Evaluation Of Community Perception And Expectationsin Implementing Operation And Maintenanceto Increase Agricultural Productionin Swamp Irrigation Area (Sia) Of Anjir Serapat II

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ABSTRACT: *The Swamp Irrigation Area (SIA) of AnjirSerapat II has a standard area of 7,270 Ha. Community participation in increasing agricultural production in SIA AnjirSerapat II is very important Their participation is mainly in the implementation of Operation and Maintenance (O&M). This research is to analyze the perceptions and expectations of the community of Water User Farmer Association (P3A) towards O&M of SIA AnjirSerapat II and to determine the priority of handling. From the findings, it can be concluded that the O&M items on maintenance on grass mowing on the embankment, maintenance on mud removal in the channel and maintenance on weed cleaning in the channel indicate that the level of perceptions and expectations of the community is high, but has an insignificant gap between perceptions and expectations. Meanwhile, the level of perceptions and expectations of the community is low and has a gap that is far from the O&M of maintenance on grass mowing on embankments, maintenance on mud removal in the channel and maintenance on weed cleaning in the channel. The priority of handling the maintenance on grass mowing on the embankment and maintenance on mud and weed cleaning in the channel.*

KEYWORD *Level of perception and expectation, operation and maintenance, DIR AnjirSerapat II, water user farmer.*

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I. INTRODUCTION

This background of research is based on the condition of the agricultural location of the Swamp Irrigation Area (SIA) of AnjirSerapat II which has a standard area of 7,270 ha. At the research location, there is a very large area and good agricultural productivity. Yet, the land management is still not optimal due to the limited facilities and infrastructure of agriculture and agricultural officers, especially O&M officers. Activities that support the sustainability of SIA agricultural land are Operation and Maintenance (O&M) activities. The participation of the farming community is needed, in this case relating to the Water User Farmer Association (P3A). The research aimed to analyze the perceptions and expectations of the farming community on the implementation of O&M in SIA AnjirSerapat II and to determine priority of handling in improving the implementation of SIA AnjirSerapat II O&M activities.

II. RESEARCH METHOD

The data was collected using purposive sampling (simple random). The primary data was obtained from interviews and questionnaires to the community while the secondary data obtained from the literature and other supporting researches. The calculation of sampling is based on the Slovin formula, which resulted in the number of P3A members of 75 people and the samples used were 43 people. The data was then analyzed using the quadrant analysis or Importance Performance Analysis (IPA), a descriptive analysis technique introduced by John A.Martilla and John C.James in 1977. IPA is the data analysis derived from questionnaires. The factors of the data that influence perceptions and expectations are then analyzed. Mapping the results of the respondent's questionnaire on several indicators that affect the SIA O&M was performed. The formed quadrant is a combination of the desired expectations with perceptions received.

III. RESULT AND DISCUSSION

The research results are presented in the form of a graphic quadrant that is easily interpreted. The results of the quadrant from the research on the respondents, namely the P3A Surya Candra of SIA AnjirSerapat II, the number of P3A members is 75 with the Slovin formula. The samples used were 43 respondents.

Table 1. Wilcoxon Signed Rank Test

		N	Mean rank	Total ranks
EXPECTATION –	Negative rank	0 [a]	0.00	0.00
PERCEPTION	Positive rank	43 [b]	22.00	946.00
	Ties	0c		
	Total	43		

Table 1 shows the calculation method carried out in the Wilcoxon signed-rank test formula is that the mean of the rank value and number of ranks from the negative rank, positive rank and Ties groups. Negative rank means that the expected value is lower than the perceived value. When the expected value is greater than the perceived, it is a positive rank. Ties is the perceived value equal to the expected value. N indicates the number of respondents. Mean rank is the average rank and the total rank indicates the total number of the ranks.

Table 2. Statistical Test

	EXPECTATION – PERCEPTION
Z	-5.807
Asymp.Sig. (2-tailed)	0.000

Based on Table 2 about the results of the calculation of the Wilcoxon Signed-Rank Test, the Z value is -5.807 with P value (Asymp. Sig. (2 tailed) of 0.000. The Z value is less than the research limit of 0.05, so the hypothesis is accepted, which means there is a difference between perceptions and expectations. According to the statistical test results, Z = -5,807 and Asymp. Sig (2-tailed) = 0,000 resulted from the hypothesis test of 0 (zero), which means there is no difference between the data tested and the field data.

Table 3. Descriptive statistic of expectation

	N	Mean	Standard Deviation
1. Mud Removal	43	4.0465	0.30500
2. Weed Cleaning	43	4.2093	0.41163
3. Grass Mowing	43	4.8372	0.37354
4. Floodgate Maintenance	43	3.6279	0.48908
5. Bridge Maintenance	43	3.8140	0.62700
6. Door Maintenance	43	3.8140	0.39375
Valid N (listwise)	43		

Table 4. Descriptive statistic of perception

	N	Mean	Standard Deviation
1. Mud Removal	43	3.7442	0.44148
2. Weed Cleaning	43	4.0698	0.50687
3. Grass Mowing	43	4.6977	0.51339
4. Door Maintenance	43	3.0930	0.56963
5. Bridge Maintenance	43	3.1395	0.55982
6. Door Maintenance	43	3.6512	0.65041
Valid N (listwise)	43		

Tables 3 and 4 display the output that shows the number of respondents (N) of 43 respondents, from whom the average value (mean) is obtained, where each O&M question item submitted to respondents has a value and standard deviation. The two mean descriptive statistics values of perceptions and expectations are analyzed again by entering them into the Cartesian diagram to find the value of the gap between the values of perceptions and expectations with the Cartesian quadrant diagram form as follows:
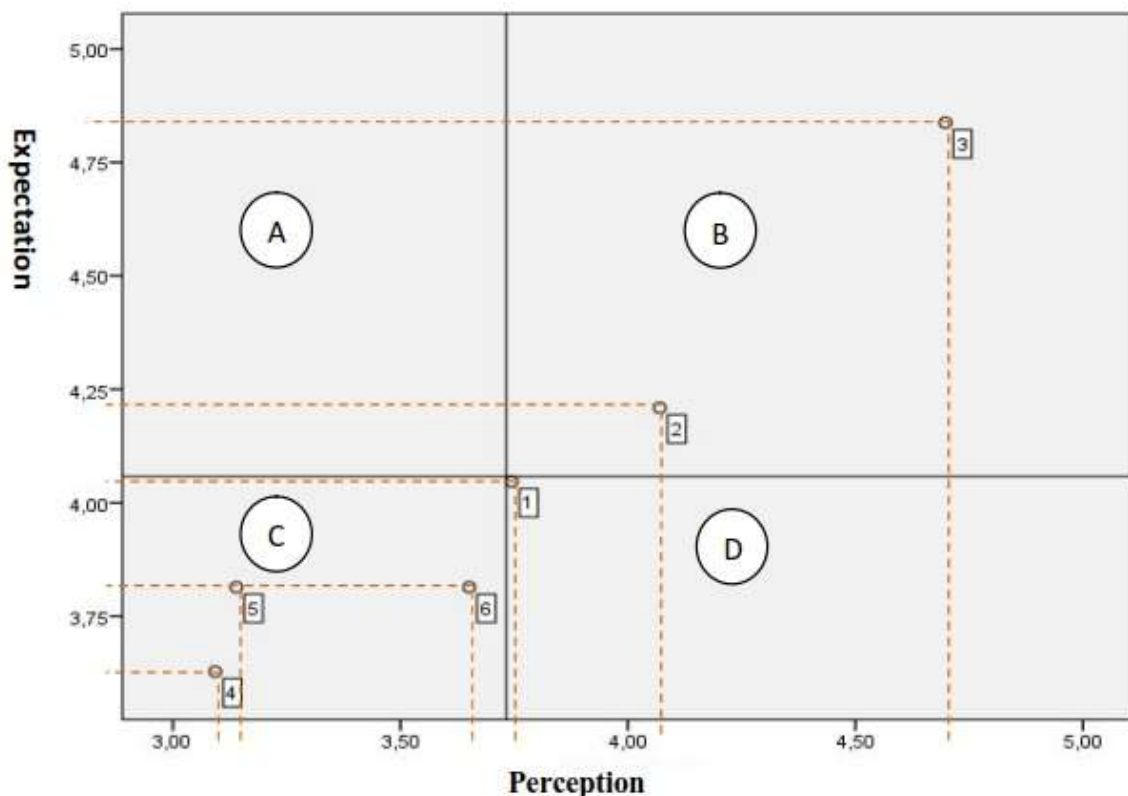
Picture. 1 Cartesian Quadrant Diagram

Explanation of the diagram, from the analysis of the Cartesian quadrant diagram, there is a gap between the 6 questions asked to respondents. There is a difference in values between expectations and perceptions with the following explanation:

Quadrant B is to maintain achievements, which are the maintenance on mud removal in the channel, maintenance on weed cleaning in the channel and maintenance on grass mowing on the embankment. From the results of descriptive statistics analysis contained in the Cartesian diagram, the levels of perceptions and expectations of respondents are high and have a gap that is not too far because O&M items that are in this quadrant are considered important by respondents. High levels of perception and expectations indicate that the respondents really need maintenance activities in the channel. Quadrant C is the low priority of maintenance at the floodgate, maintenance and repairs on bridges and maintenance and repairs on road inspections. From the results of the descriptive statistics analysis contained in the Cartesian diagram, the respondents consider it less important so that the levels of perceptions and expectations are low and there is a gap between them.

IV. CONCLUSION

From the results of the analysis, it can be concluded that:

Based on the analysis of the perceptions and expectations of the Water User Farmer Community (P3A) on the implementation of Operation and Maintenance (O&M) at SIA AnjirSerapat II, the O&M items of maintenance on grass mowing on embankments, maintenance on mud removal in the channel and maintenance on weed cleaning in the channel show that the levels of perceptions and expectations of the community are high, but there insignificant gap between them. Maintenance and repair of bridges and maintenance of floodgates show that the levels of perceptions and expectations of the community are low. There is a gap that is far from the O&M of maintenance on grass mowing on embankments, maintenance on mud removal in channels and maintenance on weed cleaning in the channel due to the implementation that requires a quite large cost. It requires adequate equipment. The level of damage to the facility is low and the maintenance and repair take a long time span. Therefore, for this O&M item, government needs to involve in handling it. Regarding the priority handling of maintenance on grass mowing in embankments, maintenance on mud removal in the channel and maintenance on weed cleaning in the channel that have high perceptions and expectations, the government needs to conduct more intensive coaching in the management of existing agricultural land, especially maintenance in the channel. To support sustainable management of SIA of agricultural land, the community and the government should collaborate in the field of O&M for the sustainability of management of agricultural land in swamp irrigation areas.

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