

Inhibiting Factors of the Acceleration of Irrigation Water Use Improvement Program

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ABSTRACT

Inhibiting Factors of the Acceleration of Irrigation Water Use Improvement Program (P3-TGAI) is a program for rehabilitation, improvement, or construction of irrigation networks based on the participation of farming communities which is carried out in a self-managed or non-contractual manner follow-up to the Ministry of PUPR Directorate General of Water Resources. Based on the evaluation results from Pambudi & Pramujo in 2023, the implementation of P3-TGAI activities at the basic level still encounters various problems, although in general many successes have been achieved. These problems are seen from the aspects of funding transparency, institutional readiness in the field, late determination of target locations, and less than optimal socialization at the farm level. These problems will hamper the aims, objectives, and goals of P3-TGAI activities. In order for the future implementation of this activity to run smoothly, research was conducted to find out what are the inhibiting factors that have the potential to hinder the success of this inhibiting activity in the preparation stage, planning stage, and implementation stage. The research was conducted using a quantitative descriptive method with a questionnaire instrument. The questionnaire was distributed to assistants. From the results of the study, it was found that there were 15 inhibiting factors with a very high influence on the implementation of P3-TGAI activities. 60% of them came from the preparation stage, 27% came from the implementation stage, and the rest (13.3%) came from the planning stage. Of all the inhibiting factors with a very high influence, there is one inhibiting factor with the highest score, namely communication with the community is not good. The solution to poor communication with the community is that the assistants build good emotional relationships with the community, TPM must often go to the field, and assistants mingle with the community. In terms of general project objectives, inhibiting factors that hinder timeliness are lack of community participation and poor communication and coordination by the community. The inhibiting factors that hinder quality accuracy are the lack of knowledge and experience of the assistants and the lack of socialization to the village community. And the inhibiting factor that hinders cost accuracy is that the community is manipulated by other parties.

Keywords: P3-TGAI; Community assistant; Inhibiting factors

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INTRODUCTION

A community-based development program is a program that prioritizes community participation in every stage of the implementation of the program, starting from the preparation stage to the completion stage[1]. Community participation can take the form of contributions of ideas, energy, and even materials. This will certainly add to the community's experience of

new activities. This is in line with the opinion of Hajar (2020) which states that the expected result of participation is the increased ability (empowerment) of everyone involved either directly or indirectly in every government policy program involving the community in decision-making and subsequent activities and for the longer term[2].

One example of a community-based program is the activities of the Program for the Acceleration of Improvement of Irrigation Water Use (Program Percepatan Peningkatan Tata Guna Air Irigasi, P3-TGAI). This program is organized by the Ministry of Public Works and Public Housing, Directorate General of Water Resources, which focuses on tertiary irrigation infrastructure. According to PUPR Regulation No. 4 of 2021 concerning Guidelines for the Implementation of P3-TGAI, this program is an activity to rehabilitate, improve, and build tertiary irrigation on agricultural land by prioritizing the involvement of farming communities in every stage of the activity[3].

The P3-TGAI program is a follow-up to the Ministry of PUPR Directorate General of Water Resources to the president's directives contained in the National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional, RPJMN) 2020-2024 regarding infrastructure development to boost new jobs, and accelerate the increase in added value of the people's economy with social protection programs and Cash Labor Intensive Programs[4]. Adjie (2023) stated that the P3-TGAI program aims to empower the community and to increase community income due to COVID 19. Not only that, according to PERMEN PUPR No. 4 of 2021 the P3-TGAI program has the benefit of supporting national food security and community economic activities[5] [6].

Based on data from the Sumatra V River Basin Center, P3-TGAI activities have been implemented since 2016. The recipients of P3-TGAI activities from 2016 to 2022 are 49,879 association of farmer that use water (Perkumpulan petani pemakai air/Gabungan perkumpulan petani pemakai air/Induk perkumpulan petani pemakai air, P3A/GP3A/IP3A). This shows that many tertiary irrigation areas and village irrigation areas have been rehabilitated, improved, and built[7]. With this activity, P3A/GP3A/IP3A gained experience in working on projects even on a small scale. In implementing irrigation network projects, farmers get assistance from Assistance Personnel [8]. The assistants help farmers with technical and administrative matters of P3-TGAI implementation. The technical and administrative matters referred to include: a) village deliberations; b) surveying the condition of irrigation networks and making working drawings; c) preparing work plans for P3A, GP3A, and / or IP3A or by other names; d) implementing rehabilitation, improvement, and/or construction of irrigation networks, and e) reporting on completed work.

Previously, this activity was called Program for the Acceleration and Expansion of Water Resources Infrastructure Development on Small Irrigations (Program Percepatan dan Perluasan Pembangunan Infrastruktur Sumber Daya Air pada Irigasi Kecil, P4-ISDA-IK). This program has been ongoing since 2013. From the research conducted by Istijono & Ophiyandri in 2015, the implementation of a community-based approach in small-scale irrigation infrastructure projects was a great success. Then in 2016, this activity changed its name to P3-TGAI. The results of Silitonga's research in show that P3-TGAI has a positive effect on improving irrigation infrastructure.

According to the technical guideline book for the implementation of P3-TGAI, this activity intends to foster the participation of farmer communities in the rehabilitation of irrigation networks, improvement of irrigation networks and construction of irrigation networks according to their needs and based on the principle of independence. While the purpose of P3-

TGAI is to improve the performance of small irrigation services, village irrigation and tertiary irrigation and increase national economic growth through labor-intensive activities. Furthermore, the target of P3-TGAI activities is the empowerment of P3A, GP3A, and/or IP3A in technical activities of irrigation network rehabilitation, irrigation network improvement, and/or irrigation network construction.

Based on the evaluation results by Pambudi & Pramujio (2023), the implementation of P3-TGAI activities at the site level still encounters various problems even though in general many successes have been achieved[9]. These problems are seen from the aspects of funding transparency, institutional readiness in the field, late determination of target locations, and less than optimal socialization at the farmer level[10]. These problems will hamper the aims, objectives, and goals of P3-TGAI activities. The potential sustainability of community empowerment needs to be done. One of them is the P3-TGAI activity. In order for the future implementation of this activity to run smoothly, it is necessary to know what are the inhibiting factors that have the potential to hinder the success of this activity[11]. In addition, it is also necessary to know what are the causes and steps taken to overcome them. The purpose of this study was to analyze the inhibiting factors in the implementation of P3-TGAI activities.

METHOD

This research is quantitative with a descriptive approach. Data were collected through distributing questionnaires to 152 community assistants who served at BWS Sumatera V Padang in the 2023 fiscal year. The questionnaire was distributed to respondents on June 21, 2024 to July 01, 2024. The educational background of the respondents is as follows:

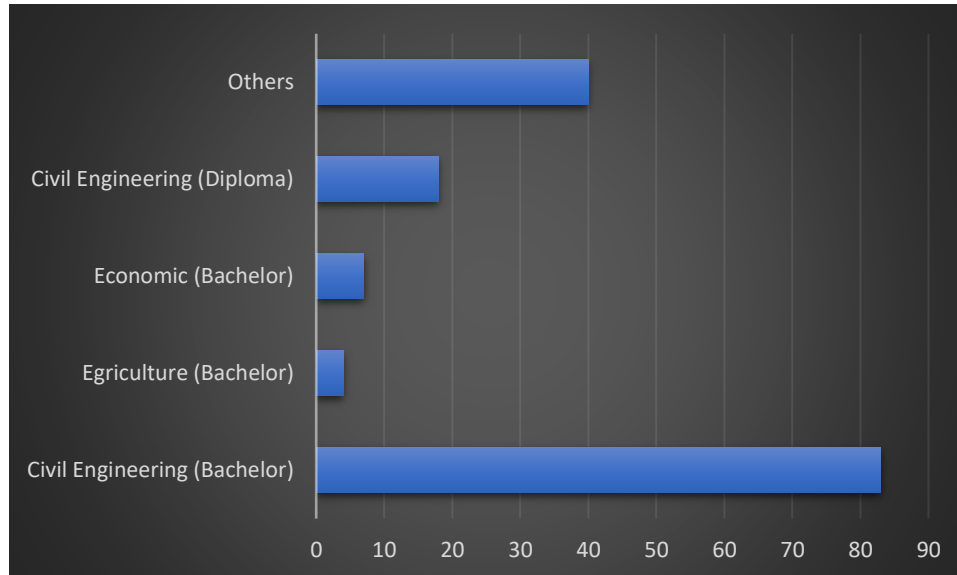


Figure 1. Education Background of Respondents

The questionnaire that will be given to respondents contains inhibiting factors that have previously been analyzed through secondary data sources in the form of journals related to the analysis of risk factors in the preparation, planning and quality stages of community-based irrigation development planning with a total of 42 questions. In addition, interviews were also conducted with 2 respondents to carry out management of P3-TGAI activities against inhibiting factors.

The measurement scale in assessing respondents' opinions based on the 42 questions uses a Likert scale in the form of statements Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree which are scored 5-1 sequentially. Data processing is carried out using Microsoft excel by determining the level category based on the scale range using the index value:

1. 1,00-1,79 categorized as very low risk
2. 1,80-2,59 is categorized as low risk
3. 2,60-3,39 categorized as medium risk
4. 3,40-4,19 is categorized as high risk
5. 4,20-5,00 is categorized as very high risk

RESULTS AND DISCUSSION

The results of the assessment of inhibiting factors of P3-TGAI based on respondents' answers are grouped based on the stages of activities, namely the preparation stage, the planning stage and the implementation stage, and then categorized based on the level of risk referring to the average index value presented in the following table:

Tabel 1. Risk Category Level P3-TGAI Inhibiting Factors

Inhibiting Factors		Average Index Value	Risk Category Level
Preparation Stage - (1) Recruitment and Training of Facilitators			
1	Inappropriate recruitment	3.99	High
2	Shortage of assistants	4.18	High
3	Lack of knowledge and experience	4.28	Very High
4	Lack of training on assistants	4.24	Very High
5	Inadequate training materials and unclear results	4.20	Very High
6	Tight and short training schedule	3.43	High
Preparation Stage - (2) Socialization and Coordination Program			
7	Lack of local government support	4.17	High
8	Lack of socialization and coordination of P3-TGAI to village communities	4.36	Very High
9	Lack of community participation in socialization and coordination	4.34	Very High
10	Lack of community togetherness, solidarity and volunteerism	4.26	Very High
11	Poor communication with village communities	4.55	Very High
12	Lack of assistants in socialization	3.50	High
13	Lack of experience of assistants in the organization	3.86	High
14	Short socialization schedule	3.32	Medium
15	Failure to hold community meetings	4.16	High
Preparation Stage - (3) Formation of Community Groups/Organizations			
16	The verification process of the Water User Farmer Association (P3A) management by assistants did not match the time allocation.	4.17	High
17	Community leaders are too dominant	3.88	High
18	The community is manipulated by other parties	4.38	Very High
19	Contract/work agreement disagreement	4.35	Very High
20	Short organization formation schedule	3.21	Medium
21	Lack of experience of facilitators in forming community groups	3.69	High
Preparation Stage - (4) Community Group/Organization Training Program			

Inhibiting Factors		Average Index Value	Risk Category Level
22	Low group participation in training	4.07	High
23	Lack of funding for training	3.55	High
24	Lack of manpower for training	3.66	High
25	Lack of time for training	3.64	High
26	Lack of facilitators in community training	3.55	High
27	Lack of role of facilitators in training	4.13	High
28	Lack of experience of facilitators in community training	3.86	High
29	Training materials are not relevant and do not meet the expected results	3.95	High
Planning Stage - (1) Survey and Validation			
30	Too many parties involved	4.22	Very High
31	Changes to the original location proposed by the village	3.91	High
32	Transportation/access issues to the project site	3.94	High
33	Land availability	4.39	Very High
34	Lack of community knowledge about specifications	4.05	High
Implementation Stage - (1) Community Participation and Contribution			
35	Poor communication and coordination in the community	4.38	Very High
36	Lack of involvement of local labor	4.10	High
Implementation Stages - (2) Labor			
37	Lack of manpower in the field	4.36	Very High
38	Unclear working hours	4.15	High
Implementation Stage - (3) Control and Supervision			
39	Delays in implementation time	4.53	Very High
40	Low implementation of work safety	3.85	High
41	Delays due to weather	4.26	Very High
42	Holidays due to statutes/customs	3.16	Medium

Based on the table above, the inhibiting factors in the preparation stage have 9 factors with very high risk, 18 high-risk factors and 2 medium-risk factors. At the planning stage there are 2 very high-risk factors and 3 other factors at high risk. At the implementation stage, there are 4 very high-risk factors, 3 high-risk factors and 1 medium-risk inhibiting factor. Of the total 15 very high-risk inhibiting factors, 9 came from the preparation stage. This shows that 60% of the inhibiting factors in P3-TGAI activities come from the preparation stage.

P3-TGAI activities are interrelated, so activities in the preparation stage will affect the planning stage and activities in the planning stage will affect the implementation stage. Likewise, if there are obstacles. The existence of inhibiting factors at the preparation stage will result in the obstruction of subsequent activities at the planning and implementation stages. For example, inhibiting factors in the socialization and coordination program, namely the lack of socialization and coordination of P3-TGAI activities in the village community, which according to the results of interviews resulted in villagers not knowing the purpose, benefits, and basis for implementing activities. This also results in low community acceptance of P3-TGAI activities, considering that socialization is the first interaction forum between assistants and the community.

1. Inhibiting Factors of the Preparation Stage

a. Recruitment and Training of Facilitators

In the recruitment and training activities carried out at the preparation stage, the inhibiting factors with the highest category are the lack of knowledge and experience of facilitators, the lack of knowledge and experience of facilitators and inadequate training materials.

The lack of knowledge and experience of the facilitator trainers is due to the short training time and lack of experience in delivering the material[12]. It is very important for a trainer to know effective communication techniques to be able to deliver the material. In addition, the provision of training in delivering materials and technical manuals is also important for a facilitator trainer.

In the inhibiting factor of lack of experience and knowledge of assistants, the basic problem is the lack of knowledge about the technical implementation of activities, knowledge about conditions in the field, how to communicate in the community, and how to resolve conflicts that occur during activities[13]. How to communicate in the community is important to master considering that this program is self-help. The solution in dealing with this inhibiting factor can be done through intensive training, understanding the technical guidelines[7] and implementation guidelines and exchanging ideas with seniors who have more experience in P3-TGAI activities.

Inadequate and unclear training materials are also an inhibiting factor in the preparation stage. The results of interviews show that the material presented is basic material and many assistants feel that they lack references or examples of obstacles faced during P3-TGAI activities. Based on this problem, the training approach that is deemed suitable is a case study-based approach, so that the handling solution is known.

b. Socialization and Coordination Program

The inhibiting factor encountered in the socialization and coordination activities was the indifferent attitude of the farmers towards government programs. This is in accordance with the opinion of Samaun, which states that the inhibiting factor for the development of a village is apathy and the lack of desire to change the situation[14]. Many farmers prioritize their work over participating in socialization activities. The lack of togetherness, solidarity and community volunteerism is another inhibiting factor in P3-TGAI activities because this activity is self-help [15]

This is inseparable from the influence of economic factors of the village community who are more concerned with personal interests to be able to meet their daily needs[16], [17]. This is in accordance with Nasution's statement that the mindset of the general public, the busier a person is the less time they have to participate in development[18]. This can be overcome by coordinating with relevant village officials to invite the community to be willing to participate in socialization. Socialization activities are very important so that the community knows the purpose, benefits and basis for implementing P3-TGAI.

c. Formation of Community Groups/Organizations

The inhibiting factors in this activity are the number of people who are manipulated by other parties and disagreements regarding work contracts. The existence of manipulation in the community is because these parties are tempted by the funds provided for program implementation and become a source of profit. When in fact, the funds provided are solely for the rehabilitation program or the improvement of irrigation canal construction in accordance with the established cost budget plan[19]. The ease of manipulation also occurred because the community did not participate in the socialization, so they did not know the program well. For this reason, supervision is needed by the local village government in order to provide

understanding to the community through information disclosure.

Meanwhile, work contract disagreements were found in the procurement of building materials, where at first it was determined which party would supply building materials, but due to the interests of several parties, it was transferred to other suppliers due to individuals who wanted to benefit from the implementation of the P3-TGAI program. This handling requires assertiveness from assistants to be able to direct activities properly and still refer to the technical instructions and implementation of activities.

2. Inhibiting Factors of the Planning Stage

a. Survey and Validation

In the planning stage in the form of survey and validation activities, there are 2 obstacle factors, namely too many parties involved and problems with land availability. The involvement of third parties or community leaders who are irrelevant to the interests of the program is caused by the desire to benefit from the program or feel they have authority in the P3-TGAI program. The solution that can be provided is the need for information transparency and the provision of understanding by assistants to the community regarding which parties should be involved and which should not. Meanwhile, the problem of land availability occurs due to the lack of understanding of farmers about the long-term benefits of the irrigation program and the limited trees that are allowed to be cut down[20]. Personal approach and coordination with stakeholders such as customary leaders or nagari government are the main solutions to overcome this land limitation.

3. Inhibiting Factors at the Implementation Stage

a. Participation and Labor

The main inhibiting factors in community participation are poor communication and coordination and lack of manpower. Lack of coordination within the organization leads to a lack of member involvement. Facilitators play an important role in providing understanding and ensuring transparency of information to all P3A members[21]. The result of weak communication is low community participation which leads to a lack of labor. The solution that can be proposed is to procure labor from outside the area if local labor is insufficient.

b. Control and Supervision

In the aspect of control and supervision, delays in implementation time were the main obstacle, caused by weather factors and holiday celebrations. Weather-related delays resulted in delays in irrigation construction work. The solution applied is to increase the number of workers on other days to catch up with delays. In addition, coordination with P3A realtions in other areas can be an alternative solution to overcome labor shortages and accelerate work completion.

Overall, the obstacles that arise in this P3-TGAI activity are mostly caused by a lack of community understanding, weak coordination, and technical obstacles such as limited labor and weather factors. By increasing transparency, good communication and appropriate mitigation strategies, these obstacles can be overcome for the smooth implementation of the program.

CONCLUSION

A total of 60% of the total very high-risk inhibiting factors were found in the preparation stage. The preparation stage has a major influence on P3-TGAI activities. This is because P3-TGAI activities are carried out systematically starting from preparation, planning and implementation. The number of inhibiting factors with a very high risk at the preparation stage has an impact on the next stage. Poor communication with the community is an inhibiting factor

with the highest risk index value. In terms of general project objectives, the factors that hinder the timeliness of P3-TGAI implementation are lack of community participation, and poor communication and coordination between the parties involved [22]. The inhibiting factors that hinder the accuracy of quality are the lack of knowledge and experience of the assistants and the lack of socialization to the village community. As well as inhibiting factors that hinder the accuracy of costs are people who are manipulated by other parties and discrepancies in work contacts.

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