

## Legal Framework of Community-Based Water Resource Management to Achieve SDGs and “No One Left Behind”

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### Abstract

This study aims to examine community-based water resources management implemented in Umbul Ponggok Village, Klaten Regency, Central Java, Indonesia, based on the Water Resources Law (2019) and was subsequently modified by the Job Creation Law (2023), which prioritizes the well-being of the local community and in order to achieve sustainable development goals (SDGs), especially the principle of No.-One Left Behind. Community involvement in water resources management is very important. Therefore, communities no longer only act as consumers but also as those who determine their own needs for water resources. One area that has implemented this approach is the community in Ponggok Village, Klaten Regency. Therefore, this study addressed the compliance of the community-based water resource management in Ponggok Village, Klaten Regency, with the existing regulations. The study also determined whether the community complies with the principles of Sustainable Development Goals (SDGs) through a juridical-empirical method. Data was collected through documentation and interviews, and qualitatively analyzed. The result showed that the practices of water resource management in Ponggok Village aligned with existing regulations. However, a notable gap existed in adhering to reporting regulations, attributed to a lack of awareness among the village apparatus. Then, the water resource management in Ponggok Village has fully aligned with the current regulations and the SDGs' principles.

**Keywords:** Community-Based Water Resources; Management Policy; Sustainable Development Goals.

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## INTRODUCTION

Sustainable development has become a global agenda with the mission of preserving a balanced development for human life in the present and the lives of future generations. This mission is outlined in the Sustainable Development Goals (SDGs) agreed by the nations around the world with the urgency that development is not only promoted solely to achieve maximum economic benefits, it must concern all aspects involved in human life without exception. In its implementation, sustainable development applies universal principles, integration principles, and inclusive principles. Sustainable development is an international agreement to drive countries in the world to implement this mission into their national policies. As one of the countries that agree to SDGs, Indonesia shall implement sustainable development into government policies, either at the central

or regional levels. One of the policies put forward and included in the SDGs aspect is the water resources management aspect, which is included in the sixth mission, namely clean water and sanitation. Since water resources are essential to human existence, sustainable development is closely related to them (Kilemo, 2022). The primary foundation of civilization is water, which is becoming increasingly scarce in arid regions due to exponential growth (Assaf et al., 2021). So, it is necessary to regulate the management of water resources based on SDGs.

Regulations regarding clean water and sanitation are closely related to the right to water and the management of water resources which is the state's obligation for the interests of citizens (public interest) to be used as much as possible for the prosperity of the people, as mandated in Article 33 paragraph (3) of the 1945 Constitution 1945 of Republic of Indonesia (Chandranegara, 2016). Rules regarding water resources are also regulated in the Water Resources Law (2019) as regulations that provide a legal paradigm that prioritizes people's prosperity and aligns with national development goals (Nugroho, 2020). In the latest developments, policy changes are also found in the Job Creation Law (2023).

The environmental analysis of water resource dynamics has often focused on the biophysical aspects, with limited studies centered on local wisdom. However, the study of human behavior in this context is equally essential, specifically given the notion that water is a common resource used extensively and for varied purposes. The study of human behavior, specifically their willingness and ability to participate in meeting household water needs, assumes critical importance (Purwanto et al., 2016). Effective community-based water resource management tends to succeed based on the responsiveness of the villagers. This action is intended to encourage community participation in various aspects, including financial contribution, facility management, and voluntary maintenance. The aforementioned approach fosters a sense of ownership, which in turn plays a pivotal role in promoting sustainable practices and nurturing enduring community commitment.

Community-based water resources management is a management system implemented jointly between local communities and the government. Van Koppen defines community-based water law as a set of largely informal institutional, socio-economic, and cultural regulations that shape the development, use management, allocation, quality control, and productivity of water resources by communities (Van Koppen et al., 2007). These rules are based on local wisdom embedded in local government structures and rules that exist in kinship groups, tiny hamlets, larger communities, and clans and groups that have the same ancestors. In developing countries, even these rules often only exist in verbal form. The

development of community-based water resources management is expected to contribute to poverty alleviation (Van Koppen et al., 2007).

Unlike environmental-based water resources management, which focuses on preventing environmental damage, the terminology of community-based water resources management is based on societal factors. Community factors are indicators of success: a person's sense of ownership, organized management, the group's ability to operate and maintain the system, community participation in all activities, socio-cultural aspects related to water resources, and financial and administrative management capabilities. Therefore, this factor is at the core of community-based water resources management because the approach requires the community to take an active role or participate in every stage of water resources management, from the planning stage to the implementation stage, including maintenance. It could also cater to the needs of the rural population and foster socioeconomic development (Tantoh et al., 2020).

Poverty alleviation is the task of the state as a force that can change (a tool of social engineering) exploitative economic-social relations towards new economic-social relations that bring prosperity through law (Dayanto, 2013). In its implementation in relation to water resources management, the state assigns duties to villages to encourage community initiatives and participation in managing water resources in their village areas. One example of a village that has initiated water resources management with community participation is Ponggok Village, located in the sub-district. Polanharjo, Klaten Regency, Central Java. Ponggok Village has successfully reduced poverty and increased village income through community-based water resource management and tourism development based on the village's water resource potential. Ponggok Village, which was previously a disadvantaged low-income village, has managed to recover with village income that can now reach billions of rupiah (Kumparan, 2022). Based on this success, the author wants to examine whether the regulations regarding community-based water resources management in Ponggok Village are implemented by statutory regulations to see whether normative regulations actually accommodate this system well. The author also focuses on the application of Sustainable Development principles to examine whether the success achieved by Ponggok Village is in line with the global agenda according to the principles of SDGs.

The challenges and opportunities that exist in Ponggok Village provide a different perspective for analyzing the legal framework for water resources management. Understanding community-based water resources management is crucial for developing comprehensive solutions that suit community needs and the

broader benefits of sustainable development. This paper not only aims to analyze the legal framework but also contributes to the international community. By highlighting the success of Ponggok Village in implementing community-based water resources management, this article will provide broader insight into the practice of community-based water resources management in Indonesia, as there is only few amount of research discussing this matter.

## RESEARCH PROBLEM

The present study focused on community-based water resource management implemented in Umbul Ponggok Village, Klaten Regency, highlighting two significant issues to be address. Firstly, it examines whether the village's ongoing community-based water resource management adheres to prevailing regulations. Secondly, the study investigated the integration of SDGs into the community-based water resource management practices in Umbul Ponggok Village.

## RESEARCH METHODS

This legal investigation falls within the category of juridical-empirical or non-doctrinal study, and its objective is to approach the examined issues in a legal manner that aligns with real societal circumstances. An essential source of legal material in this research is legislation. This research also recognizes regulations related to water resources (Andika et al., 2022). Employing a qualitative approach, this study generated descriptive-analytical data to delve into the subject matter. Descriptive qualitative research is conducted by describing the data as it is and explaining the data with qualitative explanatory sentences (Pradana et al., 2023). The data collection methods include literature or document review and in-depth interviews. The interview session was held with informants from Ponggok Village, in the Polanharjo Subdistrict of Klaten Regency, Central Java. The present study employed qualitative data analysis involving distinct stages. These stages include data collection, qualification, linking theoretical concepts to the identified issues, and ultimately deriving conclusions that define the study findings.

## DISCUSSION

### 1. Legal Frameworks of Water Resource Management in Indonesia

Gaining insight into the history of water resource management regulations in Indonesia is essential due to its evolution through various phases. During the New Order era, the regulatory framework was governed by the Irrigation Law (1974). Transitioning to the reform era, the regulation was amended with the enactment of the Water Resources Law (2004). This new regulation embraced a market-based paradigm for managing natural resources. Unfortunately, this law led to

contradictions, as it clashed with tenets enshrined in the Constitution. This divergence arose primarily from its initiation of water privatization through the involvement of private entities. The Constitutional Court issued a pivotal verdict on February 18, 2015, under case Number 85/PUU-XI/2013. This ruling effectively nullified the substantial aspects of the Water Resources Law (2004) and reinstated the application of the Irrigation Law (1974).

In a sequential progression, on October 16, 2019, the government enacted the Water Resources Law (2019). Implementing this recent legislation is anticipated to establish a legal paradigm that prioritizes community prosperity while aligning with national development goals (Nugroho, 2020). Finally, there was a subsequent amendment to the Job Creation Law (2020), further refined through the enactment of Government Regulations in Lieu of Laws (2022). Given these dynamics, it is important to understand the ever-evolving policy landscape governing water resource management till the present.

According to Maskur, water resource management in the Water Resources Law (2004) is based on four fundamental principles. Firstly, the management of water resources is guided by a set of principles, including sustainability, balance, public utility, integration and harmony, justice, independence, as well as transparency, and accountability (Article 2). Secondly, the approach towards water resources is characterized by comprehensiveness, integration, and environmental awareness, with the ultimate goal of achieving sustainable benefits that contribute to the community's overall welfare. Thirdly, water resources encompass social, environmental, and economic functions harmoniously orchestrated and realized (Article 4). Lastly, the state bears the responsibility of guaranteeing access to water for basic daily needs, ensuring individuals can sustain a healthy, clean, and productive lifestyle (Article 5) (Azil Maskur, 2019).

Furthermore, the water resource management system is further elucidated in Articles 6, 7, 8, 9, and 10 of the aforementioned law. This legal framework outlines the use of both usage and business rights within the management process. A critical concern arises from Article 9 that water business rights can be granted to individuals or business entities by either the central or local government, in alignment with their respective authority. This specific provision introduces a potential vulnerability for capitalization, thereby posing a significant threat to the sustainability of communities reliant on water resources.

There are several aspects, according to the Water Resources Law (2019), namely conservation, utilization, and control of water damage. The conservation aspect includes quality management, preservation, and protection. The utilization

aspect involves development, usage, provision, and management. The control of water damage encompasses prevention, mitigation, and restoration.

The enactment of the Water Resources Law (2019) is a response to rectifying the shortcomings of the prior paradigm that failed to meet the expectations of the Indonesian community regarding the Water Resources Law. Driven by the recognition of the inadequacies and inefficiencies within the management framework established by the Water Resources Law (2004), which also has the potential risk of privatization by individuals, the latest law introduces a fresh concept known as cooperative management. Within this cooperative management system, a collaborative synergy is fostered between the local community and the government. This approach is essentially synonymous with community-based water resource management, emphasizing joint endeavors and active local participation.

The amendments to the Job Creation Law address several significant aspects, including the involvement of Regional Governments in water resource management and the authorization of various governmental parastatals (Suparmoko, 2020). These encompass the Central, Provincial, Regency, or City Governments, as well as Villages. The amendments proposed a partial delegation of authority from higher-level governments to their lower-level counterparts while still complying with the Standard Norms, Procedures, and Criteria (NSPK) mandated by the Central Government. Additionally, the Job Creation Law aims to simplify business licensing procedures for water resource usage within the boundaries established by the Constitutional Court. This simplification, however, should not compromise the priority of meeting the essential daily needs of the community. The amendments established the State as the ultimate authority over water rights by the Standard Norms, Procedures, and Criteria (NSPK) determined by the Central Government (Budie Yuwono, 2021).

Article 53 Paragraph (4) of the Job Creation Law brings amendments to Article 17 of the Water Resources Law (2019). This section outlines the specific responsibilities assigned to Village Governments. These duties encompass the following key aspects: (a) assist the Central or Regional Governments in the management of water resources within their respective territories. This management must align with the principle of public utility, (b) promote initiatives and encourage active community participation in the management of water resources in the vicinity, (c) participate in maintaining the overall quality, effectiveness, order, and efficiency of water resource management implementation, and (d) collaborate with the Regency or City Regional Government to ensure that the fundamental daily water needs of the village

residents are met. However, it is underscored that under letter b of this article, Village Governments have the authority to facilitate and promote community engagement in water resource management. It can be reasonably inferred that the Job Creation Law continues to advocate for a water resource management approach that is centered on active community involvement.

Nestled within Klaten Regency, Ponggok Village is endowed with an assortment of water sources that traverse its expanse. In 2002, the village entered into a collaborative alliance with Aqua, a bottled water company. This partnership wielded a transformative influence, significantly elevating the living standards of the community and yielding tangible enhancements. The water resources gracing Ponggok Village underwent a remarkable metamorphosis, evolving into versatile domains that served multiple functions. These revitalized water bodies not only became alluring focal points for tourism but also thrived as vibrant centers for fisheries. Additionally, they assumed a pivotal role in irrigating the rice paddies that form an integral part of the village agricultural landscape.

Based on a comprehensive study conducted by the Public Works and Spatial Planning Office (DPUPR) of Klaten Regency, it was reported that the acquisition and utilization of water resources in Ponggok Village were originally initiated and developed autonomously by the village itself. However, the distribution network to the rice fields for irrigation purposes is overseen by the Klaten Regency Regional Government. All water resource management activities in Ponggok Village were carried out by the community and bolstered by the engagement of the Village-Owned Enterprises (VOE). As for financial considerations, aid, and funding, the Central Government extends its support through allocations from the State Budget.

The study conducted in Ponggok Village revealed insights from an interview session with the Village Head, Junaedi Mulyono. It highlighted the active community involvement in water resource management. A significant contributor to the prosperity of the village is Umbul Ponggok, a prominent tourist destination that has propelled Ponggok into a position of affluence among rural communities. However, attention must be paid to the use of water resources for business purposes, such as village tourism. Such endeavors must adhere to the principles stated in Article 46 of the Water Resources Law. Based on Article 46 Paragraph 1 (e) of the law, the priority on the use of water resources for business activities is granted to entities such as State-Owned Enterprises (SOE), Regional-Owned Enterprises (ROE), and Village-Owned Enterprises (VOE). The interview clarified that Umbul Ponggok, a commercial water resource, is managed by the Village-Owned Enterprise of Ponggok Village. This management approach aligns with the

regulations stated in Article 46, Paragraph 1 (e) of the Water Resources Law, reaffirming its compliance with established guidelines for business purposes.

The Village Head of Ponggok has been actively promoting community involvement in management efforts. Due to these proactive endeavors, Ponggok Village has effectively embraced the principle of community-based water resource management. This approach extends beyond the oversight of water resources, encompassing their practical use and the empowerment of the local communities within the village. In addition, the community manages three umbul (natural springs). This dedication resonates with the essence of Article 17, Letter B of the Water Resources Law. The aforementioned approach assigns the Village Head of Ponggok with the responsibility of fostering active participation of the local community in the management of water resources within their vicinity.

According to the village head of Ponggok, there are reports that the village responsible for managing the water resources must send them to the relevant authorities every month. During the interview, the Village Head was unaware of these reporting requirements until informed by the government officials. This scenario underscores the importance of proactive measures by government bodies, including the provision of notifications or the organization of awareness campaigns, particularly for villages deeply involved in water resource management. Furthermore, this proactive stance is essential due to the prevailing lack of understanding among overseeing entities in the region regarding their reporting responsibilities. The fact remains that there is still a significant awareness gap regarding water resource management among various stakeholders, including both the local community and governmental agencies.

## **2. Implementation of SDGs Principles in Community-Based Water Resource Management in Ponggok Village**

Indonesia, a proactive member state of the United Nations (UN), is actively engaged in the pursuit of sustainable development through the implementation of SDGs. Its commitment to implementing SDGs as a UN member state is enshrined in the legislation, specifically known as Presidential Regulation Number 111 of 2022. This regulation focuses directly on the implementation of Sustainable goals. Article 2, paragraph (1) of this regulation outlines the objectives of SDGs: (a) sustaining the continuous improvement of the economic welfare of the community, (b) ensuring the perpetuation of harmonious social dynamics and sustainability within the community, (c) safeguarding environmental quality and the facilitation of inclusive development, (d) the establishment of governance systems that contribute to an improved quality of life for successive generations. The SDGs are enshrined in the UN document titled Transforming Our World: The 2030 Agenda



for Sustainable Development. This globally endorsed document unites nations in their collective commitment to principles of sustainable development (Abubakar & Handayani, 2019).

Sustainable Development is expected to be a solution in meeting basic human needs, integrating development and protecting the environment, achieving equality, guaranteeing socio-cultural self-determination, and maintaining ecological integrity (Klarin, 2018). To achieve these goals, the implementation of the SDG agenda applies principles that are in line with the concept of sustainable development, namely universal principles, integration principles, and inclusive principles, to ensure that no one is left behind or no one is left behind. By implementing the universal principle, SDGs embarked on a transformative journey that acknowledges the fundamental rights of the community. This principle calls upon all actors to actively participate in the collective endeavor to attain SDGs. The integration principle is intended to ensure that sustainable development is carried out in an integrated manner across all social, economic, and environmental dimensions. The intent is to avoid a one-dimensional focus and instead cultivate decisions that incorporate the multifaceted dimensions of development, resulting in a holistic and genuinely sustainable trajectory.

By embracing the inclusive principle, the implementation of SDGs encompasses the engagement of all stakeholders, fostering equitable access and opportunities for every societal strata. In addition, this principle is firmly rooted in the notion of fairness. Based on these principles, SDGs fundamentally strive to achieve long-term economic and environmental stability. This achievement is realized through the integration of economic, social, and environmental dimensions, which are understood and considered in decision-making processes for policy determination (Emas, 2015). Thus, the conceptualization of inclusive development in the Sustainable Development Goals (SDGs) is built on respect for human rights and the achievement of social justice, which form the basis of the 17 goals and 169 targets of the SDGs (Gupta & Vegelin, 2023).

The implementation of SDGs is carried out through government programs at both the central and regional levels. At the regional tier, which encompasses provinces, districts or cities, sub-districts, and even villages, programs and policies are expected to align with the SDGs agenda while adhering to the fundamental principles of universality, integration, and inclusivity. This study delved into a specific analysis, examining how the principles of universality, integration, and inclusivity are put into action within programs operating at the village level. The focus is directed toward community-based water resource management in Ponggok Village, Polanharjo Subdistrict, Klaten Regency, Central Java.

At the heart of community-based water resource management lies a focus on addressing the specific needs and preferences of the local population in terms of its usage (Van Koppen et al., 2007). Ponggok Village exemplifies this approach, where water resources are harnessed to drive the advancement and prosperity of the community. A notable example of this regard is the transformation of a water resource into a popular tourist destination named Umbul Ponggok. This tourist site is effectively managed by the Tirta Mandiri Ponggok VOE. According to the Village Head, the revenue generated from managing the tourist attraction is allocated in a manner where forty percent (40%) contributes to the village income and sixty percent (60%) benefits the VOE revenue. Apart from managing the Umbul Ponggok tourist site, the VOE also oversees a range of other business units. These include the rental of a multipurpose hall at the village office, establishment of Tirta Mandiri homestay, operation of the village store, management of clean water services, provision of credit and savings facilities, offering fish pond, facilitating culinary kiosk, and vehicle rentals, as well as Ponggok ciblon, and village studies.

Additionally, a remarkable example of community involvement is showcased through the 1 House 1 Pond program. Under this initiative, every household in Ponggok Village is mandated to use water resources in their compounds to cultivate red tilapia fish (Shihab, 2018). This transformation of untapped potential into functional fish ponds for tilapia farming epitomizes water resource management rooted in community engagement, with the direct Participation of the residents. The success of this endeavor is based on the collective willingness and cooperation of the villagers, who collaboratively repurpose previously neglected and polluted ponds into valuable assets with notable economic benefits.

To uphold the preservation of springs within Ponggok Village, a program called Water Defender was instituted. This program comprises a group of individuals representing various stakeholders responsible for water resource management in the village. It includes community members, Village-Owned Enterprise (VOE), and private entities. Their collective responsibility is to ensure the preservation and sustainability of the management of the springs. The protection of these springs is achieved through dedicated reforestation efforts carried out in the Merbabu and Merapi regions. These areas serve as the primary sources of the springs in Ponggok Village. By diligently pursuing reforestation initiatives, these springs are nurtured and protected, ensuring their enduring health and ecological equilibrium.

The results of community-based water resource management strategies were allocated to funding village empowerment programs, which in turn have a broad

impact on various development sectors, including education, health, economy, and social welfare. Specifically, within the education sector, Ponggok Village has introduced the 1 House 1 Scholar scholarship program tailored for students who are pursuing higher education. Scholarship recipients were obliged to promote Ponggok Village among fellow students to enhance its recognition as a tourist destination. In addition, Participation from the community creates new local institutions while bolstering and empowering the ones that already exist (Tantoh et al., 2021).

In terms of healthcare, Ponggok Village proactively contributes by facilitating health insurance payments through a comprehensive protection program. This initiative involves the village government covering the health insurance costs (Social Security Agency on Health/BPJS) of its residents, particularly using the revenue generated from water resource management. Addressing social welfare, the village extends its support to marginalized groups, implementing a range of social protection programs. These programs included dedicated welfare schemes for the elderly, initiatives for housing rehabilitation, provisions for clean water and sanitation facilities, and strategic community settlement planning. These combined efforts work towards promoting social unity and inclusivity within the village.

Additionally, to enhance the human resource quality in Ponggok Village, a comprehensive program was initiated. This program involves women from the Family Welfare Empowerment (PKK) organization and is centered on capacity-building initiatives. Capacity-building for human resources also extends to children, village, and VOE management, as well as the Tourism Awareness Group (Pokdarwis).

The evaluation of the community-based water resource management programs is guided by the principles of SDGs, such as universality, integration, and inclusivity. In addition, universality is achieved by involving all stakeholders. The approach adopted by Ponggok Village with respect to community-based water resource management actively engages both the community and the government in collaborative efforts. This effort is evident through initiatives like the 1 House 1 Pond program, which directly involves the community in water resource management activities. The role of the village government is also essential in this approach, as exemplified by the Tirta Mandiri Ponggok VOE, which is responsible for overseeing the management of the Umbul Ponggok tourist attraction.

Subsequently, the principle of integration underscores the comprehensive nature of development, encompassing social, economic, and environmental dimensions. The involvement of these dimensions is evident in community-based

water resource management initiatives in Ponggok Village, such as the 1 House 1 Pond program, Jamkesdes (Health Insurance for Village Residents), and the Water Defender programs. The 1 House 1 Pond program repurposes ponds in front of households into mediums for cultivating red tilapia fish, thereby providing both economic benefits and aligning with environmental sustainability goals. Similarly, the Jamkesdes program operates within the social dimension. It extends essential health insurance coverage to all village residents, ensuring their overall well-being while fitting seamlessly into the broader development framework. The environmental dimension is addressed through the Water Defender program, which is committed to safeguarding and enhancing the benefits of the springs. This program involves cooperative responsibility among the village government, the community, and private entities that share these resources. This collaborative approach underscores the mutual significance of environmental preservation and communal progress.

Furthermore, the principle of inclusivity is firmly rooted in the commitment to providing equal economic opportunities for all community members. It means that every individual, regardless of their background or social status, should have an equitable chance to participate in economic activities and reap the benefits. This approach ensures that no specific group, including vulnerable populations like the elderly, women, people with disabilities, or the less privileged, is excluded from participation or benefiting from a given policy. Guided by the principle of inclusivity, community involvement is integrated into various aspects of policy formulation, decision-making processes, and the distribution of authority and responsibilities. This integration guarantees that policies are well-aligned with their intended goals while also fostering a sense of shared ownership (Sudarmono & Dkk, 2021). This goal aligns with the UN's 2030 Agenda, which recognizes that to achieve sustainable development, the SDGs must be achieved for all (Montanari et al., 2021).

Within the scope of community-based water resource management in Ponggok Village, deliberate efforts have been made to include vulnerable groups through a variety of local programs. These programs are designed to offer social assistance to those who are more susceptible to challenges. Specifically, support is extended to the elderly and underprivileged families through a comprehensive range of social protection initiatives. This support encompasses various welfare measures for the elderly, rehabilitation projects for housing, enhancements in clean water and sanitation facilities, as well as strategic plans for community settlements. Meanwhile, the overarching principle of inclusivity has been upheld, and there exists an opportunity for enhancement, particularly regarding the involvement of the community, specifically the vulnerable groups, in the processes

of policy formulation and decision-making. There is a need to bolster community participation, thereby providing a platform for expressing aspirations and concerns.

The implementation of community-based water resources management programs in Ponggok Village has fully aligned with the principles of SDGs, especially the principles of no one left behind. All the principles of SDGs are reflected through various programs that involve parties from diverse interests and communities. The profit gained from the programs has also been utilized to empower and prosper the villagers, who have been involved in all levels of society from any strata and social backgrounds.

The implementation of community-based water resources management in Ponggok Village has impacts on the environment and socio-economy. It cannot be denied that population growth and increased community activities in Ponggok Village can result in changes in environmental functions that have a negative impact on sustainability, especially on water destructive power. The Ponggok Village Government, which has the authority to regulate and implement water resources management, must make policies that include conservation, utilization, and control of water damage, as well as a balance of conservation and utilization efforts. Thus, the Ponggok Village government can implement environmentally sound water resources management. Environmental-friendly water resources management is a management system that emphasizes and is concerned about the environment carrying capacity and the balance of the ecosystem. The balance of the ecosystem is aimed at maintaining water scarcity. This sustainable management is aimed at the interests of the current generation and future generations. This concept is characterized by the expansion of market mechanisms by creating relationships between water resources and humans, as well as relationships between humans (Wulandari & Ilyas, 2019). According to Manalu, environmental-friendly water resources management is an effort to utilize water resources in an environmental manner, where the use of water resources is done by minimizing the environmental damage so that the water resources can be managed and used sustainably (Manalu, 2019).

The existence of a community-based water resources management system regulated in the Water Resources Law (2019) is to encourage active community participation in the management of water resources in all regions of Indonesia. Suppose you look at Article 17 of the Water Resources Law (2019). In that case, it can be seen that the village government has the duty to encourage the initiative and participation of village communities in managing water resources in their area, including the Ponggok Village government. Active community participation in

policy-making, planning, and implementation of water resources management can have a positive impact on the environment in Ponggok Village. Without community participation, environmental conservation and management efforts are likely to end in failure. This failure often happens in every water resource management process that is carried out without the involvement of local communities (Prastya & Putri, 2017). An example is the Citarum area, which is experiencing environmental damage and water pollution along the Citarum River due to the lack of community participation in managing water resources in the area (Manalu, 2019).

In line with these various issues, the efforts made by the Ponggok Village government to prevent environmental damage caused by the management of water resources in Ponggok Village are to encourage the community to participate actively in preserving the environment. According to the Head of Ponggok Village, Junaedi Mulyono, it cannot be denied that any activity involving the search for water resources will definitely have a direct impact on environmental damage. Therefore, the Ponggok Village government created a "1 house 1 pond" program policy, which is expected to prevent environmental damage in Ponggok Village.

Community-based water resources management has an impact on the socio-economic conditions of the community in Ponggok Village. One of the social impacts felt is the loss of people's habit of bathing and washing clothes at Umbul Ponggok because it has been managed as a tourist attraction (Arinda, 2016). This action is done by BUMDes by providing understanding to the surrounding community so that Umbul Ponggok, which is now a tourist spot, can provide comfort to visitors. The village community has also become more modern with the status of a tourist village given to Ponggok Village. Society has become more modern, transforming professions from being farmers or fish cultivators to traders or tourism service providers, both of which have an impact on improving the economic conditions of village communities (Parantika, 2020).

## CONCLUSION

Based on the study and subsequent discussions, it was concluded that (1) The management of water resources in Ponggok Village was primarily overseen by the community and the Village-Owned Enterprises (VOE) within the locality. Meanwhile, the village apparatus was responsible for acquiring these resources, specifically for irrigation and agricultural purpose. The Klaten Regency government was tasked with supplying water. Overall, the practices of water resource management in Ponggok Village aligned with existing regulations. However, a notable gap existed in adhering to reporting regulations, attributed to a lack of awareness among the village apparatus. In terms of management progress,

most provisions were followed based on regulations, except for a requirement that the Village Head had not been able to fulfill. (2) The community-based water resource management in Ponggok Village was implemented in line with the principles of SDGs, universality, integration, and inclusivity. The benefits derived from this management approach were used to empower the community and elevate its overall well-being, involving individuals from diverse social strata. However, some areas need improvement, specifically the level of community participation, particularly among vulnerable groups, in processes of policy formulation and planning

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