activities on the coast. One of the beaches in Indonesia that has a garbage problem is Kedonganan Beach. Kedonganan Beach is located in the Kuta District, Badung Regency, and is an area of the Kedonganan Traditional Village. The waste problem at Kedonganan Beach is caused by a lack of public awareness of environmental cleanliness, both local people and tourists who come to visit Kedonganan Beach. Chaerul (2019) stated that garbage in tourist attractions comes from tourists who litter when traveling, be it drink bottles or plastic food boxes.

Various economic activities found on Kedongan Beach are also the cause of the garbage problem on Kedonganan Beach. The economic activities in question are tourism activities, fish trade, and fishing activities. The volume of waste found on Kedonganan Beach is the highest volume of waste among other beaches in Bali (Christiawan, 2019). The seasonal waste volume measurement is carried out by the Badung Regency Environment and Hygiene Service by measuring the total volume of waste obtained, which is once a week, while the total amount of waste generation is carried out every month (Badung LHK Office, 2017).

The distribution or distribution of seasonal waste in the coastal area of Kedonganan Beach is very disturbing for community activities around the beach. The existence of this seasonal waste starts from the mainland area which is washed away by the river to the Bali Strait. Marine debris management

continues to be a very big problem in Kedonganan. Marine waste management must involve all elements of society and related parties, including tourists who travel in the coastal area. This is because the problem of marine debris cannot be borne alone by the government or the coastal management agency. For this reason, an analysis is needed to determine the involvement of the Kedonganan community in creating effective waste management (Pratama, 2019).

Willingness to participate analysis is one type of analysis carried out to determine the potential for community involvement in waste management because often a waste management system is applied without paying attention to the wishes of the community as waste producers. According to Chaerul (2019), the Willingness to participate analysis can be used as a reference in waste management as has been done in a study in Pulau Pari Village where based on the results of the study it was found that respondents in Pulau Pari Village had a high willingness to participate in waste management. This study is important to know so that the local government can develop an appropriate waste management system so that various kinds of waste management facilities that will be built can run in a sustainable manner. The same thing needs to be done at Kedongan Beach.

Therefore, it is necessary to conduct research on the Willingness to participate analysis to determine the form of the Kedonganan community's willingness to participate in marine waste management as an observational study.

2. Research Methods

The data collection method used in this study was a survey method which was conducted using a questionnaire as a guide for collecting data. The data collected consists of primary data, namely data that is directly collected when conducting research in the field in the form of questionnaires. The sample is determined by setting the confidence level used at 90% and the error rate value used at 10%, the error rate value depends on the desired level of confidence (Hanum, 2018).

Based on the Kedonganan Village Year Report, it was found that the population in 2021 was 7,038 people spread over 1,585 families. The selected respondents are residents who live in Kedonganan Village. The sample was taken based on the population, namely the people who were directly involved in waste management using the Slovin equation. By taking the number of 7,038 people as the population and the selected error rate of 10%, the number of respondents who represent is 98 people. Sampling was carried out by means of probability sampling in each community group in Kedonganan Village. According to Sugiyono (2017) "Probability sampling is a sampling technique that provides equal opportunities or opportunities for each element or member of the population to be selected as a sample".

The population in this study was the entire Kedonganan community, which was then determined by the sample. According to Noor (2012) that the determination of the number of samples is determined by using the Slovin formula, which is as follows:

$$n = \frac{\sum X_t}{\sum X_t x \alpha^2 + 1}$$

Information:

N = Number of samples

$\sum X_t$ = Total population.

α = error rate used 10% or 0.1.

Willingness to participate is used to determine the potential for community involvement in waste management. There are 6 criteria that can be applied in the Willingness to participate questionnaire, namely:

- 1) people's habits,
- 2) desire to participate,
- 3) community identification,
- 4) environmental concern,
- 5) social norms, and
- 6) public perception.

Each of the above criteria has different sub-criteria. Each respondent was asked to give an assessment of the sub-criteria with the method used for measurement using a Likert scale which has 5 (five) answers.

3. Results

The quantity of marine waste produced by Kedonganan Village in 2019 was 200 tons, which was sent from the sea and the estuaries of nearby rivers. As a result of the rapidly growing population, as well as tourism activities in Bali, especially in Kedonganan Village, the level of waste pollution on the sea coast of Kedonganan Beach also increases, the garbage comes from shipments by ocean currents and wind from one place to another. In addition, the lack of knowledge and counseling about the impact of inadequate waste management has an impact on the low public awareness in managing plastic waste.

Piles of garbage that pollute the environment and smell bad because they have been left for days cause damage to the environment and the existing ecosystem. Bad weather conditions welcome the beginning of 2021 in Kedonganan Village. High rainfall in recent times has resulted in an increase in the amount of sea water which causes an increase in the amount of waste shipped to the Kedonganan coast. The phenomenon of marine debris outbreaks on

the Kedonganan Coast usually occurs every year, but considering the increase in the volume of waste recorded since 2019 and the Covid-19 pandemic which has limited all forms of activity, therefore waste management requires social responsibility.

Based on the results of the study, most of the residents of Kedonganan Village have received high school/vocational/equivalent education. The number of respondents who received high school education was 47 people. The number of respondents who have received undergraduate education is quite a lot, as many as 9 people. The number of respondents who received junior high school education was 16 people, and the number of respondents who received elementary education was 26 people. The average income earned is around Rp. 1.000.000,- up to Rp. 5.000.000,- per month.

The Kedonganan community is a heterogeneous society. In addition to the "native" Kedonganan residents, there are also many community members who come from other areas of Bali. Despite the differences in the area of origin, the overall population of Kedonganan can be identified as Balinese. Meanwhile, immigrants from other ethnic groups are Javanese, Madurese, and Chinese.

The Kedonganan Coastal Tourism Area Management Agency (BPKP2K) is an institution formed by the Kedonganan traditional village in charge of organizing and managing the Kedonganan coastal area. Every year in the rainy season, Kedonganan beach gets garbage from the ocean. The Kedonganan traditional village through BPKP2K, in collaboration with stakeholders and the community is trying to clean the beach with all their abilities. Marine debris taken from the coast is collected on the land provided, and then transported by truck to the Badung City Environment and Hygiene Service (DLHK). Meanwhile, waste originating from the community is transported by TPS3R officers. The following is a picture that shows the process of collecting marine debris on the coast of Kedonganan Beach.

Community waste collection systems vary in form and type. The community provides various forms of garbage inside the house, some are in the form of medium barrels, cans, crackles, etc., while the outside of the house is in the form of a 40 L fiberglass trash can provided by the local government in the form of a plastic bag. flexible shape to lift and move.

There are several segregated waste containers which are generally placed in crowded places or communal public spaces provided by the local government. The pattern of waste collection in Kedonganan Village uses an indirect individual pattern approach, namely waste from houses is collected first at the Temporary Shelter (TPS) by using a cart or a motorized cart. The frequency of garbage collection is carried out every day with a total of 10 trucks operating, the operational time for collecting waste is Monday - Wednesday, organic waste is collected, and every Thursday non-organic waste is collected. The community is charged Rp. 30,000,-/month for the cost of transporting waste.

There is a Reduce-Reuse-Recycle Waste Processing Site or it can be called 3R TPS in Kedonganan Village. TPS 3R is a pattern of approach to waste management on a communal or regional scale, involving the active role of the government and the community, through a community empowerment approach, including for low-income people and/or those living in dense and slum settlements. The management system carried out at the 3R TPS which involves the community in principle, the implementation of the 3R TPS is directed at the concepts of Reduce (reduce), Reuse (reuse), and Recycle (recycling), where efforts are made to reduce waste from the source on a communal scale or area, to reduce the burden of waste that must be processed directly at the landfill. Thus it can help extend the life of the landfill.

As stated in the questionnaire, there are 6 (six) criteria with each sub-criteria used to assess the respondents' willingness to participate. The results of the assessment of all criteria and sub-criteria are described in the following sections.

Table 1. Recapitulation of All Criteria Assessment

No.	Criteria	Disagree(%)	Doubtful (%)	Agree (%)
1	People's Habits	1.35	9.19	89.46
2	People's Desire to Participate	4	17.5	78.5
3	Community Identification	0	6	94
4	Environmental Concern	0.67	10.02	89.32
5	Social norms	16,67	9,26	74.7
6	Public Perception	3.00	11.20	85.80

Based on the average percentage in the Recapitulation of the Assessment of All Criteria, the results of the Community Habit Criteria are Agree at 89.46%, Doubtful at 9.19%, No, Agree is 1.35%. People's Desire to Participate is Agree by 78.5%, Doubtful by 17.5%, Disagree by 4%. Community identification, namely Agree by 94%, Doubtful by 6%, No, Agree by 0%. Environmental Concern, namely Agree by 74.7%, Doubt by 9.26%, No, Agree by 16.67%. Public perception is Agree by 85.80%, Doubtful by 11.20%, No, Agree by 3.00%. This data shows that the percentage of people who answered agree to participate in waste management is quite high.

As it is known that there are 6 (six) criteria with each sub-criteria used to assess the willingness to participate of the respondents. Discussion on the assessment of all criteria and sub-criteria is described in the following section.

Based on Criterion 1, Community Habits in Managing Waste, the results show that most of the community's habits in managing waste have implemented good management. The pattern of waste management by involving coastal communities as actors who can play an active role in reducing the volume of waste is the right decision in anticipating an increase in the volume of waste in coastal areas. Garbage is the result of community activities, so it should be instilled that waste management is also a shared responsibility (Sudiro, 2018). The active role of the community or individual can be started by

implementing positive behavior (Notoatmodjo, 2003). According to Notoatmojo (1985) operational forms of behavior are divided into three types, namely knowledge, attitude and action.

Based on Criterion 2, Community Desire to Participate in Waste Management, it can be seen that the community's desire to participate in waste management is already high, including the desire to be a volunteer, contribute to waste management, and utilize the economic value of waste. The community has a high desire to volunteer in waste management, especially in doing community service to clean up the surrounding environment. The higher the level of community participation means the greater the role of the community in determining the form of the environment they want (Sudiro, 2018). The higher community participation and if the community is independent in waste management, it will certainly be able to ease the burden on the government in overcoming the waste problem (Martinawati, 2016). Another study states that applying the concept of reduce, reuse, recycle (3R) in waste management in Kudus City can increase collectors' income (Dwioktovanny, 2017).

Based on Criterion 3, Community Identification shows that the results are good and can be used to increase the willingness to participate, namely being close to neighbors, participating in community activities, and caring about the surrounding conditions. The Kedongan community in general can be compared to rural communities who have a close relationship with each other and a very high sense of mutual cooperation. According to Sanjaya (2015) Social networks or the presence of emotional closeness between members of the community such as close friends, relatives, neighbors who are social networks can also lead to closer relationships between villagers in working together. Social interaction is a reciprocal influence between individuals and groups in their efforts to solve the problems they face in an effort to achieve their goals (Ahmadi, 2007). Several factors that influence waste management which are considered as system barriers are population distribution and density, socio-economic and physical environmental characteristics, attitudes, behavior and culture in the community (Sahil, 2016).

Based on Criterion 4 Environmental Concern, it shows a fairly good value, namely the community cares if there is garbage scattered in the environment, and knows that bad waste management can interfere with aesthetics and tourism activities, because protecting the environment is also the responsibility of the community. The environment is the biggest factor in influencing health status, so protecting the environment is the responsibility of the community (Slamet, 2016). Inculcating an attitude of caring for the environment from an early age is very necessary, because seeing the current conditions there are more and more cases of environmental damage and natural disasters caused by human hands (Purwono, 2020). The role of the community is very important in protecting the environment, because the community is required to be able to solve problems related to their environment (Slamet, 2016).

Based on Criterion 5, Social Norms, it is found that the form of reward and punishment in the form of social norms is well appreciated by the community, namely fines for residents who litter, as well as giving rewards for residents who want to participate in waste processing. Meanwhile, the definition of subjective norm is a person's perception of social pressure on him to perform or not to perform a behavior (Fishbein, 1981). Norms as social resources are shared rules that guide a person's behavior in acting. Norms provide individuals with a way in which they orient themselves towards others. Norms guide us in defining the situation (Damsar, 2009). Social norms are a set of rules that are expected to be obeyed and followed by the community in a particular social entity, and these rules are usually institutionalized, not written but understood as determinants of good behavior patterns in the context of social relations so that there are social sanctions given if violated. Hasbullah, 2006).

Criterion 6, Community perception based on interviews, the results show that the community's perception of waste management is good, namely the role of RT/RW, kelurahan, and local village heads. Perception is one of the important psychological aspects for humans in responding to the presence of various aspects and symptoms around them. Perception has a very broad meaning. Various experts have given various definitions of perception, although in principle they contain the same meaning (Aditya, 2017). According to Adrianto (2006), community perception is a response or environmental knowledge from a collection of individuals who interact with each other because they have values, norms, ways and procedures are shared needs in the form of a system of customs that are continuous and bound. by a shared identity obtained through the interpretation of sensory data.

Recapitulation of Assessment of All Criteria In general, the desire of the community to participate in waste management is quite high where the criteria for community identity are considered to play the most important role, followed by the Social Norms Criteria and Environmental Concern Criteria. Most of the community's habits in managing waste have implemented good management, the desire of the community to participate in waste management is high, the identity of the people of Kedonganan Village shows good results, and also the Environmental Concern Criteria show a fairly good value. From the questionnaire, it was found that the form of reward and punishment in the form of social norms was well appreciated by the community, and the public's perception of waste management was good. This data is enough to prove that the interest and desire of coastal communities in waste management is quite good. So that it can be a consideration for local governments in developing an appropriate waste management system, so that various kinds of waste management facilities that will be built can run in a sustainable manner.

4. Conclusion

1. Based on the quantity of marine waste produced by Kedonganan Village in 2019, it was 200 tons of shipping waste. High rainfall in recent times has resulted in an increase in the amount of sea water which causes an increase in the amount of waste shipped to the Kedonganan coast. Ecosystems that have been formed previously are damaged due to piles of garbage that pollute the environment and smell bad because they have been left for days
2. Community contribution in waste management is quite high. The community has a high desire to volunteer in waste management, especially in doing community service to clean up the surrounding environment. This is done for the sake of cleanliness in the environment that will support economic and tourism activities.
3. The management system implemented at TPS 3R which involves the community is principally directed at the concepts of Reduce, Reuse, and Recycle, where efforts are made to reduce waste from the source on a communal or regional scale, to reduce the burden of waste that must be processed directly at the landfill.

REFERENCES

- Aditya, W. 2017. Pengaruh Persepsi Wanita Yang Tidak Berhijab Terhadap Motivasi Membeli Produk Sariayu Hijab Hair Shampoo Di Perumahan Taman Permata Buana (Doctoral dissertation, UNIVERSITAS TARUMANEGARA).
- Adrianto, B. 2006. Persepsi dan Partisipasi Masyarakat terhadap Pembangunan Prasarana Dasar Permukiman yang Bertumpu pada Swadaya Masyarakat di Kota Magelang (Doctoral dissertation, program Pascasarjana Universitas Diponegoro).
- Ahmadi, A., & Uhbiyati, N. (2007). *The Science Of Education*. Jakarta: PT Rineka Cipta.
- Aryati, A. S., Sudiro, A., Hadiwidjaja, D., & Noermijati, N. 2018. The influence of ethical leadership to deviant workplace behavior mediated by ethical climate and organizational commitment. *International Journal of Law and Management*.
- Assuyuti, Y. M. Zikrillah, R. B. Tanzil, M. A. Banata, A. Utami, P. 2018. Distribusi dan Jenis Sampah Laut serta Hubungannya terhadap Ekosistem Terumbu Karang Pulau Pramuka Panggang Air dan Kotok Besar di Kepulauan Seribu Jakarta. *Jurnal science taific* 35(2): 91- 102
- Bangun, S. A. Sangari, J. R. R. Tilaar, F. F. Pratasik, S. B. Salaki, M. Pelle, W. 2019. Komposisi Sampah Laut di Pantai Tasik Ria. Kecamatan Tombariri. Kabupaten Minahasa. *Jurnal Ilmiah Platax*. 7(1) : 322-328.
- Blum, H. L. B. H. 1974. Faktor yang mempengaruhi status derajat kesehatan masyarakat atau perorangan. Ministry Health of Indonesia.
- Chaerul, M., & Rahayu, S. A. (2019). Cost Benefit Analysis dalam Pengembangan Fasilitas Pengolahan Sampah: Studi Kasus Kota Pekanbaru. *Jurnal Pengelolaan Sumberdaya Alam dan*
- Chaerul, M., & Rahayu, S. A. 2019. Cost Benefit Analysis dalam Pengembangan Fasilitas Pengolahan Sampah: Studi Kasus Kota Pekanbaru. *Journal of Natural Resources and Environmental Management*, 9(3), 710-722.
- Citrasari, N., Oktavitr, N. I., & Aniwindira, N. A. 2012. Analisis laju timbunan dan komposisi sampah di permukiman pesisir Kenjeran Surabaya. *Berkala Penelitian Hayati*, 18(1), 83-85.
- Direktorat Pengelolaan Sampah. 2018. Informasi Pengelolaan Sampah Nasional. Jakarta, DKI Jakarta, Indonesia: Direktorat Pengelolaan Sampah, Limbah, dan B3 Kementerian Lingkungan Hidup dan Kehutanan
- Dwioktovanny, Y., Syafrudin, & Rezagama, A. (2017). Studi potensi peningkatan nilai ekonomi sampah anorganik melalui konsep daur ulang dalam rangka optimalisasi pengelolaan sampah kecamatan Kota Kudus (Studi kasus: Kecamatan Kota Kudus, Jawa Tengah). *Jurnal Teknik Lingkungan*, 6(2), 1-11
- Faizal, A. Saru, A & Fitrah, M. N. 2017. Analisis Kesesuaian Lahan Rehabilitasi Mangrove di Kecamatan Bontoa Kabupaten Maros Provinsi Sulawesi Selatan. *Torani Journal of Fisheries and Marine Science*, 1-13.
- Fishbein, M., & Ajzen, I. 1981. On construct validity: A critique of Miniard and Cohen's paper. *Journal of Experimental Social Psychology*, 17(3), 340-350.
- Hamdi, A. S., & Bahruddin, E. (2015). Metode penelitian kuantitatif aplikasi dalam pendidikan. Deepublish.
- Hanum, F., Suhendrayatna, S., & Isya, M. (2018). Partisipasi masyarakat gampong nusa terhadap pengelolaan sampah dengan program 3r. *Jurnal Arsip Rekayasa Sipil dan Perencanaan*, 1(2), 90-101.
- Harrison, J. P. M. Sapp, M. Schratzberger and Osborn, A. M. 2011. Interactions between Microorganisms and Marine Microplastics. *A Call for Fesearch. Mar. Tech. Socie*. 4(5): 12-20.
- Hernawati, D. 2013. Partisipasi Masyarakat Dalam Pengelolaan Sampah Berbasis 3R (Reduce, Reuse Dan Recycle)(Studi Pada Tempat Pengelolaan Sampah Terpadu Di Desa Mulyoagung Kecamatan Dau Kabupaten Malang). *Jurnal Administrasi Publik*, 1(2), 181-187
- Ismail, A., Hasbullah, K., Bakar, R. A., Ahmad, R., & Junoh, A. M. 2006. Pemindehan Pengetahuan, Kemahiran Dan Kebolehan Mempengaruhi Kesan Amalan Komunikasi Antara Mentor Dan Mentee: Satu Kajian Di Sebuah Institusi Pengajian Tinggi Awam Di Malaysia Timur. *Jurnal Kemanusiaan*, 4(1).
- Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., ... & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, 347(6223), 768-771.
- Jambeck, Jenna R. 2015. Plastic waste inputs from land into the ocean." *Science* 347.6223: 768-771
- Kementerian Dalam Negeri Indonesia (KEMENDAGRI). 2021. Data jumlah kabupaten/kota di Indonesia.
- Martinawati, M., Zahri, I., & Faizal, M. F. M. 2016. Partisipasi Masyarakat dalam Pengelolaan Sampah Rumah Tangga: Sebuah Studi di Kecamatan Sukarami Kota Palembang. *Jurnal Penelitian Sains*, 18(1), 14-21.
- NOAA. 2015. *Turning The On Trash A Learning Guide On Marine Debris*. NOAA PIFSC CRED.
- Notoatmodjo, S. 2003. Pendidikan dan perilaku kesehatan.
- Notoatmodjo, S. 2007. Promosi kesehatan & ilmu perilaku.
- Pratama, I.G.P.Y., & Christiawan, P.I. 2019. Pemetaan sampah musiman di wilayah Pesisir Kecamatan Kuta. *Jurnal Pendidikan Geografi Undiksha*, 7(2).
- Prianto, A. 2019. Pengaruh gaya kepemimpinan partisipatif terhadap pengambilan keputusan di Pemerintahan desa (studi kasus Desa Pelem, Kecamatan Pare, Kabupaten Kediri). *REVITALISASI: Jurnal Ilmu Manajemen*, 5(1), 7-14.
- Pribadi, T.D.K.Rosada, K.K. Handayani, M.F.Khairunnisa, T.S. 2017. Tingkat Pemahaman Masyarakat Tentang Sampah Laut (Marine Debris) di Sekitar Kawasan Pananjung Pangandaran. *Jurnal pengabdian kepada masyarakat*. 1(3): 188 - 190.
- Purwono, A., & Jannah, T. 2020. Pengaruh Wiyata LignKeyungan dan Kecerdasan Naturalis Terhadap Sikap Kepedulian Lingkungan Bagi Siswa MI. *Child Education Journal*, 2(1), 1-9.
- Rifani, D.N., & Jalaluddin, A.M. 2019. Pengelolaan sampah secara bersama: peran pemerintah dan kesadaran masyarakat. *Jurnal Paradigma (JP)*, 7(1), 45-54.
- Sahil, J., Al Muhdar, M. H. I., Rohman, F., & Syamsuri, I. 2016. Sistem pengelolaan dan upaya penanggulangan sampah di Kelurahan Dufa-Dufa Kota Ternate. *Jurnal Bioedukasi*, 4(2).
- Sanjaya, S. 2015. Modal sosial sistem bagi hasil dalam beternak sapi pada masyarakat desa Purwosari Atas, kecamatan Dolok Batu Nanggar kabupaten Simalungun. *Perspektif Sosiologi*, 3(1), 156643.
- Sihombing, Lisbet, and Saptono Nugroho. 2018. Peran Kelompok Nelayan Dalam Aktivitas Pariwisata Di Desa Kedonganan Kuta, Bali. *Jurnal Destinasi Pariwisata Slamet*, J. 2016. Otak-atik Google Form guna pembuatan kuesioner kepuasan pemustaka. *Info persadha*, 14(1), 21-35.
- Sucipta, M. A., & Solihin, S. 2017. Pengelolaan Pantai Kedonganan sebagai Daya Tarik Wisata Kuliner Berbasis Masyarakat di Desa Kedonganan. *Soshum: Jurnal Sosial dan Humaniora*
- Sugiyono. 2016. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta
- Sumarto, H. S & Antlov, H. 2004. Inovasi, Partisipasi dan Good Governance.
- United Nations Environment Programme (UNEP), 2009, *Converting Waste Plastics Into a Resource*, Division of Technology, Industry and Economics International Environmental Technology Centre, Osaka/Shiga.