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Implementation of Pamsimas Policy in the Provision of Clean Water for the Community in Padang Pariaman District West Sumatra Province

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Abstract: Environmental management in harmony, harmony and balance with environmental functions is the embodiment of sustainable development. With the principles of good environmental governance, organizing government is more open (open government) so as to provide space for the community to participate. Pamsimas is a flagship program in the provision of drinking water and sanitation in rural/kelurahan areas to encourage an increase in the number of people who can access drinking water and sanitation services. The population growth in Padang Pariaman Regency in 2020 reached 430,626 people while in 2021 it reached 433,626 people. Where the population growth rate is 0.74%, illustrating the importance of providing clean water sources, especially by encouraging community involvement. Implementation of Pamsimas using a community-based approach means making the community the main actor and person in charge of implementing activities. The method used for the assessment is a literature study using secondary data. Participation of the community, government and various related parties can provide reinforcement and commitment so as to achieve the availability of water sources with an insight into sustainable development.

Keywords: Community participation; Pamsimas; Provision of drinking water.

Introduction

Environmental management encompasses the prevention, mitigation of damage, pollution, and the restoration of quality, which form a unified space involving all elements, forces, conditions, and living beings, including humans and behaviors that impact the environment, the continuity of life, and the well-being of both humans and other living beings. As it develops, it is closely interrelated (interdependence) and holistic in nature regarding programs and policies for sectoral and regional development (Edorita, 2014).

Water resources refer to water, sources of water, and the energy contained within them. Water usage encompasses all human and environmental activities. The composition of water on Earth is as follows: 97% is saline, and 3% is fresh water, most of which is locked in glaciers and polar ice. Groundwater, located beneath the surface, dominates the availability of fresh water compared to surface water or atmospheric water. The potential of fresh water serves as a renewable source of clean water. The increasing human population is directly proportional to the demand for water, which exceeds the capacity of available fresh water supplies. According to the United Nations (UN), by 2050, the world's population is expected to reach 9.8 billion, with the population growth concentrated in countries such as India, Nigeria, the Congo, Pakistan, Ethiopia, Tanzania, the United States, Uganda, and Indonesia. This population growth rate will result in limited water availability (Lestari et al., 2021).

The provision and sustainability of water resources have been set as targets 6, 12, 13, 14, and 15 in the Sustainable Development Goals (SDGs). Indonesia's

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water resource potential reaches 3,906.5 billion m3 per year. This potential reflects the availability and sustainability of water (Strategic Issues in Reservoir Management for Raw Water Sources in Bintan Island, et al., 2021).

Sustainable environmental management is a human right, as mandated in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states, "Everyone has the right to live in physical and spiritual well-being, to reside, and to have a good and healthy environment and the right to obtain health services." Therefore, its implementation is well-ensured and regulated in Law No. 32 of 2009 concerning Environmental Protection and Management (UUPPLH). Several rights outlined in the UUPPLH include: (1) The right to a good and healthy environment as a human right; (2) The right to environmental education; (3) The right to access information; (4) The right to participate; (5) The right to submit proposals or objections to planned efforts or activities that may cause environmental impacts; (6) The right to play a role in environmental protection and management; (7) The right to file complaints due to suspected environmental pollution and/or destruction; (8) The right to be free from criminal and civil charges when fighting for the right to a good and healthy environment.

The UUPPLH mandates that the use of natural resources must be harmonious, balanced, and in accordance with environmental functions. Thus, planning, policies, and development programs should be grounded in environmental preservation for sustainable development (Edorita, 2014).

Access to clean water is a right for every citizen, and the government has ensured access to clean water through Law No. 17 of 2019 concerning Water Resources. Article 6 states that the state guarantees the people's right to water to meet their daily basic needs for a healthy and clean life in sufficient quantities, with good quality, safety, sustainability, and affordability.

The management of access to clean water follows the principle of good governance, involving the private sector and the public. Good environmental governance involves a more open government (open government), which provides space for the community to participate in governance, particularly in matters that affect them. Good governance in environmental management relates to the implementation of governance principles, such as legal certainty, balance, non-interference in authority, fairness, appropriateness, addressing emerging expectations, and the principle of serving the public interest (Nopyandri, 2014).

Public participation in environmental management can have a positive impact, including providing information to the government, increasing the community's willingness to accept government decisions, preventing lawsuits from the public, democratizing decision-making, and protecting public interests because the struggle for the right to a clean and healthy environment cannot be pursued criminally or civilly (Edorita, 2014).

In achieving universal access to drinking water and sanitation, the Indonesian government has shown strong commitment to this target by improving public health through the provision of drinking water and environmental sanitation infrastructure. Therefore, the Community-Based Drinking Water and Sanitation Development Program (Pamsimas) has been implemented since 2008. The funding for Pamsimas activities comes from the state budget (APBN), regional budgets (APBD), and community contributions.

Pamsimas is a flagship program for providing drinking water and sanitation in rural and urban areas to promote the increase in the number of people who can access drinking water and sanitation services, aiming to achieve a clean and healthy lifestyle. The target is to achieve 100% access to drinking water and sanitation by 2024.

The implementation of Pamsimas uses a community-based approach, meaning that the community becomes the main actor and responsible party for the activities. Thus, support from the management units at the central, regional, and village/community levels, as well as facilitators, is crucial to the success of this program (Kosanke, 2019).

Method

The method used for this study is a literature review. The type of data utilized is secondary data from the Central Statistics Agency of Padang Pariaman Regency and journals related to the topic of discussion.

Result and Discussion

Padang Pariaman Regency covers an area of 1,343.09 km² and is geographically located between 00°19'25.68" – 00°48'59.868" South Latitude and between 99°57'43.325" – 100°27'28.94" East Longitude. Based on its geographic position, it shares borders with: to the North – Agam Regency; to the South – Padang City; to the West – Pariaman City and the Indian Ocean; and to the East – Solok Regency and Tanah Datar Regency. Padang Pariaman Regency consists of 17 sub-districts with a population of 430,626 people in 2020, and 433,626 people in 2021. The population growth rate from 2010 to 2020 was 0.94%, and from 2020 to 2021 it was 0.74% (BPS Padang Pariaman, 2022).

The population growth in Padang Pariaman Regency requires the provision of clean water sources

that are of good quality and accessible to the public, as mandated by Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia and Laws No. 32 of 2009 concerning Environmental Protection and Management (UUPPLH) and No. 17 of 2019 concerning Water Resources. These laws state that the state guarantees the people's right to water to meet their basic daily needs for a healthy and clean life, with sufficient quantity, good quality, safety, sustainability, and affordability. As water availability is a basic human right, its management should follow the principle of good governance involving public participation.

Good environmental governance refers to government practices that are more open (open government), providing opportunities for public involvement or participation in governance, especially regarding issues directly affecting the community. Good governance related to environmental management involves the implementation of principles such as legal certainty, balance, separation of powers, fairness and reasonableness, responsiveness to emerging expectations, and serving the public interest (Nopyandri, 2014).

Table 1. Existence and Development of Pamsimas in Pati Regency

Subdistrict	Number of Villages Receiving Pamsimas							Number of Pamsimas
	2008	2009	2010	2011	2012	2013	2014	
Sukolilo	1	1	2	2	1	1	1	9
Kayen		1	1			4	3	9
Tambakromo			3	1	1	1		6
Winong		1	1	1	1	1	3	8
Puncakwangi	1	2	1	2	2	2	3	13
Jaken		1	2	1		1	2	7
Batangan	1		1	1	2			5
Juwana	1							1
Jakenan	1	1	1	1	2	1		7
Pati								0
Gabus		1	1		3	2		7
Margorejo	1				1			2
Gembong	1	1	1	2	1	1		7
Tlogowungu	1	1		2	1	3		8
Wedarijaksa								0
Trangkil								0
Margoyoso	1		1			1		3
Gunungwungkal		1	2	1		3		7
Cluwak			1	2	1	2		6
Tayu					1			1
Dukuhseti					1	1	1	3
Kabupaten Pati	9	11	18	16	18	24	13	109

Source: Bappermades Kab. Pati (2015)

Community involvement in sustainable development can encourage positive impacts, including contributing to the achievement of well-being and fulfilling daily needs related to drinking water and sanitation development. This reflects the community's concern for drinking water and sanitation programs, which are part of the community-based development process (Wadu et al., 2020).

Public policy refers to policies formulated by government administrators or public administrators that govern social life, including relationships between citizens and between citizens and the government. Public policy is manifested in programs with specific goals, values, and practices. According to Anderson, public policy consists of several stages, which include: (a) Policy agenda setting, which involves identifying public issues that need resolution; (b) Policy formulation, identifying potential policies for solving the issue; (c) Policy adoption, where policy choices are made through support from administrators and legislators; (d) Policy implementation, which is the phase of an adopted policy being carried out by relevant units utilizing available funds and resources; (e) Policy assessment, where the implementation is evaluated (Suroso, 2016).

The implementation of the Pamsimas program (Community-Based Drinking Water and Sanitation Development) from 2008 to 2012 has benefited the rural and suburban poor population by providing access to drinking water and sanitation services, along with improvements in health and hygiene practices through community empowerment. The continuation of the Pamsimas program from 2013 to 2016 focused on two national agendas for providing adequate and

sustainable drinking water and sanitation services, namely: (1) Clean water for the people, and (2) Total sanitation based on community participation. The program's goal was to increase the number of underserved people, including low-income rural and peri-urban populations, who can access drinking water and sanitation services. Peri-urban areas are the outskirts of cities that can serve as locations for the Pamsimas program, meeting the following criteria: (1) Located on the borders or outskirts of urban areas; (2) The population coverage with access to proper drinking water and sanitation facilities is still low; (3) No existing PDAM (drinking water supply company) or PDAL (sanitation service). Furthermore, one of Pamsimas' targets is for at least 50% of the community in each village (the program location) to adopt the practice of stopping open defecation (Stop Buang Air Besar Sembarangan - BABS) (Suroso, 2016).

Table 2. Prospects for Sustainability and Development of Pamsimas in Pati Regency

Subdistrict	Home Connection		Balance Ownership		Proportion Ratio
	Pamsimas	%	Amount (Rp)	%	
Sukolilo	615	4.18	30.825.800	4.23	1.01
Kayen	531	3.61	2.781.000	0.38	0.11
Tambakromo	731	4.97	16.266.000	2.23	0.45
Winong	2.065	14.04	20.850.000	2.86	0.20
Puncakwangi	896	6.09	28.910.077	3.96	0.65
Jaken	648	4.40	17.905.000	2.46	0.56
Batangan	750	5,10	21.779.800	2.99	0.59
Juwana	0	0.00	0	0.00	0.00
Jakenan	1.232	8.37	81.129.600	11,13	1.33
Pati					
Gabus	1.027	6.98	66.055.120	9.06	1.30
Margorejo	366	2.49	60.403.961	8.28	3.33
Gembong	1.082	7.36	153.387.518	21.03	2.86
Tlogowungu	1.489	10,12	76.875.661	10.54	1.04
Wedarijaksa					
Trangkil					
Margoyoso	689	4.68	45.575.878	6.25	1.34
Gunungwungkal	794	5.40	9.597.200	1.32	0.24
Cluwak	1.164	7.91	67.246.772	9.22	1.17
Tayu	211	1.43	22.990.000	3.15	2.20
Dukuhseti	421	2.86	6.640.550	0.91	0.32
Kabupaten Pati	14.711	100.00	729.219.937	100.00	1.00

Source: Bappermades Kab. Pati (2015)

From Table 1, it is known that the Pamsimas program in Pati Regency in 2008 covered 9 villages, in 2009 it covered 11 villages, and in 2010, 18 villages received the Pamsimas program. By 2014, the program had expanded to 109 villages. From Table 2, it is known that the household connection payments for clean water access from the Pamsimas program in Pati Regency are determined by the community through deliberation. The total financial balance of Pamsimas from the 109 villages amounts to IDR 729,219,937. The ratio of the financial balance indicates the sustainability potential, reflecting the awareness of the community. For example, the community in Margorejo Sub-district exhibits better awareness compared to other sub-districts in the implementation of Pamsimas. This is supported by their agreement to collect relatively larger routine contributions compared to other sub-districts.

Pamsimas is a flagship program for providing drinking water and sanitation services in rural areas to increase the number of people who can access drinking water and sanitation services to promote a clean and healthy lifestyle. The target is to achieve 100% access to drinking water and sanitation by 2024.

The government channels assistance to Community Groups as regulated by the Directorate General of Cipta Karya, referring to the Ministry of Public Works and Public Housing Regulation Number 25 of 2021 concerning Amendments to the Ministry of Public Works and Public Housing Regulation Number 24/PRT/M/2016 on the Mechanism for the Implementation of Government Assistance Budgets in the Directorate General of Cipta Karya and PMK No. 168/PMK.05/2015 and its amendments (PMK No. 173/PMK.05/2016) on the Mechanism for the Implementation of Government Assistance Budgets in State Ministries/Institutions and PMK No. 190/PMK.05/2012 and its amendments (PMK No. 178/PMK.05/2018) on Payment Procedures for the Implementation of the State Budget (Kosanke, 2019).

The factors influencing the clean water supply system consist of both physical and non-physical factors.

Physical factors include topography, which affects installation costs and production costs. An increase in production costs will determine the basic water tariff and the production capacity of the treatment results. Geographic factors also play a key role in the planning and design of the system as well as the connection costs, which can affect the number of people served. Non-physical factors are influenced by water loss rates, financing, and institutional factors (Susanti, 2010).

The government is committed to improving the welfare of the community by expanding access to drinking water and sanitation services. This is particularly important in community-based activities that encourage community awareness to meet their basic needs, especially in promoting clean and healthy living values and behaviors.

Conclusion

The implementation of the Pamsimas program (Community-Based Drinking Water and Sanitation Provision) from 2008 to 2012 has benefited poor rural and peri-urban communities by providing access to drinking water and sanitation services, as well as improving clean and healthy living practices through community empowerment. The continued Pamsimas program from 2013 to 2016 covered two national agendas in providing adequate and sustainable drinking water and sanitation services, consisting of: (1) Clean water for the people and (2) Total sanitation based on community participation. The target of this program is to increase the number of underserved people, including low-income populations in rural and peri-urban areas, who can access drinking water and sanitation services. The population growth in Padang Pariaman Regency requires the provision of clean water sources that are of good quality and accessible to the public, as mandated by Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia and Law No. 32 of 2009 on Environmental Protection and Management (UUPPLH) and Law No. 17 of 2019 on Water Resources. These laws guarantee the people's right to water to meet their basic daily needs for a healthy and clean life, in sufficient quantities. Community empowerment in providing access to drinking water through community-based activities is a strategic step to address the scarcity of fresh water. The participation of the community, the government, and various related stakeholders can strengthen and ensure commitment, leading to the availability of water sources with a sustainable development perspective.

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Author Contributions
The conceptualization of the study was conducted by the first author. The methodology was developed by the second author. The resource collection and analysis were carried out by both the first and second authors. Writing and review were collaboratively performed by both the first and second authors.

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Conflicts of Interest
The authors declare no conflict of interest.

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