Implementation empowering communities in small scale irrigation projects during Covid 19 Pandemic in Padang and Padang Pariaman District

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Abstract. During the covid 19 pandemic, development, and economic growth were hampered, so the people's purchasing power decreased. To overcome this, especially in rural areas, the government combined the P3-TGAI Program (the Acceleration for Irrigation Water Usability Improvement) and the PKT (Cash for work) Program in empowering the community in one way to recovery community income due to the covid pandemic 19. This article presents the P3-TGAI program as an implementation of community-based engagement in empowering communities. P3-TGAI is part of the PKT Program in Padang City and Padang Pariaman District, during the covid pandemic 19, including the covid protocol 19, which was carried out during the project work. This research uses a literature review method to describe the P3-TGAI and PKT program. Descriptive statistics are used to identify the benefits of the programs for the community and the covid 19 protocol performed during project work. The results of the study were that, although the covid 19 protocol was not fully implemented, the program is useful in recovering the community income during the covid 19 pandemics.

1. Introduction

One of the rural development programs conducted by the Ministry of PUPR is through the Program of the Acceleration for Irrigation Water Usability Improvement (P3-TGAI). The P3-TGAI program aims to provide water for agricultural areas through the maintenance, rehabilitation, and improvement of small irrigation networks (less than 150 hectares, rice field), tertiary irrigation, and village irrigation, which is carried out by way of Empowering Water User Farmers (P3A). The program is to support the National food security program as well as efforts to increase economic capacity and welfare through empowering the farming community in participatory improvement of irrigation networks. During the period of 2014 to 2016, the P3-TGAI program was conducted in 3,429 locations spread across the river area with a total budget of Rp180 billion.

P3-TGAI is one of the activities of the Community-Based Infrastructure Program (IBM), the purpose of the implementation of this program is to foster the participation of the community of Water User Farmers (P3A) in activities to repair, rehabilitate and improve irrigation networks in accordance with the needs and principles of independence.

During the Covid 19 pandemic, development and economic growth were hampered, so the people's purchasing power decreased. To overcome this, especially in rural areas, the government combined the P3-TGAI Program and the PKT in empowering the community in one way to restore community income due to the covid pandemic 19.
PKT “Padat Karya Tunai” (cash for work) is an activity to empower village communities. This program is specifically aimed at the poor and marginal people who support the productivity of local resources, labor, and technology to provide additional wages, increase purchasing power, improve the economy, and support a reduction in stunting rates.

This article presents the P3-TGAI program as an implementation of community-based engagement in empowering communities. P3-TGAI is part of the PKT Program in Nagari A, Padang Pariaman District, during the covid pandemic 19, including the covid protocol 19, which was carried out during the project work.

2. Literature Review

According to [1], the definition of "community" is not always the same as "municipality"; it is a wider concept, which implies the existence of shared values and shared goals among people and shared rights [2]. In their research, [3] stated that, the community is defined as a group of farmers who use the water provided by the irrigation systems, and they are called the farmer water user group (P3A).

The empowerment approach to development was a way of placing the poor at the center of development and seeing them as the most important resource [4]. He further stated that empowerment is generally seen as the key to good quality of life, improvement of human dignity, good governance, pro-poor growth, project effectiveness and improved service provision.

Empowerment has five processes: Enabling is to create an atmosphere or climate that allows the potential for community develop optimally, Empowering is strengthening the knowledge and capabilities of the community in solving problems and meeting needs, Protecting the public, especially to protect vulnerable groups, not oppressed by the powerful and dominant groups to avoid an unbalanced competition and prevent the exploitation of the powerful against the weak, Supporting by providing the guidance and support for poor communities in order to be able to perform the role and functions of life, Fostering is maintaining conditions conducive to keep a proper balance of power distribution between different groups of people [5]. It is very popular as everybody tends to claim that his program is a community-based project because it has involved the community, no matter in which level the community participation is [6-9] noted the problem in defining “community-based” programs. Referring to the model of community participation proposed by [6,10] suggest that the definition of ‘community-based’ constitutes an approach where participation of the community is at the level of collaboration or empowerment.

3. Program of the Acceleration for Irrigation Water Usability Improvement (P3-TGAI)

P3-TGAI is implemented to support national food sovereignty as a manifestation of economic independence by moving the domestic economic strategic sector as contained in the seventh “Nawa Cita” program through empowering farming communities in improving irrigation networks, rehabilitating irrigation networks and increasing participatory irrigation networks in rural areas. P3-TGAI is implemented based on the principles of participatory; transparency; accountability; and continuous.

Based on Circular Letter of the Director General of Water Resources Number 134 / Se / D / 2017 Regarding Technical Guidelines for the Program for the Acceleration of Improvement of Irrigation Water Use, the performance indicators in the implementation of P3-TGAI include: implementation of empowerment and participation of farmer communities in the technical activities of repairing irrigation networks, rehabilitation of irrigation networks or improvement of irrigation networks; and improving irrigation network conditions.

The implementation of P3-TGAI activities in the form of repair of irrigation networks, rehabilitation of irrigation networks and improvement of irrigation networks is carried out in: small irrigation areas with an area of less than 150 (one hundred fifty) hectares and / or village irrigation; or tertiary irrigation networks in the irrigation area under the authority of the Central Government, Provincial Governments, and Regency / Municipal Governments. Figure 1 below shows where workers are carrying out the rehabilitation of irrigation channel activity.
Figure 1. A number of workers are rehabilitating irrigation through the Irrigation Water Use Improvement Program (P3TGAI) Ministry of Public Works and Housing. (Source: [11])

P3-TGAI funding is sourced from the State revenue and expenditure budget: DIPA Work Unit of the Directorate of Operations and Maintenance and DIPA Work Unit assigned to carry out P3-TGAI at BBWS / BWS level. P3-TGAI is given to P3A / GP3A / IP3A who meet the requirements in accordance with the General Guidelines, stipulated by commitment official and approved by Head of working unit, for irrigation network repair, irrigation network rehabilitation or irrigation network improvement.

4. PKT “Padat karya Tunai” (Cash for work) Programs
PKT “Padat Karya Tunai” (cash for work) is an activity to empower village communities. This program is specifically aimed at the poor and marginal people who support the productivity of local resources, labor, and technology to provide additional wages, increase purchasing power, improve the economy, and support a reduction in stunting rates.

PKT scheme in implementing In Village Fund Program is expected to absorb large numbers of workers, by providing direct cash salaries to the workers involved, both daily and weekly, to strengthen people's purchasing power, increase economic growth, and community welfare. Based on Article 4 of Law No. 6 of 2014 concerning Villages, village regulation aims, among others, to advance the economy of rural communities, overcome development gaps, and strengthen rural communities as subjects of development. To support the implementation of cash-intensive programs in villages, on December 18, 2017, a Joint Decree of four Ministers was adopted regarding the Alignment and Strengthening of the Policy to Accelerate the Implementation of Law Number 6 the Year 2014 concerning Villages.

The background of these PKT programs, namely; the high rates of malnutrition and stunting, the high of unemployment rates, high of poverty rates, high income inequality rates, the high number of underdeveloped villages, and high migration and urbanization. This PKT Program is provided for; Unemployment groups, part time workers, poor citizens, young people who are in productive age, farmers/groups of farmers who have failed to harvest and wait for planting/harvesting, and labor who lost jobs. As can be seen from Figure 2, the workers for the program came from the village where the project was carried out.
Figure 2. PKT (Cash for Work) program. This program is intended to maintain the purchasing power of the community, especially the rural poor. (Source: [12])

The PKT program is realized for the following activities: Basic Services, Infrastructure and Facilities Development, Productive Economy Development, and Community Empowerment. PUPR Ministry said, PKT program in 2020 runs on a budget of Rp 10 trillion spread across 34 provinces. The budget is given to seven programs. Namely, the acceleration program improvement of irrigation water use (P3-TGAI), routine maintenance of roads and bridges, development of regional socio-economic infrastructure (PISEW), the arrangement of municipalities without slum area (KOTAKU), the place of waste management reduce, reuse, recycle (TPS 3R), the provision of community-based drinking water and sanitation (Pamsimas) and community-based sanitation (SANIMAS), new development and improvement of home quality.

The Benefits and impacts of the PKT Program are:
1. Increase the Production and added Value of the Production
2. Expanding the temporary employment opportunities
3. Creating Wages / Additional Income
4. Expand Access to Basic Services
5. Increasing the Quality of Basic Services
6. Increase village accessibility (opening of isolated villages)

The Minister of Public Works and Housing said that the PKT program is essential for people with a low income. In addition to spurring economic growth and increasing people's purchasing power, the PKT program also aims to distribute funds to villages / remote areas. The pattern of PKT implementation must also pay attention to physical & social distancing protocols, "said Minister

The budget sources used to support the activities of the village PKT are as follows: Village fund program budget, Ministry / Agency Budget, and Local Government Budget. The targets of the PKT Program are 100 districts/municipality throughout Indonesia.

5. Method
Two methods were adopted in this study; first, a literature review method was used to describe the P3-TGAI and PKT programs. Second, descriptive statistics were used to identify the benefits of the programs for the community and the covid 19 protocol performed during project work. The primary data were collected by giving a set of questionnaires to respondents in Padang city and Padang Pariaman District. The data were analyzed by using descriptive statistics.
6. The benefits of the P3-TGAI program for the community during the Covid 19 Pandemic

The scope of this research is the implementation of P3-TGAI in Padang City and Padang Pariaman District. The Work Implementation Cost Budget is Rp. 195 million. There are 4 stages of work in the implementation of this P3-TGAI, namely Socialization, meetings in the local village, field survey and work implementation. There are two villages in Padang City and two Villages in Padang Pariaman District, namely:

1. Padang City
   a. Irrigation Network Improvement Work in Batang Jao II Irrigation Area, Balai Gadang Village, Koto Tangah Subdistrict, Padang City, West Sumatra Province
      
      In Balai Gadang, the project was to construct a permanent irrigation channel. As can be seen from Figure 3, the first activity was to carry out socialization and meeting with the community (top left and right picture). The bottom left picture shows the irrigation channel before the rehabilitation begins while the bottom right is the irrigation channel after rehabilitation.

   ![Figure 3. Implementation of Irrigation Network Improvement Work in Batang Jao II Irrigation Area, Balai Gadang Village, Koto Tangah Subdistrict, Padang City, West Sumatra Province](image)

2. Padang Pariaman District
   a. Irrigation Network Improvement Work in Gunung Nago Irrigation Area, Piai Tangah Village, Pauh Subdistrict, Padang City, West Sumatra Province
      
      Figure 4 shows the implementation of the program at Piai Tangah Village

   ![Figure 4. Implementation of Irrigation Network Improvement Work in Gunung Nago Irrigation Area, Piai Tangah Village, Pauh Subdistrict, Padang City, West Sumatra Province (Socialization, meetings in the local village, field survey and work implementation)](image)
2. Padang Pariaman District
   a. Irrigation Network Improvement Work in Batang Anai Irrigation Area, Nagari Sungai Gimba Ulakan, Ulakan Tapakis Sub-district, Padang Pariaman District, West Sumatra Province
   Figure 5 and Figure 6 show the implementation of the P3-TGAI program in Padang Pariaman District.

   ![Figure 5](image1)
   ![Figure 5](image2)

   **Figure 5.** Implementation of Irrigation Network Improvement Work in Batang Anai Irrigation Area, Nagari Sungai Gimba Ulakan, Ulakan Tapakis Sub-District, Padang Pariaman District, West Sumatra Province (Sosialization, meetings in the local village, field survey and work implementation)

   b. Irrigation Network Improvement Work in Batang Anai Irrigation Area, Nagari Toboh Gadang Barat, Tapakis Sub-District, Padang Pariaman District, West Sumatra Province

   ![Figure 6](image3)
   ![Figure 6](image4)

   **Figure 6.** Implementation of Irrigation Network Improvement Work in Batang Anai Irrigation Area, Nagari Toboh Gadang Barat, Tapakis Sub-District, Padang Pariaman District, West Sumatra Province (Socialization, meetings in the local village, field survey and work implementation)
To find out whether any benefits of the P3-TGAI program for the community during the covid-19 pandemic, a survey was conducted by giving questionnaires to the people involved in the program. Twenty-five respondents were involved in this survey. Ten questions were asked to the respondents. Questions asked related to the influence of the Covid-19 pandemic towards their income, their involvement in the P3-TGAI program, and the benefits of the program in recovering their income during the covid-19 pandemic. Figure 7 shows the characteristic of respondents.

![Figure 7. The characteristic of respondents](image1)

From the survey conducted, the following results were obtained; respondents stated the covid-19 pandemic harmed their income. Figure 8 shows the reduction of their income occurred as a result of the sales reduction of their agricultural production, and they lost their jobs during the covid-19 pandemic.

![Figure 8. The impact of Covid 19 Pandemic on the income](image2)

![Figure 9. The characteristic of respondents](image3)
Their involvement in the P3-PTGAI program is as daily workers who are given salaries per week. Figure 8 (the purpose on involving in P3-TGAI Project) and Figure 9 explain that even though the income earned is lower than work in normal conditions, this program is useful in recovering their income during the covid 19 pandemics.

7. Conclusion
There are several conclusions that can be drawn from the Implementation Empowering Communities in Small Scale Irrigation Projects during Covid 19 Pandemic in Padang and Padang Pariaman Districts, namely:

a. The implementation of a community-based approach to small-scale irrigation improvement helped communities increase income during the covid-19 pandemic.

b. In carrying out work in an open place by maintaining work distance, only lack of discipline wearing a mask.

c. Community contributions to this activity increase the sense of ownership and sustainability of irrigation networks.

d. The advantage of this project is that the project can be completed on time, within budget and using high quality materials.

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