



The Implementation of Marine Litter Management Program in Watang Soreang Village Soreang District, Parepare City

Sabrina^{a*}, Suriah^b, Anwar Mallongi^c

^a *Public Health Magister Program, Faculty of Public Health, Hasanuddin University*

^b *Department of Health Promotion and Education, Faculty of Public Health, Hasanuddin University*

^c *Department of Environmental Health, Faculty of Public Health, Hasanuddin University*

^a *Email: inhasabrina@gmail.com*

Abstract

Most of the waste that is found on the coast is plastic waste that comes from the land, so that the coastal waste management program should be started from the land. This study aims to assess the implementation of waste management program in the coastal area of Watang Soreang Village Soreang District of Parepare City involving Settlement Sanitation Development Acceleration, Community-Based Total Sanitation, and Community Empowerment National programs. The research was a qualitative study design using phenomenological approach. The informant was determined using purposive sampling method. The techniques of obtaining the data were in-depth interviews, focus group discussions (FGD) and documentation study. The Data were analyzed using thematic analysis method. The results of the research indicate that in general the implementation of Settlement Sanitation Development Acceleration, Community-Based Total Sanitation, and Community Empowerment National programs viewed from communication aspect are quite good as indicated by socialization and the involvement of stakeholders.

* Corresponding author.

E-mail address: inhasabrina@gmail.com.

Viewed from the characteristics of the implementer agent, the implementer of Settlement Sanitation Development Acceleration and Community-Based Total Sanitation programs already knows their task and authorities although there are still some deficiency, while most of the implementers of Community Empowerment National program do not know their task and authorities because of the influence of the quality of human resources and uneven distribution of guidelines. The resources of Settlement Sanitation Development Acceleration program are considered being in accordance the program needs, while the Community-Based Total Sanitation and Community Empowerment National programs are still needing improving. Social, economic and political aspect do not give direct influence to Settlement Sanitation Development Acceleration program, while the Community-Based Total Sanitation and Community Empowerment National programs are really influenced the social, economic and political aspects. The inhibiting factors for the implementation of Settlement Sanitation Development Acceleration program is SKPD in which the responsible agency does not implement the recommendations of program, while handicaps faced for while the Community-Based Total Sanitation and Community Empowerment National programs are incentive problem and the difficulty of changing the community's mindset. On the other head, the supporting factors of those three programs are the involvement of stakeholders, community leaders and facilitators, support from Government, local parliament, NGOs and community in the implementation of the program.

Keywords: Coastal Waste Management; Settlement Sanitation Development Acceleration program; Community-Based Total Sanitation program; and Community Empowerment National program.

1. Introduction

Marine litter (sometimes called marine debris) is a serious global environmental problem for the oceans and regional sea. Marine debris is a solid material that is persistent manufactured or created by humans then disposed or abandoned in the marine and coastal environment. Marine debris primarily consists of a very slowly degradable waste, items such as plastic, metal, glass, wood and leather. Marine litter (sometimes called marine debris) can be found in the ocean and beach, on the surface of the water, in the water column or on the seabed. Garbage can be found near the source, but also can be streamed by ocean currents and winds to distant sites [1].

Marine litter (sometimes called marine debris) is a complex issue that has a significant impact on the marine and coastal environment and influencing human activities across the world. The cause of multi-sectoral and cultural problems, starting from poor implementation of waste management, increasing utilization of marine resources, weak infrastructure, behavior or activities of people and communities and the lack of understanding about the adverse impacts of their activities. Marine litter provides a very broad negative impact not only for the environment but also the economy, culture, public health and safety. Most of the waste were very difficult to be decomposed and occur so there are addition of a significant quantity of marine litter (marine debris) on beaches and marine environment [2].

Marine litter can harm public health. The results showed plastic can absorb toxic substances (persistent organic pollutants or POP) and was found in the stomach of fish and sea birds when eating fish that has been contaminated and can harm health if consumed by humans but no further research related to it [3]. Broken glass

and pieces of rusty metal can cause injury if stepped on both the beach or in the seabed. Contaminated trash such as medical waste (syringes, bandages, etc.) and associated wastes, pose a public health hazard through the transmission of infectious diseases. Divers can be trapped in trawl or rope entangled and there are report a number of divers have experiencing serious injury or drowning [2].

Most of the waste that were found in coastal areas were plastic waste and sourced from mainland [4-6]. Therefore, marine or coastal waste reduction should be started from mainland. The most effective and efficient to address the problem of garbage in the sea was to prohibit the dumping at sea. Therefore, various measures have been carried out, among others, to make laws that require manufacturers / community process garbage properly. International law is needed to regulate the problem of garbage in the sea [7]. Regulation or policy of a country was measured by how effective solid waste management program in municipal, industrial, commercial and recreation; and how well the stakeholders will respond and contribute to the implementation [3,8].

As a country surrounded by the sea, an important maritime route, intensive fishing areas and make the sea as a tourist attraction, Sea has an important role for the Indonesian nation. Indonesia including in countries that have been reported problems related to marine litter (marine debris) [2].

Pare Pare city itself is geographically adjacent to its western side Makassar Strait. Sub-district directly adjacent to the sea is village of Watang Soreang, sub district Soreang [9]. The location study is village of Watang Soreang Sub district of Soreang with the consideration that this location has coastal areas which currently have a problem related to the accumulation of garbage along the coast, because the majority occupation of the people live the area were fisher and of course the accumulation of garbage seashores affect the income of fishermen. Also in this location there is a tourist destination Sumur Jodoh and fish auction centers, trash buildup will certainly reduce the aesthetic and economic value from tourist destination. So as for the formulation of the fundamental problem in this research was to find out how the implementation of waste coastal reduction program in sub district Soreang, City of Pare-Pare.

This research aimed to assess the implementation waste coastal reduction program in sub district Soreang, City of Pare-Pare were The Acceleration Program of Sanitation Development Settlements (PPSP), The Total Sanitation based on Community (STBM) and the National Community Empowerment Program (PNPM) and examining the inhibiting and supporting factors.

2. Materials and Method

2.1 Research Type

This type of research is the qualitative research design to explore in-depth information about how the implementation waste coastal reduction program in village Watang Soreang, sub district of Soreang, City of Pare-Pare.

2.2 Location and time of research

This research was conducted in the Village of Watang Soreang, City of Pare-pare. The location is focused on the area immediately adjacent to the beach (coastal area) and have problems related to the landfill on the coast. The research was also conducted in Secretary of Working Group AMPL, The office of Hygiene and landscape gardening department of Parepare, The department of health Pare-Pare and other related department (SKPD). The research was planned conducted in February - March 2015.

2.3 The research informant

The determination of the informants in this research conducted by purposive sampling method. As for the informants in this research was the Executing Program Coastal waste management in Parepare, which consists of: (1) Head of Division and Head of Section in charge of the waste at the Department Hygiene and landscape gardening Parepare, (2) Head of P2PL and The head section of Environmental Health of Department of Health Parepare as executing of STBM program, (3) Head of Ciptakarya division and head of section Building Construction Department of Public Works Pare-pare as the executor PNPM program, and (4) Members AMPL for PPSP program Parepare. Other informants are community leaders of Village Watang Soreang Parepare who involved in PNPM program, PPSP and STBM and communities who feel the direct impact of coastal were the accumulation of garbage and household fishermen along the coast of the Village Watang Soreang, City of Parepare.

2.4 The technique of data collection

Data collection techniques in this research conducted in-depth interviews, Focus Group Discussion (FGD) and document review to collect objective data regarding the implementation waste coastal reduction program at coastal areas in the city of Pare Pare from the informants.

2.5 The Validity of data

To determine the level of accuracy of data on the qualitative research carried out the checking of data validity using triangulation techniques.

2.6 The research Instruments

The research instrument was the researchers themselves are equipped with research tools, such as a tape recorder to record the interview, discussion guidelines, sheets of document filling and stationery.

2.7 The data analysis

The data analysis use Thematic analysis method with the following steps: (1) Familiarizing yourself with your data: Copy the data (if necessary), read and then read again the data, noting the initial idea, (2) Make the initial Code: Coding interesting features of data across the data set in a systematic, collated data relevant to each code, (3) for the theme: Preparing code into a potential theme, gather relevant all data into each theme, (4) Reviewing the theme: Checking if appropriate theme to extract the code (Level 1) and a collection of all the data (Level 2)

so as to produce a 'map' thematic analysis, (5) Define and give it a name on the theme: Perform ongoing analysis to improve the specifics of each theme, and the whole story of analysis results resulting definition and clear name for each theme, and (6) Make a report: Perform the analysis for the last time, the final analysis of the theme chosen, review the relationship with the question of research and literature to produce a scientific report of the analysis [10]

3. Results

3.1 Settlement Sanitation Development Acceleration (PPSP)

The socialization of PPSP program done well to related SKPD and community. In addition PPSP program also involve all relevant stakeholders as well Sanitation Working Group Members of the elements of government, Parliament and the public. Executing both in quality and quantity deemed to have met the needs of the program. The budget of PPSP program has been deemed enough for the program.

“(next socialization) the white book revision, EHRA... We will conduct EHRA, we have to go to village office will be involving in EHRA like questionnaire distribution..Socialization had been conducted too related IPA..”

(RM, 40 year)

” I think it's suitable with every division because i saw the empowerment division, there are from structure division, and from health division. I think it's suitable with the the job and authorities “

(ND, 44 years)

The Decree and the Technical Guidelines / Code of complete and distributed to all program implementers. Incentives were given was felt quite by implementing programs so that program managers considered to have learned the task and authorities. The socio-economic condition was not in direct with the PPSP program so it does not affect. Likewise, the political situation does not give effect to the program.

“Yes, I have ever get it when the training..even the guidelines book was ever given..

(ND, 44 year)

“Maybe all of us understand, but for me, I understand..We understand it because we had ever been trained “

(ND, 44 year)

The obstacle in the implementation of the Working Group was recommendation PPSP PPSP is not programmed / technical SKPD budget caused by: (1). Technical budget in every SKPD limited, (2). PPSP Working Group members were not involved in the preparation of program / budget, and (3). PPSP Working Group members do not understand the technical implementation of the PPSP program. Factors supporting this program are: (1). The involvement of relevant stakeholders in the PPSP program, (2). The meeting / WG PPSP periodic coordination

meetings, and (3). Support from the Government and Parliament.

“Sometimes our effort was not supported in department, sometimes matrix program that had been arranged by working group was not considered as guide. Sometimes technical department suggest something that was not needed in data baseline that we had prepared”

(RM, 40 year)

“The supporting factors were clearly, the government policies, and DPR support”

(ZK, 42 year)

3.2 Community-Based Total Sanitation (STBM)

The communication STBM program implemented through the socialization and implementation involving governments, NGOs and communities. The human source of Implementing both in quality and quantity should be improved. Program budget is not considered sufficient for the program.

“Yes, the involvement maybe only Department of Sanitation. The related department such as Department of Sanitation, or whatever can be found in AMPL working group“

(HL, 54 year)

“Yes it's not enough but for program executive means that for department of health scale only consist of 4 staff. Sometimes we are only accompanied from health center party as coordination linkage but it was only 1 staff ”

(EKS, 30 year)

The Decree and the Technical Guidelines / Code of complete and training to program managers so that program managers considered to have been aware duties and responsibilities. But implementing feel the incentive program was inadequate. Socio-economic condition of the community was very influential on the programs while political conditions considered to provide advantages in program implementation, especially related to the budget

“” there are no incentives, for the need of the program is not sufficient even the incentives”

(HL, 54 years)

“For the middle upper it was not difficult changing behavior if related basic sanitary. But for the people below the standard economy, it was really difficult ...”

(KW, 53 year)

The results showed that inhibiting factor of STBM program are: (1). The lack of good coordination between programs and internal executive, (2). The lack of availability of resources both implementers and budget, (3). Less incentive program implementers, and (4). The difficulty of changing the mindset of society. The results showed the factors supporting this program are: (1). Mastery of the language and local culture, (2). The availability of facilities for the implementation of the program, (3). Support from the Government and NGOs, and (4). The involvement of community leaders in the implementation.

“the incentive is clear, from 22 village is only one of decree of executive program”

(EKS, 30 year)

“The support is the municipal government in generally support how live healthier, that was the core point in STBM. Actually there are many supporting such as from IUWAS, they concern with our budget and many gives support...”

(KW, 53 year)

3.3 Community Empowerment National Program (PNPM)

The result of research, the communication of PNPM program implemented through the socialization conducted regularly and the involvement of stakeholders such as governments and communities in implementing. The executive resources is good in quantity but from quality are considered still needs to be improved. The program budget was considered sufficient for the program and it only needs to be a review of the technical use of its budget.

“Oh it is always conducted every year..Because every year it must be conducted. It was sustainable program...”

(RL, 48 year)

“If the quantity is enough but maybe only improved the quality of member. It was the problem because the executive was appointed directly by the communities even their education only elementary school graduated as long as they care, they will be selected..”

(NJ, 42 year)

Notary Deed and Technical Guidance / Guidance complete but it was not distributed so that most of the program managers do not know the duties and responsibilities. There is no incentive for implementing the program. Socio-economic conditions of the people in direct contact with the program even become the goal of the program. The program allegedly can be used as a political vehicle for direct contact with community needs.

“Even there are technical guidelines but not all of us know it, sometimes there of us didn't know their job and responsibilities .”

(AN, 56 year)

“If I talk truly, there was a relation..For example me as the executive here at least it gives impact to the communities here..if there are party figures which i support, automatically I can influence the communities (people) here ...”

(NJ, 42 year)

The inhibiting factors of this program are: (1). The absence of a budget for the procurement of the facility or facilities, (2). The quality of program implementers need to be improved, (3) The technique of use of budget needs to be revisited, (4). Program implementers do not know the technical implementation of the program, (5). There is no incentive for program implementers in village level, and (6). The difficulty of changing the mindset of the people. Factors supporting this program are: (1). Support from the government and society, and (2). Assistance from the village facilitator.

“The facilities is inadequate. Because until now the secretary is never changed. No facilities here such as table and so on because from PNPM regulation, we can't buy facilities with the money...”

(NJ, 42 year)

“I just only say that government policy is good for supporting this program. It was started of head of village for giving encouragement motivation. It include too the public figures in village”

(RL, 48 year)

4. Discussion

This research shows that the Communication in PPSP, STBM and PNPM program have been carried out and involve relevant stakeholders even in the implementation has not been effective. It was necessary to improve the quality and quantity human resources of implementing the program as well as a review of the budget to fit the needs of the program. Technical guidelines of the program and the provision of incentives to the performer also gives an influence in the implementation of the program. So is the case with the social, economic and political. Inhibiting factor in the implementation of internal come from program implementers and the program as well as the social and economic conditions of the community. While supporting factors derived from the support of the government, NGOs and the whole society.

Problems garbage piling up along the coastal of Watang Soreang village ,Parepare until now have not been able to be overcome by the government through department related hygiene and environmental issues. Communities tend to be less concerned about this issue because they think it is the duty of the government. It was added by people behavior who still throw garbage in the gutter and the coast. This is because household waste are not transported by the vehicle of Sanitation department of Parepare City.

It required a new approach to waste management especially coastal waste. Programs that can unite or synergize the various programs, work plans and resource needs of the parties involved in waste management programs such as PPSP program can be used as a solution to the current problems. The involvement of community can be done through STBM and PNPM program. Coastal waste reduction programs would be more effective in its application if it involves public sensitivity and community involvement [11].

The PPSP program, or PNPM STBM has conducted socialization to the public and relevant stakeholders and involve all stakeholders in its implementation. But socialization is carried out seems not work effectively because it is based on interviews with program managers at the village level program activities have not been properly socialized in the community. The frequency of socialization and the information was not conveyed from community leaders who attended the socialization become one of the causes.

The communication is very important in the phenomenological sense for a policy in a democracy. Organizing and civic engagement were the process of communicating with his own society about the needs, issues and creative ideas to solve it [12]. The research of Wulandari shows that the public knowledge about the PNPM affect the activity of the community in the PNPM program includes the presence and activity of the discussion in the meeting as well as active in voluntary work.

The quality and quantity of program implementers greatly affect the implementation of the program. Likewise with the availability of budget for implementation of the program. In a research of [13], regarding the constraints of policy implementation in Nigeria, one of the five barriers found are resource issues. Agency or institution that was charged with implementing of policy was given have not enough resources required both in human and financial resources for the implementation of effective policies. Basically for the implementation of effective policies, implementing agencies require adequate resources and unlike the case in Nigeria where most public policy failures caused by resource issues.

Implementation of the program will be effective when the executive know what they have to do. The Decree as well as SOP or technical guidelines of the program become the influence factors.

Providing incentives also provide important influences. The research of [14], the barriers to environmental policy implementation at the local level in China showed that one of the inhibiting factors identified were inadequate incentives due to budget constraints felt by implementing programs at the local level resulting in a lack of commitment to implementing the mandate or program of government center. As a result, local level implementers prefer to invest time and funds for programs that improve their welfare substantially.

It cannot be denied that the social, economic and political has a significant role in the implementation of a program. The results of research showed that the enthusiasm and participation of the society were bigger in the implementation of the program, particularly STBM and PNPM program that was community-based. The phenomenon that arises is that society plays a larger role in the program are people who have low education levels and the economy. Although there was limited local economy is also an inhibiting factor of program the implementation. And for the political environment of the results showed that the political conditions are not a

significant influence on the implementation of the program. The government gave full support to implementation of the program at all levels of the city to the village level. Only the executive level, the program is sometimes used as a tool to get more budget through the involvement of legislators in the implementation of the program STBM or concerns that PNPM program will be used as a political vehicle by unscrupulous executors.

According to [15], in his publication to the USAID explain about the seven dimensions of policies and one of them were the social, economic and political. Social factors, economics and politics can be a contributing factor or inhibiting factors for implementation of the program depends on the nature and scope of the policy, social norms, forms of government are decentralized and other factors

Broadly speaking perceived obstacles in the implementation of the program, among others: (1). The breakdown in communication between the meetings that have been agreed by executing the program with the program implementation both government department and community level, (2). The difficulty of changing the mindset of the people who consider the fulfillment of their environmental sanitation needs in terms of waste reduction at the coast this is the government responsibility so that the public awareness to actively participate in the program need to be improved, (3). Inadequate budget for the implementation of the program, (4). The quality and quantity of program implementers need to be improved, (5). The incentive for Implementing programs are considered insufficient and unclear mechanisms of administration, and (6). Program managers do not understand their duties and authorities.

The research of [16], the implementation of environmental policies in 22 countries concluded three obstacles in the implementation of environmental policy, were the lack of political commitment to the program and the support of related parties, the inadequate resource both human and financial resources. And the last obstacle was the obstacle in the institutional or program implementing agencies and the conflicting interests of the parties concerned.

The factors related support of the implementation of the program PPSP, STBM and PNPM in Parepare are: (1). Support from the Government started at the municipal level to the village level, (2). The involvement of stakeholders in the implementation of the program, (3). Mastery of the local language and culture by implementing the program, (4). Public confidence in the executive program, and (5). Public participation in the implementation of the program.

In line with the research of [17], which explains some of the factors that may be supporting the implementation of the program, among others, stakeholder engagement, leadership, resources, the organization support, communication, and how we learn from previous experiences.

5. Conclusion and Suggestion

And for the conclusions are: (1). The program implementation of PPSP in Parepare viewed from the aspect of communication has been running well, socialization and engagement of relevant stakeholders have been carried out, human resources and budgets are also considered to be in accordance with the needs of the program, the

program was implemented in accordance with existing guidelines, and supported by the social environment, despite the economic and political implementation were still some technical obstacles that recommendation which has been prepared by the Working Group is not budgeted by the related technical department (SKPD), (2). STBM program implementation in Parepare viewed from the aspect of communication has gone well, socialization and engagement of relevant stakeholders have been conducted, program implementers have the educational background and skills appropriate to the needs of the program, the program is implemented in accordance with existing guidelines but constrained in the number of executive and inadequate budgets, so that program coverage is still low. Although politically STBM program supported by the government but the social and economic condition of the people become challenge in the implementation of this program, (3). Implementation of PNPM program in Parepare review of communication aspects has gone well, socialization and engagement of relevant stakeholders have been conducted, from quantity, program implementers was sufficient but it was necessary to study further the quality requirements for implementing the program. The quality of implementing the program and the absence of the budget allocation for implementing incentive become a limiting factor in the PNPM program, and (4). Inhibiting factor in the implementation of program implementation, among others, communication disconnection between the something that has been agreed to be carried out with implemented by the relevant department (SKPD) , lacking resources, both human resources and budget, implementing programs that do not understand the duties and responsibilities, incentives for implementing the program and the difficulty changing the mindset of the people to actively participate in government programs, (5). The supporting factors of the program implementation such as the support of the government, the involvement of relevant stakeholders in the implementation of the program, the mastery of the local language and culture by implementing programs, trust and participation of community in the implementation of the program. And it was expected in the future every program to be undertaken by the government should be disseminated not only to the community but also to implementing the program and all relevant stakeholders as well as can be expected also to conduct again review of the needs of program resource, both the quality and quantity as well of executive program as their budget will be given for the implementation of the program.

References

- [1] UNEP /GPA. (2006). Marine Litter Facts. Global Marine Litter Information Gateway.(<http://marine.litter.unep.org/facts/facts/html>).
- [2] UNEP/GPA.(2009a). Marine Litter-Trash that Kills, United Nation Enviromental Protection Agency. 2009. (<http://marine.litter.unep.org/html>).
- [3] Frias J.P.G.L., Martins J. &Sobral P.(2011). Research in plastic marine debris in mainland Portugal. *Journal of Integrated Coastal Zone Management*;11(1);145-148.
- [4] Ocean Conservancy. (2008).2007 International Coastal Clean-up Results. Washington, DC. 2008; 56 pp.
- [5] UNEP/GPA.(2009b). Marine Litter: A Global Challenge, United Nation Enviromental Protection Agency.

2009. (<http://marine.litter.unep.org/html>)

[6] Mouat J., Lozano R.L., & Bateson H. (2010). Economic Instrument and Marine Litter. KIMO International.

[7] Trouwborst A. (2011). Managing Marine Litter: Exploring the Evolving Role of International and European Law in Confronting a Persistent Environmental Problem. *Merkourios* 2011 – Volume 27/Issue 73, Article, pp. 04-18.

[8] Hammer J., Kraak M.H.S., & Parsons J.R. (2012). Plastics in the Marine Environment: The Dark Side of a Modern Gift. *Reviews of Environmental Contamination and Toxicology* 220.

[9] BPS. (2013). *Parepare Dalam Angka Tahun 2013*. Badan Pusat Statistik Kota Parepare.

[10] Braun V. & Clarke V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3 (2). pp. 77-101. ISSN1478-0887.

[11] Shamshiry E., Nadi B., Mokhtar M.B., Komoo I., Hashim H.S., & Yahaya N. (2011). Integrated Models for Solid Waste Management in Tourism Regions: Langkawi Island, Malaysia. *Hindawi Journal of Environmental and Public Health* Volume 2011, Article ID 709549.

[12] Peterson E.E. (2009). *An Introduction to Communication and Public Policy*. Department of Communication and Journalism University of Maine Orono USA.

[13] Ikechukwu B. U. & Chukwuemeka E.E.O. (2013). The Obstacles to Effective Policy Implementation by the Public Bureaucracy in Developing Nations : The Case of Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review* Vol. 2, No.7; March. 2013.

[14] Kostka G. (2014). Barriers to the implementation of environmental policies at the local level in China. *World Bank Policy Research Working Paper*(7016).

[15] Bhuyan A., Jorgensen A., & Sharma S. (2010). Taking the Pulse of Policy: The Policy Implementation Assessment Tool. Washington, DC: Futures Group, Health Policy Initiative, Task Order 1.

[16] Quesne T., Kendy L., & Weston D. (2010). *The Implementation Challenge*. WWF Report 2010.

[17] Burke K., Morris K., & McGriggle L. (2012). *An Introductory Guide to Implementation: Terms, Concept and Framework*. Centre For Effective Service (CES) Guide August 2012.