

THE EFFORT TO RE-IMPLEMENT COMMUNITY LED TOTAL SANITATION SYSTEM : EVALUATION IN SUJUNG VILLAGE, BANTEN

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Abstract- Community Led Total Sanitation System (CLTS) is the approach to society for hygiene and sanitation behavior change through triggering. However the implementation of CLTS experienced some constraints as happened in the village of Sujung, Banten. Local culture embeds behaviour to cleanse and defecate in the irrigation canal as a means to socialize. Early childhood intervention and access to microcredit may be the solution to improve sanitation condition.

Keywords- CLTS, Evaluation, Sanitation, Society, Sujung.

I. INTRODUCTION

The main problems experienced by inland residents in developing countries is a matter of sanitation (Tukahirwa, Mol, & Oosterveer, 2013), it can be seen from the data that show as much as 2.4 billion people do not have access to decent sanitation (United Nation, 2016). The problems of the majority in developing countries, including Indonesia, is the lack of decent sanitation, and even yet have adequate toilet (Hu, Fan, Wang, Qu, & Zhu, 2016). In Indonesia, the need for clean water to the residents of suburbs are still using river water and well water, as for the management of waste water in rural with the use of latrines still revolves around 25.47% (Ministry of Public Work, Republic of Indonesia, 2009). Sanitation is very important and affects health, particularly children (United Nation, 2016) as well as the growth of children (Torlesse, Cronin, Sebayang, & Nandy, 2016). Understand the need for good sanitation, then formed the target through the United Nations Sustainable Development Goals (SDGs) ease of access in the form of a decent sanitation by 2030 (United Nation, 2016).

Community led total sanitation (CLTS) is the approach to society for hygiene and sanitation behaviour change through triggering (The Decree of Minister of Health, 2008). Refers to the permenkes 3/2014 article 13 regarding CLTS that includes the creation of a conducive environment, an increase in the needs of water and sanitation, as well as an increase in the provision of water access and sanitation, then have been much effort implementing CLTS in areas throughout Indonesia. Despite the many positive sides, but some CLTS implementation experienced constraint such as the commitment that is less from the leader of the region,

do not to have regulatory aspects in the area, and the construction of toilets that have yet to become a priority of the citizens (Ministry of Health, 2013).

Sujung village with an area of 978,001 Ha of land, is located in Banten Province. Bordering the Java Sea in the East. This village consists of 3.984 family who are all living as a moslem. Based on the results of secondary data which is owned by the village, it is known that by 2015 only 5.57% family who has toilet while 5.3% family rely on the River as a source of drinking water. This condition indicates the necessity of intervention CLTS in it, but in reality the intervention experienced a failure. To that end, this article aims to analyse the evaluation of CLTS implementation in Sujung Village.

II. METHODS DETAILS

The method of this research is done by involving the various parties, among other UI as an institution, PKPU as a NGO who very close to the community of Sujung Village, councilor, health centers, and villagers Sujung himself.

2.1. Context

Sujung village is a village that relies on agriculture as its main economic resources and is located in the West of the Javaisland, Indonesia. Many activities have been carried out by the NGO as PKPU has become a partner of the Sujung Village to help nutrition and sanitary conditions of the community since 2014. By 2016, University of Indonesia do work closely with PKPU.

2.2. Data Collection

The initial conditions of the village can be known through secondary data collection taken from the village, related NGO, namely PKPU, and clinics. The

collection of data to support the village conditions research done with quantitative and qualitative learning. Qualitatively, the initial conditions of the village territory Sujung knowable through the village. Other qualitative side done by investigative field, interview, questionnaire, and limited focus group discussion (FGD). In addition to the water sampling was carried out at some point and tested in the lab to be able to analyze water quality in depth.

2.2.1 Local Base Data Collection

The appropriate technologies selection method should involve local communities to find out the conditions of the region (Katukiza, et al., 2010). Data can be collected in the form of the sanitary conditions of the population, citizens, and the implementation of sanitation-related activities have been done earlier.

2.2.2 Transect-walk

Transect-walk is a field investigation at the beginning of the study to find out the condition of the sanitary region in real (Figure 1). The investigation contains activities surrounding the area and take note of important things to be considered such as the presence of rivers and its condition, the well, the conditions of housing, hygiene, environment and behaviour of citizens. In the field investigation was conducted with the help of informants Sujung Village.



Fig.1. The existing conditions of the River in Sujung Village

2.2.3 Interview

In-depth interviews were conducted with several stakeholders in Sujung Village related of sanitation. The people that had been interviewed is consist of a variety backgrounds, including management of *artisan jamban*, cadre of posyandu (integrated service post in Indonesia), village financial staff, administrators group women farmers (KWT), Chairman of the RT and RW Chair by a total of 8 people.

The purpose of those chosen people for an interview because they have authorities in terms of the Councilor and active in sanitary condition improvement process in the Sujung Village. The interview was conducted to find out things such as

the financial condition of society, aspects of environmental knowledge, norms and rules of the environment, as well as public health conditions.

2.2.4 Water Sampling

Water sampling was conducted to find out the condition of water quality. Equipment used for sampling, among others are water sampler, bottles, pH paper, cooler box, thermometer, dropper, and aqueous H_2SO_4 to acidify.

Point sampling selected from rivers, wells, and citizenssewage water that made throughout the zone, i.e. in 3 neighborhoods (known as RW) in the Sujung Village. The reason the point of retrieval is to see clean water quality conditions that originate from rivers and wells, as well as the condition of the wastewater produced by households. Sample phase I was taken on September 22, 2016, and sampling phase II was conducted on November 22, 2016. Results from sampling are then tested and used for the consideration of the chosen technology to cultivate clean water and waste water.

2.2.5 Questionnaires

Questionnaires were created with the purpose to know the real conditions of the citizens. Questionnaire addressed to citizens of 3rd RW which will be pilot zones for other areas in the village of Sujung. The results of the questionnaire will be used for triggering in limited FGD.

2.2.6 Limited Focus Group Discussions (FGD)

Triggering is done in the form of limited FGD (Figure 2), aims to reopen the memories of residents regarding to the triggering of that ever applied earlier and opened the eyes of the citizens of the current sanitation conditions. FGD is composed of 9 persons, i.e. financial staff, village treasurer of *artisan jamban*, Chairman of the RT, and the community. The selection of people who follow the FGD not limited to gender, age or educational background. The result of the FGD were made to find out citizen complaints about the sanitary environment currentcondition, potency, as well as the citizensexpectations for sanitation condition in the future.



Fig.2. Limited FGD Activity

III. RESULTS AND DISCUSSION

3.1. Impact

Sanitation training has been conducted by PKPU by 2015 earlier, and from the training produced an activity called *arisan jamban* that had accompanied by governance arrangement. However, the current activities of *arisan jamban* did not go well. Refers to data that suggest that the only sanitation 5.57% family of Sujung village which has toilets, then obviously it will make an impact, especially in the field of environment and health.

3.1.1. Environment

The most obvious environmental impact of poor sanitation conditions are to water. The water is divided into two, namely clean water and waste water. Clean water component consists of river water and well water, while the water waste comes from households.

Table1: The River Water Quality OfSujung Village

Parameter	Unit	Phase I	Phase II	Standard *
pH	-	<5,5-6	<5,5-6	6-9
Fe	Mg/L	0,93-1,1	0,91-1,45	0,3
Mn	Mg/L	0	0	0,1
TSS	Mg/L	34-104	2-30	50
KMNO ₄	Mg/L	10-19	-	-
E.Coli	Jumlah / 100 mL	4,5-11	-	-
F.Coli	Jumlah / 100 mL	110-170	-	100

*Government Regulation No. 82 of 2001 class 1

From table 1 it is known that the water quality of the river Sujung Village has a value of iron (Fe) and TSS beyond raw quality standard. The levels of iron (Fe), besides the high can disrupt health also raises a stink less palatable and causing yellow color on the tub wall and yellow spots on clothing. Iron can also cause trouble piping (rust).

Table2: The Well Water Quality OfSujung Village

Parameter	Unit	Phase I	Phase II	Standard *
pH	-	6-7	6-7	6-9
Fe	Mg/L	0,01-1,3	0,01-3,6	0,3
Mn	Mg/L	0-0,7	0-1,1	0,1
TSS	Mg/L	7-24	16-34	50
KMNO ₄	Mg/L	6,2-31	-	-
E.Coli	Jumlah / 100 mL	1,8-2	-	-
F.Coli	Jumlah / 100 mL	17-26	-	100

*Government Regulation No. 82 of 2001 class 1

Comparing table 1 and table 2 it can be seen that the quality of the well is better than river water. Even so, some parameters in water well in table 2 shows that iron and manganese parameter exceeds the quality of the raw water supply that has been set by the Government.

Table3: The Household Waste Water Quality OfSujung Village

Parameter	Unit	Phase I	Phase II	Standard*
pH	-	7-8	7-8	6-9
COD	Mg/L	181-988	371-6955	100
TSS	Mg/L	42-370	244-1740	30
BOD	Mg/L	105-505	159-2390	30
Ammonia	Mg/L	0,65-16	0,5-20,5	10
KMNO ₄	Mg/L	31,23-625,7	-	-

*Regulation of the Minister of the Environment No. 68 P 2016

Table 2 shows the quality of the waste water from the village of Sujung where many parameters that exceeded the raw quality. This condition is exacerbated by the fact that wastewater dumped in vain, do not fit as well as processed.

3.1.2. Health

The health of the citizens can be said to be either because there are not many experienced the pain of the disease although there are some who have experienced pain diarrhea. Children have also been given special by particular local clinics. Nevertheless there are odd things with the children who have abnormal high (source: midwife). Change the height of the child can be caused by poor sanitation, so growth is not maximal (Torlesse, Cronin, Sebayang, & Nandy, 2016)

3.2. Cause

The absence of a proper sanitation system in the village of Sujung can be caused by many things, one of which is that the public still do not feel as a sanitation needs. The real form of this can be seen from the condition of the economy.

Economy through a questionnaire distributed at the FGD participants is limited. From the questionnaire it is known that the majority of the residents have an income of roughly less than \$2,200, 000 and the majority of both had revenue of more than Rp 3,600, 000. Based on the literature, as much as Indonesia have communities 38.5% of the income of the middle class first Rp 2.6-5.2 million per month (Ministry of Finance, Republic of Indonesia, 2015). It shows that the majority of people in the village have middle-class incomes Sujung down.

As for the largest expenditure first is to buy the food and the second largest for the cost of smoking. Money for food is also swell due to the citizens love to buy snacks for their children. As for the money the cigarette used by the husband because of their habit of smoking. Spending money for water is part of the 5 large spending the smallest citizens. The results of this survey indicate that citizens still puts the problem of drinking water and sanitation as the lowest priority

3.3. Analysis

Questionnaire results prove that the villagers Sujung know correctly the importance of sanitation for their survival. However, they do not belong to a community that is very capable with the condition of the economy of the middle class down. It is increasingly aggravated with the fact that they also do not have the will to improve their sanitation, seen from the expenditure which does not give priority to sanitation.

The unwillingness of residents to care about sanitation would also influenced by the failure of an earlier toilet caused some arisan residents finally withdrew from *arisan jamban*. The failure is due to the existence of discontent citizens are going to the toilet technology obtained after following the *arisan jamban*, as well as time constraints and opportunities experienced Treasurer arisan in collecting money from residents. As a result, money is no longer collected and sanitation development activities to a halt.

There are at least 5 pillars that must be met in applying appropriate sanitation, i.e. the technical aspect of operational, organizational aspects, as well as the role of the Community aspects, legal aspects and regulations as well as the aspects of financing. The technical aspects of the operations does not exist because there is no communal sanitation for shared. This condition is derived from the results of limited FDG, with regards to the disappointment of the citizens will be sanitary technology is applied at the time of arisan latrines. Aspects of the Organization demands a clear structure to deal with the problems of sanitation, but in fact does not exist, as for human resources only available 1 person to take care of the problems of sanitation. Through the technical aspects of law and Regulation No regulations in the area of sanitation, Sujung Village related laws and regulations should be made expressly to be followed by the community. Aspects of the role of the community is also not met because the citizens have not been able and willing to improve their sanitary conditions, it is attested from at least the interest residents follow arisan latrines. As for the aspects of financing are already there but never experienced a failure due to the constrained financing system. Based on the 5 aspects which are unmet so there is no great motivation to improve their sanitation citizens.

Look at the aspects of financing can be addressed first by doing the application of microcredit institutions which can become citizens to return containers raise money in order to establish sanitation in accordance with their wishes. Through microcredit agencies then can residents save up to get the toilet that fits the needs of the citizens. The success of the implementation of the credit for the improvement of sanitation can be seen in several areas, particularly in Indonesia, as happened in Lumajang, East Java (Ministry of Health, Republic of Indonesia, 2014)

CONCLUSIONS

CLTS in Sujung Village was studied and major conclusions are as follows:

1. Poor sanitation conditions in the village give a bad impact Sujung on the environment and public health
2. The causes of poor sanitation was the inability and unwillingness of citizens in paying a decent sanitation development
3. The need for microcredit institutions as money collection solution to improve sanitation

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