

# THE IMPLEMENTATION OF STANDARD OPERATIONAL PROCEDURES FOR VILLAGE-BUSINESS ENTITY (BUMDES) IN HIPPA RICE FIELDS IRRIGATION TO SUPPORT SDGS 2030

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**Abstract.** This study analyzes the application of the BUMDes SOP in Ngadirejo Village, Widang District, regarding the irrigation of Hippa Rice Fields. The aim is to identify obstacles in optimizing BUMDes in villages and the importance of implementing SOPs to achieve the Sixteenth SDGS related to village welfare through village institutions. This study uses a case study method with a qualitative approach and collects data through interviews, observation, and documentation. In its implementation, the BUMDes SOP Ngadirejo Village faces challenges, including a lack of community participation and limited human resources. However, through the rice field irrigation program, BUMDes have played an important role in supporting village economic growth by creating jobs, increasing farmers' income. According to the report, BUMDes Ngadirejo Village need to optimize their operations with innovative techniques to improve village economic performance and growth. This is expected to achieve sustainable development goals and improve the welfare of rural communities.

Keywords: BUMDes, SOP, Irrigation

## 1 Introduction

The creation of Village Owned Enterprises (BUMDes) is a type of organization or institution that directly represents all or a portion of the capital owned by the village. This establishment seeks to increase communal welfare by maximizing the current village's potential. One of the government's initiatives to create villages that are insulated from hunger and poverty and to support rural communities sustainable development is the BUMDes program. The establishment of BUMDes is regulated by Law No. 6/2014, which defines BUMDes as a legal entity established by the village government to manage village-owned enterprises [1]. The BUMDes program needs SOPs to ensure that the activities or programs introduced may function successfully and efficiently in line with the company's aims to support these goals.

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A. Mustofa et al. (eds.), *Proceedings of the International Joint Conference on Arts and Humanities 2023 (IJCAH 2023)*, Advances in Social Science, Education and Humanities Research 785, https://doi.org/10.2991/978-2-38476-152-4\_32

SOPs have several very important uses in village-owned enterprises, for example in terms of regulating and maintaining consistency, SOPs help regulate and maintain consistency in carrying out various processes and activities in BUMDes; increase efficiency, SOP helps improve efficiency in carrying out tasks and processes in BUMDes; guarantee quality, SOP helps in maintaining the quality of products or services produced by BUMDes; facilitating training and development: SOP is a useful guide in training new BUMDes members.

BUMDes can help achieve the 16th SDG by adopting strong governance, guaranteeing an effective oversight mechanism, and fostering active community engagement in decision making. The 16th Sustainable Development Goal, "Building Effective, Accountable, and Inclusive Institutions at All Levels," is closely related to Village-Owned Enterprises (BUMDes). These SDGs promote the formation of robust, transparent, and accountable institutions, which in turn promote the formation of BUMDes as economic entities that play an essential role in local development.

### LITERATURE REVIEW

#### **Definition of Village-Owned Enterprises**

The village government is an organization responsible for formulating policies and coordinating with the village apparatus task force in implementing them. Its significant role in administering governance in a village cannot be overlooked [2]. BUMDes is a new concept of rural development in Indonesia. It was introduced in 2014 by the Ministry of Village, Development of Disadvantaged Regions, and Transmigration. The establishment of BUMDes is regulated by Law No. 6/2014, which defines BUMDes as a legal entity established by the village government to manage village-owned enterprises [1]. All stakeholders, including the Government, across various sectors of development, must prioritize the principle of sustainable development in all policies and development plans, including the agricultural sector [3]. The following are the steps involved in mapping a village's potential: conducting a field survey, studying the data collected, prioritizing the scale, and formulating a design [4].

First, support the recovery of the national economy in accordance with village authority. Second, implementing national priority programs according to village authority. And third, carry out disaster mitigation and management, including non-natural disasters, according to village authority [5]. It is important for BUMDes to develop a Standard Operating Procedure (SOP) so that they can run their business in a more orderly and efficient manner [6].

**Definition of Standard Operational Procedure**A Standard Operating Procedure (SOP) is a flow that should exist in an organization or company to assist in the execution of activities. The SOP must be in the form of a written framework that includes the roles and duties of the organization's members as well as the processes for the organization's activities. Companies may ensure consistency and quality in every operation

and reduce the possibility of errors or failures in carrying out their responsibilities by implementing SOPs [7]. As a result, establishing SOPs is critical for BUMDes to achieve its goals and for the village economy to continue to expand.

#### **Definition of Village Governance**

Village government governance refers to the principles, procedures, and techniques utilized to organize and manage government activities at the village level. Village government governance attempts to produce good and effective governance so that village government can function correctly in administering public services, managing resources, and serving the needs and ambitions of the community at the village level. Good village government governance also includes active community participation in decision-making, the disclosure of public information, effective monitoring of village government performance, the existence of a fair and transparent dispute resolution mechanism, and community aspirations [8]

### 2 Methods

This study uses a qualitative approach with a case study research methodology. Data collection was carried out through interviews, field observations and document analysis. Researchers use a qualitative research approach with descriptive problem formulation, this is done for the reason of obtaining valid and credible data in knowing the role of the Ngadirejo Village Government of Widang District in organizing the Rice Field Irrigation program (HIPPA) in developing Village-Owned Enterprises (BUMDes).

Case study is a research method for studying a case in depth and detail. The cases studied can be individuals, groups, organizations, or events in a real context. Case study is a research approach that allows researchers to study complex cases holistically and in depth through collecting data from various sources, including observation, interviews, and documentation. Qualitative research is a tradition in the social sciences that observes humans in a special context and uses certain terms. While descriptive research is a type of research that aims to provide an interpretation of a situation, event, object, or other things related to variables that can be explained through numerical or narrative data [9].

So that the source of data in this study is the main source of data derived from interviews with several informants determined using purposive sampling, direct observations made by researchers during research and additional data sources in the form of reports and documents at the BUMDes office of Ngadirejo Village, Widang District with the help of sources, the Head of Ngadirejo Village, the Chairperson of the Ngadirejo Village Owned Enterprise, and the Secretary of the Ngadirejo Village-Owned Enterprise.

### **3** Findings and Discussion

The government has a mission to develop rural areas, which can be accomplished by empowering the community to enhance productivity and diversify rural businesses, providing adequate infrastructure and facilities to support the rural economy, establishing and reinforcing institutions that support production and marketing chains, and optimizing resources as a foundation for economic growth [10]. The water supply, food supplies, and energy are the three most crucial resources for human society's development. Because of the intrinsic links between them, it is critical for handling the three sectors all of them. The WFE relationship must be optimized in order to achieve the committed sustainable development goals (SDGs) that were ratified by the United Nations in September 2015 [11].

Rice is an essential food for over half of the global population. Rice plants have long been the most important crop on the Asian continent. Rice is becoming increasingly important for national food supply in Asia and internationally. Rice is one of the world's most important processed foods [12]. Irrigation has been used to increase agricultural production since ancient times and will continue to be used in future nutrition efforts. Because of the high degree of rice consumerism, previously low-priced rice types became more expensive. Water scarcity is becoming a critical issue due to the increasing demands of various sectors and environmental damages caused by the excessive exploitation of natural resources. As a result, efficient management of irrigation systems has become essential [13].

During the dry season, there is a tension between agricultural water withdrawal and hydropower generation. Meanwhile, Oryza sativa L., or rice, is a plant that is highly dependent on water all over the world, with irrigation accounting for more than 43% of global agricultural demand for water [14]. It is critical to boost water productivity and conserve water resources through water control in order to solve the worldwide water problem. Efficient water management in paddy production is crucial to ensure the provision of sufficient water supplies in the paddy field. Water is a valuable and limited resource that needs to be managed effectively to meet the increasing demand of paddy cultivation [15]. The significant potential of water resources, besides being used for agricultural irrigation, has begun to be developed into a village-based tourism destination [16].

(1). Improving irrigation efficiency: With SOP, irrigation officers will have clear guidelines on how to manage irrigation; (2). Ensuring the continuity of rice production: With the SOP, irrigation officers can ensure that the water used for irrigation is in accordance with the needs of rice plants and is not excessive or lacking; (3). Improving the quality of crop yields: irrigation officers can follow established procedures to improve the quality of crop yields through the use of fertilizers and pesticides at the right time and in the right amount; (4). Reducing the risk of natural disasters: In SOPs, there is usually guidance on how to deal with natural disasters, such as floods or droughts.; (5). Strengthening water management systems: SOPs can help strengthen water management systems in villages, by setting irrigation schedules, determining the required volume of water, and ensuring that the water used for irrigation comes from safe and clean sources. Interventions after a sanitary survey: screen provision, warning signs, diversion ditch, impervious barrier [17].

(BUMDes) is established with the aim of generating profits. Hence, various operational aspects such as financial management, marketing, human resources, product quality, and innovation become expectations of stakeholders involved in its management and the most important is improve the economic welfare of rural communities [18]. The task of balancing the sustainability of the economy and the environment of rice production systems is challenging. To provide insights for future food production and environmental sustainability goals, integrated research initiatives that account for both biophysical and social components are required [19]. The rural populace is defined as individuals who have a common bond and mutual support. Therefore, it is essential to establish a stable democracy that can accommodate the inputs and aspirations of people in advancing their villages through Village Owned Enterprises [20].

The water supply directly affects the level in the grain of rice. Since irrigation water is contaminated, it makes sense to develop an agronomic plan that focuses on water management, either alone or in conjunction with other relevant solutions [21]. The implementation of BUMDes faces several issues such as insufficient community involvement in its management, insufficient empowerment of the community by the village government to develop BUMDes, and underperforming BUMDes operations. Moreover, there is a lack of capable Human Resources to manage BUMDes effectively [10]. These obstacles include:

- 1. Limited knowledge and skills: BUMDes managers and members have limited knowledge and skills in business management, financial management, and marketing.
- 2. Limited resources: BUMDes faces limited resources, including funding, human resources
- 3. Lack of community participation: The community's lack of participation in BUMDes management and activities hinders the implementation of its programs and limits its impact on the community's economic growth

The performance of a program can be influenced by the allocation of resources, hence it requires careful consideration. The essential resources needed for a program include the legal framework, human resources, budget, infrastructure, and institutions [22]. Due to the unavailability of SOPs in implementing the process of irrigating rice fields in Ngadirejo Village, Widang District. We will provide input in the preparation of the Standard Operating Procedure (SOP) for irrigating rice fields which starts from several stages, namely : **1. Preparation and Land Identification Phase :** Which in this stage includes: Preparation of a budget and a work program proposal for paddy irrigation; Prepare the administration and documents needed as supporting materials for the rice field irrigation program; Establish policies, prepare funds and infrastructure, and coordinate program implementation. Training is conducted for maintenance procedures for each component, starting from solar cell panels, supporting poles, control systems, and pumps [23].

**2. Irrigation Planning :** Which in this stage includes : Planning the irrigation system and making an irrigation schedule that is submitted to the village head; Approve or disapprove of the rice field irrigation plan that has been made by the working group; Collect data and information needed in irrigation planning, such as the area of agricultural land, rainfall, water availability, and preparation of documents regarding rice field irrigation

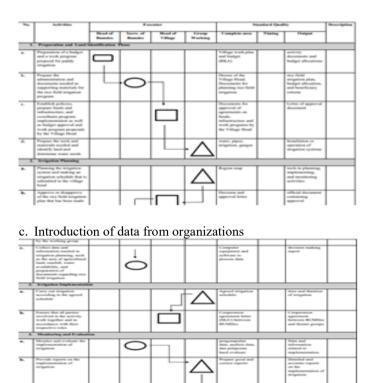
**3. Irrigation Implementation :** Which in this stage includes : Carry out irrigation according to the agreed schedule; Ensure that all parties involved in the activity work together and in accordance with their respective roles

**4. Monitoring and Evaluation :** Which in this stage includes, Monitor and evaluate the implementation of irrigation; Provide reports on the implementation of irrigation; Evaluate the monitoring and evaluation results from the working group's report and then take corrective action if necessary. With a picture of the implementation of the SOP as follows :



### a. Introduction of data from organizations

b. Introduction of data from organizations



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### 4 Conclusion

Based on the analysis of the implementation of Standard Operational Procedures (SOP) for BUMDES in Ngadirejo Village, Widang District in irrigation of Hippa rice fields, it can be concluded that the implementation of SOP is essential for the success of BUMDES. The study found that the implementation of SOP has a positive impact on the management of BUMDES in various aspects, such as financial management, human resource management, and marketing strategies.

SOP (Standard Operating Procedures) play a critical part in assisting the village's role and contribution to the 16th SDGs. SOP contributes to the development of good, transparent, accountable, and participatory village governance. Village administrations can improve the efficiency and quality of public services, ensure justice and defend human rights, and stimulate community participation in decision-making by implementing standardized SOPs. Furthermore, the importance of SOP stems from its role in establishing good governance, fostering transparency, fairness, and community engagement, as well as promoting good and sustainable governance at the village level. As a result, SOPs play an important role in achieving the 16th SDG, and sustainable governance at the village level.

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