Analysis of the Influence of Public Participation Against the Success of Community-Based Sanitation Program (SANIMAS) in Paciran Village, Paciran District, Lamongan Regency

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Abstract—Sanimas program in East Java province has been implemented from 2003 and based on the results of monitoring conducted on the sustainability of the Sanimas program as much as 30% work only partially and 8% does not work. Failure in achieving the result of the development program did not reach the target due to lack of community participation In 2017, the Directorate General of Human Settlements, the Ministry of Public Works and Housing has a project in the form of community-based Sanitation development (SANIMAS) located in Paciran village, Paciran district, Lamongan regency, which is a communal waste water treatment with an initial number of users 55 patriarch. The SANIMAS Program in Paciran Village can be assessed successfully because it still works well and is able to increase its service number significantly. There were 93 new participant in the period of 1 year so that the total users reached 148 patriarch.

This research is to examine dominant factors in the community participation that affects to the success of the Sanimas program in Paciran village. Start by spreading the questionnaires to the resident of Paciran village who participated in the SANIMAS program. Once collected data is further analyzed with a quantitative descriptive approach. SPSS analysis tools are used to determine the factors by analyzing internal factors including age variables, gender, occupation, amount of income, number of families, education level, and knowledge of SANIMAS. While the external factors include the role of local governments, the role of village government, the role of community leaders, the role of facilitators/ consultants and the role of regional regulations/ LAWS.

From the results of analysis obtained the dominant internal factors affecting the form and level of community participation is age, knowledge SANIMAS, the amount of income, type of work, level of education and the number of families. While the dominant external factors affecting the form and the level of community participation is the local regulation/ law and local government. The proposed policy to increase the success achievement of the SANIMAS program in Paciran village is that KPP will routinely held a meetings with RT and RW and to find solutions related to emerging issues and socialization to citizens will be conducted with the approach of citizen activities such as community gathering, moslem recitation etc.

Keywords—Public Participation, Community-based Sanitation (SANIMAS), Infrastructure, Descriptive quantitative analysis.

I. INTRODUCTION

Failure in achieving the results of the development program did not reach the target due to lack of community participation. Participatory development is development of a positioning the community as the subject of the above development programme allocated its own community as well as the interests of the community are actively involved. Public participation aims to find the solution of the problem, which is better in a community, in this case can be done by opening up more opportunities for the community to contribute so that the implementation of the activities running more effective, efficient and sustainable. In the year 2017, Directorate General of Human Settlements, Ministry of Public Works and Housing through the Project Unit of Environmental Sanitation Systems Development of East Java has a project in the form of community-based Sanitation development (SANIMAS) in 6 Counties/cities in East Java. The SANIMAS program priority areas that are in the red zone sanitation Sanitation Strategies based on City/County (SSK), one of which is located in Paciran village, Paciran district, Lamongan regency. The SANIMAS program is a communal waste water treatment plant in Paciran village with number of users early 55 patriarch or 281 inhabitants. The SANIMAS program in Paciran village can be rated successful since it was able to increase the number of its services significantly. There are 93 patriarch recorded as new users within 1 year bringing the total users reached 148 patriarch. The Government of Lamongan regency as one of the recipients of the SANIMAS program is very appreciative to the program in supporting the Central Government by providing funds sharing in local budgets since the year 2015. It is an effort of the local government to minimize open defecation and improve the access to sanitation in the district.

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II. METHOD

A. Data Collection

There were 2 collected data which divided into primary and secondary. Primary data is a directly obtained from study location in which on communal waste water treatment plant (SANIMAS) program in Paciran village, regarding facilities, subject, and manager. Data was collected by direct observation and interviews on authorized personal. Questionaires were also spread to obtain data from resident of Paciran village. Secondary data is usually a document and regulation which related to the study. It can be obtained from badan pusat statistik (BPS) in a form of population number, households, and total area of Paciran village. Scheaffer formulation is used to determine total sample number[1] : $n = \frac{N}{(N-1)\delta^2+1}$ with population (N) as much as 148 and 10% margin of error (δ). According to the formula, minimum sample taken was $n = 59,91 \approx 60$. simple random sampling was used, where every individual has the same opportunity to be randomly taken. The questionaires were given to 60 respondent who participated in the SANIMAS program.

B. Descriptive Analysis

The analysis method used in this study was descriptive analysis. Descriptive statistics is part of the statistical analysis that examines the ways of data collection and presentation of data so that it is easy to understand. Descriptive statistics only relate to it elaborates or provides information about a data or circumstances. With the words of descriptive statistics functions describe the condition, symptoms or problems. The withdrawal of the conclusions on descriptive statistics (if any) is only aimed at the collection of existing data. Descriptive analysis consists of Frequencies, Descriptive, Explore, Crosstabs and Ratio. Analysis-the analysis already exist at the option menu in statistical data processing software often used was SPSS.

Crosstabs from some of test methods that commonly used is chi-square test to find out the relationship between the rows and columns. The purpose of testing method using Chi-Square test (X^2) is to compare between facts derived based on the results of observation and fact based theoretically

III. RESULT AND DISCUSSION

Researched data variables apprppriateness was tested by *validity test and reliability test.* The result has shown r count > r table and *alpha cronbach > 0,60-0,80* (high reliability), the collected variable then feasible to be processed furthermore.

TABLE 1.
VALIDITY TEST

Aspect	Phase/ Factor	Variable	r-table	r-count	Conclusion
Form and level of community participation	Planning	Presence on meeting	0,3061	0,621	*Valid*
		Active in discussions	0,3061	0,763	*Valid*
		Giving suggestion	0,3061	0,866	*Valid*
		Giving donation	0,3061	0,788	*Valid*
		Follow the activities	0,3061	0,809	*Valid*
	Implementation	Presence on meeting	0,3061	0,800	*Valid*
		Active in discussions	0,3061	0,799	*Valid*
		Giving suggestion	0,3061	0,881	*Valid*
		Giving donation	0,3061	0,613	*Valid*
		Follow the activities	0,3061	0,877	*Valid*
	Operational, maintenance and sustainability	Presence on meeting	0,3061	0,499	*Valid*
		Active in discussions	0,3061	0,781	*Valid*
		Giving suggestion	0,3061	0,704	*Valid*
		Giving donation	0,3061	0,696	*Valid*
		Follow the activities	0,3061	0,653	*Valid*
Forms that affect the level of community participation	External factor	Local government	0,3061	0,818	*Valid*
		Village government	0,3061	0,822	*Valid*
		Community leaders	0,3061	0,932	*Valid*
		Facilitator/ consultants	0,3061	0,842	*Valid*
		Local regulation/ law	0,3061	0,765	*Valid*

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TABLE 2.
RELIABILITY TEST

Aspect	Phase/ Factor	Variable	Alpha cronbach	Conclusion
Form and level of community participation	Planning	Presence on meeting	0,789	*High reliability*
		Active in discussions	0,790	*High reliability*
		Giving suggestion	0,778	*High reliability*
		Giving donation	0,785	*High reliability*
		Follow the activities	0,785	*High reliability*
	Implementation	Presence on meeting	0,781	*High reliability*
		Active in discussions	0,787	*High reliability*
		Giving suggestion	0,781	*High reliability*
		Giving donation	0,786	*High reliability*
		Follow the activities	0,781	*High reliability*
	Operational, maintenance and sustainability	Presence on meeting	0,794	*High reliability*
		Active in discussions	0,788	*High reliability*
		Giving suggestion	0,785	*High reliability*
		Giving donation	0,785	*High reliability*
		Follow the activities	0,793	*High reliability*
Forms that affect the level of community participation	External factor	Local government	0,793	*High reliability*
		Village government	0,806	*High reliability*
		Community leaders	0,797	*High reliability*
		Facilitator/ consultants	0,794	*High reliability*
		Local regulation/ law	0,793	*High reliability*

TABLE 3.
INTERNAL FACTOR PEARSON CHI SQUARE VALUE IN PLANNING PHAS

Variable	Presence on meeting		Active in discussions		Giving suggestion		Giving donation		Follow the activities	
	X^2	df	X^2	df	X^2	df	X^2	df	X^2	df
Age	19,790	9	11,848	12	22,476	12	20,215	12	6,970	9
Gender	6,280	3	2,675	4	2,937	4	8,792	4	1,937	3
Occupation	23,352	15	17,728	20	17,660	20	33,132	20	14,976	15
Amount of income	16,740	9	18,423	12	15,714	12	14,368	12	4,574	9
Number of families	14,680	12	18,127	16	13,998	16	22,983	16	14,855	12
Education	7,808	12	16,510	16	10,125	16	16,823	16	11,814	12
Knowledge of SANIMAS	8,818	9	13,329	12	11,339	12	24,643	12	9,347	9

TABLE 4.
INTERNAL FACTOR PEARSON CHI SQUARE VALUE IN IMPLEMENTATION PHASE

Variable	Presence on meeting		Active in discussions		Giving suggestion		Giving donation		Follow the activities	
	X^2	df	X^2	df	X^2	df	X^2	df	X^2	df
Age	5,924	6	7,863	9	17,759	9	11,525	9	7,897	9
Gender	3,958	2	4,819	3	1,818	3	4,902	3	3,086	3
Occupation	15,541	10	37,982	15	15,627	15	16,230	15	19,114	15
Amount of income	9,774	6	11,068	9	12,113	9	5,340	9	12,743	9
Number of families	10,717	8	10,833	12	20,281	12	13,491	12	12,573	12
Education	16,797	8	14,300	12	12,938	12	9,484	12	15,599	12
Knowledge of SANIMAS	23,453	6	16,314	9	9,454	9	13,765	9	15,246	9

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TABLE 5.
INTERNAL FACTOR PEARSON CHI SQUARE VALUE IN OPERATIONAL, MAINTENANCE AND SUSTAINABILITY PHASE

Variable	Presence on meeting		Active in discussions		Giving suggestion		Giving donation		Follow the activities	
	X^2	df	X^2	df	X^2	df	X^2	df	X^2	df
Age	4,343	6	6,260	9	7,767	12	20,506	12	16,593	6
Gender	0,533	2	2,447	3	6,241	4	4,723	4	0,710	2
Occupation	18,490	10	15,758	15	17,921	20	30,824	20	16,800	10
Amount of income	5,085	6	25,113	9	23,268	12	20,433	12	12,841	6
Number of families	6,536	8	6,921	12	9,081	16	20,508	16	22,458	8
Education	7,032	8	17,619	12	22,510	16	24,085	16	6,435	8
Knowledge of SANIMAS	7,930	6	8,173	9	12,520	12	24,782	12	10,289	6

TABLE 6.
EXTERNAL FACTOR *PEARSON CHI SQUARE* VALUE

Variable	Local government		Village government		Community leaders		Facilitator/ consultants		local regulation/ law	
	X^2	df	X^2	df	X^2	df	X^2	df	X^2	df
Age	7,388	6	9,611	9	5,363	6	11,092	9	18,401	9
Gender	2,008	2	7,801	3	2,756	2	0,693	3	1,076	3
Occupation	4,514	10	17,665	15	7,515	10	11,326	15	14,903	15
Amount of income	6,927	6	3,982	9	12,305	6	7,190	9	3,898	9
Number of families	7,417	8	13,056	12	3,926	8	13,534	12	9,657	12
Education	11,377	8	15,460	12	5,486	8	14,916	12	14,932	12
Knowledge of SANIMAS	13,860	6	5,151	9	10,419	6	12,480	9	15,666	9

IV. CONCLUSION

1. The dominant influence of internal factors in the achievement of the success of the program SANIMAS in the village of Paciran sequentially from the highest are:
   a. The age that affect 4 variable form and level of public participation that is that is the presence in the meeting at planning phase, give suggestion in the meetings at planning phase, give suggestion in the meeting at implementation phase and following the activities at operational, maintenance and sustainability phase.
   b. Knowledge of SANIMAS that affect 3 variable form and level of public participation that is contributed in the form of labor or money at planning phase, the presence in the meeting at implementation phase and give a donation in the form of energy or money at operations, maintenance and sustainability phase.
   c. The amount of income that affect 3 variable form and level of public participation that is actively discussing in meetings, give suggestion in the meeting and the following activities at operations, maintenance and sustainability phase.
   d. The occupation that affect 3 variable form and level of public participation that is contributed in the form of labor or money at the planning phase, active discussions in a meeting at implementation phase and the presence in the meeting at operational, maintenance and sustainability phase.
   e. The education that affect 1 variable form and level of public participation that is attendance in meetings at implementation phase.
   f. The number of families that affect 1 variable form and level of public participation that is following the activities at operational, maintenance and sustainability phase
2. While external factors affecting dominant form and level of public participation in the program SANIMAS in the village of Paciran sequentially from the highest is the role of local regulations/ACT with Chi-Square count of 18.401 and the role of local governments with the Chi-Square count of 13.860.

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