

## Leadership in Schistosomiasis Eradication Policy in Indonesia

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### Abstract

Schistosomiasis is an endemic illness found throughout the world, including in Indonesia's Central Sulawesi province. The prevention and control procedures have been in place since 1975, but the prevalence rate has not yet reached 0%. This study used a methodology that combines primary and secondary data collection. The focus of this research is on the importance of leadership in attaining the aims of the schistosomiasis eradication policy, which is concentrated on a single location in Poso, the Bada Valley. This study discovered that policy innovations and personal leadership with a desire to succeed in a career in education and leadership training at the official level in Indonesia through PIM II Education and Training were responsible for the success of the schistosomiasis policy in Bada. The use of close personal and institutional networks is able to drive various formal and non-formal institutional mechanisms to support the achievement of schistosomiasis eradication policies in Poso.

**Keywords:** Eradication, Leadership, Policy, Region, Schistosomiasis

### Introduction

Policy is frequently characterized as a set of decisions made by persons in charge of a specific policy area, such as health, the environment, education, or trade. A broad grasp of policy is inextricably tied to the government's general policies or current authorities in terms of what the government does and does not do. Thomas R Dye's classical view has been chastised for seeming to contradict the more formal notion that all policies are constructed to attain a specific aim or goal (Ardianto & Widayati 2018). Since 1975, the Ministry of Health of the Republic of Indonesia has taken seriously the prevention measures that have been carried out since the discovery of this case. However, the focus of transmission has not been totally eliminated to this day, with the prevalence rate not reaching 0 (zero) percent. One of the problems that prevents this disease from being controlled is the geographical conditions in the Lindu, Napu, and Bada highlands

The implementation or application of a public policy through programs, activities, actions, or actions in a mechanism tied to a specific system is known as public policy implementation. The urge to tackle societal problems motivates the formulation of public policy. Parties (stakeholders) determine public policy, particularly the government, which is focused on satisfying the needs and interests of the community. In the constitutional mandate, health is an essential right that must be met by the community, as mentioned in the General Declaration of Human Rights, which

is established as a basic right (right based).

Indonesia is the only country in Southeast Asia that is still endemic to Schistosomiasis or snail fever (National Revenue Agency of the Republic of Indonesia 2017). This is an old sickness in which the worm *Schistosoma japonicum* existed 2100 years ago, according to excavations in China's Hunan region, where worm eggs were discovered in the intestines of a mummy between 1971 and 1974 (McManus et al. 2010). This illness has infected a total of 206.5 million people in 78 nations across three continents: Africa, Asia, and South America (Pranata & Setia 2019). The bloodworm *Schistosoma japonicum* causes this disease, which was initially detected in the Lindu Valley area in 1937, then in the Napu Valley in 1974, and finally in the Bada Valley in 2008.

Schistosomiasis has been detected in 23 villages across Poso Regency, Central Sulawesi Province (Dinas Kesehatan 2019). This disease attacks humans so that it has a negative impact on the economy and public health. Children, for example, are readily targeted because they simply want to be free to explore their surroundings. This condition can induce anemia in children, resulting in stunting and impaired learning capacity. Chronic schistosomiasis in adults causes a loss of ability to work and, in extreme circumstances, death. This is due to the fact that these worms assault the liver and cause harm. The *Schistosoma japonicum* worm is transmitted through the *Oncomelania hupensis lindoensis* worm, which is capable of infecting mammals and serving as an intermediary for transmission through worm droppings in a variety of livestock, including cattle, buffalo, pigs, rats, and, in the case of the Philippines, dogs, which serve as reservoirs for humans (Rudge et al. 2008).

Although the phenomenon of the Bada Valley was first found in 2008, it is much faster in terms of achieving control. This situation is distinct from the broader state of Central Sulawesi, which is in flux (Kawur & Taufan 2019). There are 269 snail focus areas in Poso Regency, scattered among five sub-districts, one of which is in the Bada Valley, West Lore District. Given the handling procedures in the previous two locations that will make it easier to handle and control, the Bada valley or West Lore sub-district is fascinating as the last place discovered. To be able to eliminate and eradicate schistosomiasis by 2019, policies for dealing with the disease have been placed as a national priority. Humans have been infected with Schistosomiasis, which has a negative influence on the region's economic, health, and even social life. One of the real impacts is stunting and children's low enthusiasm for learning (National Revenue Agency of the Republic of Indonesia 2017).

Existing policies at various levels of government are, of course, an attempt to reduce the prevalence rate by establishing a system of cooperation, such as collaboration between government institutions. Well, there is no serious, systematic, or mass effort that makes the schistosomiasis problem, which is one of the endemic and peculiar diseases in Central Sulawesi, as though there is no progress. There is no comprehensive assessment of the actors, substance, context, and processes involved with this topic. Schistosomiasis is a tropical parasitic disease caused by *Schistosoma* worms. In developing countries, this disease has afflicted 200 million people (Rusjdi, 2011). With diseased mammals as the medium of development, the schistosomiasis phenomena becomes more difficult. (Rosmini et al. 2014). According to the study (Lusiyana & Eka 2016) this disease is endemic in 78 nations, 52 of which have medium-high endemicity levels. Because environmental conditions, habits, parasites, vectors, and hosts all play a role in *Schistosoma* sp. transmission, it is extremely difficult to eradicate.

The policy of the Governor of Central Sulawesi through the Integrated Team for Schistosomiasis Control has been implemented with the existence of the Team, according to a study on schistosomiasis control policies conducted by Erland et al. (2012); Erland et al. (2014) despite the need for regional regulations as an umbrella for synchronizing the work of all SKPD. The working relationship between the federal, provincial, and district administrations as a single body is not placed in the framework of national policy in this study. Another finding of the study Firmansyah (2017) is that the policies governing the integrated team for Schistosomiasis control need to be reviewed and socialized again so that the integrated team's performance may be improved such that the objective of lowering Schistosomiasis prevalence to less than 1% can be met.

Another study involving community participation was given in a paper Pitriani & Rau (2017) which found that there was an idea to develop Neighbourhood level Schistosomiasis cadres in endemic and potentially endemic villages using the focus group discussion approach. This is expected to encourage community engagement even further so that routine inspections can be expanded; people want to wear boots and drink safe, clean water, and latrines are available in settlements and community gardens in this scenario.

The findings of this study are backed up by a thesis study Akbar (2016) which found multiple variables in four indicators of Schistosomiasis incidence: the use of water sources, passing through the focus area, the use of personal protective equipment, and the habit of activities in rivers / ditches. In addition to poor use of water sources, habits of activities in rivers/troughs, and habits of passing through focus areas, and the use of personal protective equipment by not wearing personal protective equipment such as boots, the quantitative study discovered that the predictive index of the incidence of Schistosomiasis based on community behavior was obtained.

Akbar (2016) findings are consistent with those of (Ningsi and Ikhtiar 2019) (Syam, Bungawati, and E Faisal 2018) who concluded that while Lindu inhabitants have a strong understanding of schistosomiasis, preventive action to safeguard themselves and their families is still lacking. The practice of people not wearing personal protective equipment while working in the fields and gardens encourages schistosomiasis to spread. Another study found no link between the technical characteristics of using water facilities and using family latrines and the incidence of Schistosomiasis. There is a link between the use of personal protective equipment (PPE) and the involvement of candidates in the occurrence of Schistosomiasis. According to the study (Veridiana & Chadijah 2013) individuals in Mekarsari Village and Dodolo Village exhibited inadequate conduct in preventing the transmission of schistosomiasis. Work is the only one of the three characteristics evaluated that is related to community behavior in preventing schistosomiasis transmission.

The primary goal of health-care policies Dachi (2016) is to provide a pattern of prevention (preventive), services that focus on health maintenance (motive), disease treatment (curative), health recovery (rehabilitative), and protection of the vulnerable. Based on these goals, health policy is a component of health institutions, acting as a political force that influences public health at regional, national, and international levels. The achievement of this goal has been accomplished by the development of several initiatives at various levels of government (central, provincial, district, and village) to address various schistosomiasis issues. According to a study (Muhammad 2014), the ability to implement public policies, backed by adequate public

leadership and governance, is a mechanism for achieving goals locally, nationally, and worldwide. The conclusion of Fadel's thesis is that in the process of implementing public policy, effective public leadership and excellent public governance are required, along with implementation competence. The interrelationships between public leadership, governance, and policy implementation competency have direct consequences for the implementation and effects of public policies. Collaboration, interaction, and entrepreneurial abilities must be recognized as fundamental and important talents for governmental program implementation.

Through the preparation of various supporting factors such as content, actors, and policy procedures, health policy pays attention to aspects of health service users, particularly the community. Although most policy assessment studies are retroactive in character, this analysis examines policy decisions about how policies might be incorporated in the agenda at all levels of government policy (village, sub-district, district and province). This has to do with how it was started and formulated, as well as the contents of the policy on support for schistosomiasis treatment in the affected areas, particularly in Bada.

This research reviews and tracks policies that determine whether or not the goals set out to be achieved were met. The Bada Valley was chosen as one of the three regions in Central Sulawesi that became the focus of schistosomiasis, along with the Napu Valley and the Lindu Valley. The findings of this study will be used to evaluate policies to combat schistosomiasis in these two locations. The government can use this research to build a baseline framework for rejuvenating policies and revising existing policies in order to achieve synergies and better policy outcomes

## **Methods**

A qualitative descriptive method is used in this investigation. In the context of analyzing the schistosomiasis policy, this method emphasizes the meaning, reasoning, and definition of a specific circumstance. This policy research uses elite interviewing as stated (Patton et al., 2015), with the referent or snowball method to select sources. Multidimensional, inductive-empirical, practical action oriented, policy actor-based, and value-laden are the concepts that guide this policy research. This study employs secondary and primary data collection approaches, as well as in-depth interviewing techniques. The data analysis used in this study follows the given concept (Anon 2018). revealed that the activities in qualitative data analysis were carried out interactively and took place continuously at each stage of the research to completion.

## **Results and Discussion**

Health policy is defined as a set of government action relationships that are determined by a web of interconnected decisions. Health policy is also a plan or approach for influencing the health sector's determinants in connection to strategic concerns in order to promote public health, in this case schistosomiasis. As a result, health policy is simply an arrangement of design objectives and the foundation for considering government programs related to public health problems such as schistosomiasis in the context of this research as the government's decision to do or not do in the field of public health. in the province of Central Sulawesi, particularly in Poso Regency, and particularly in the Bada Valley, one of the schistosomiasis-affected places where the snail focus was discovered. This focus may be found in West Lore District, from Lelio Village to Kageroa Village

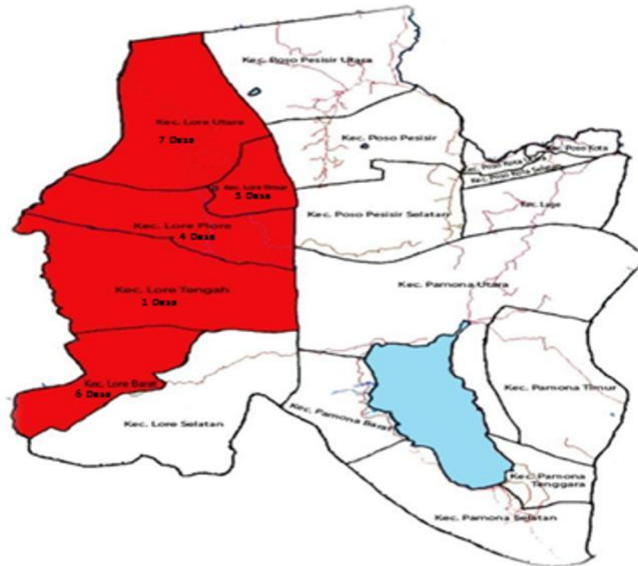


Figure 1. Map of Schistosomiasis Focus Distribution in Villages in Poso Regency

Source: Head of Poso District Health Office, 2019

One of the RPJMN's 2015–2019 priority is the eradication of neglected tropical illnesses. This aligns with the Sustainable Development Goals (SDGs), particularly one of the aims in the third SDG, namely ending AIDS, tuberculosis, malaria, and other neglected tropical illnesses epidemics. Schistosomiasis, sometimes known as snail sickness, is a tropical disease that is often overlooked. Efforts to control this disease have been ongoing for at least 35 years, and lessons have been learned that eradication of this disease requires a multi-sectoral approach implemented simultaneously in endemic locations/villages.

Since 1975, numerous central and regional initiatives for schistosomiasis prevention have been implemented. Governor Decree number. 443.2/201/DISKESDA-G.ST/2012 Regarding the Integrated Team for Schistosomiasis Control in Central Sulawesi Province 2012–2016 was issued by the provincial government following the reform (Central Celebes Governor's decree 2012). Even back then, the Governor of Central Sulawesi Province issued Decree No. 440/271/BAPPEDA-G.ST/2017 concerning the Integrated Team for Schistosomiasis Control in Central Sulawesi Province 2016–2021, as well as the Regent of Poso issued Decree No. 188.45/0434/2017, 188.45/0251/2018, and 188.45/0319/2019. In 2017, 2018, and 2019, the Poso District established an Integrated Team for Schistosomiasis Control (Central Celebes Governor's decree 2017) (Poso regent's decree 2017) (Poso regent's decree 2018) (Poso regent's decree 2019). The provincial government and three districts in Central Sulawesi Province have committed to this approach. On the 47th National Health Day, 12–11–2011, at Wusa (NAPU), North Lore District, local governments signed an agreement on the Control and Elimination of Schistosomiasis Disease in Dataran Napu, Poso, and Lindu Districts, Sigi District. There is no mention of the Bada region, which was just discovered in 2008.

The period of leadership of the Central Sulawesi government under Longki Janggola from 2011–2020 today, through this policy, has not been able to eradicate schistosomiasis. Similarly, the 2 leadership periods in Poso from Piet Inkiriwang to Darmin Sugilipu were also unable to eradicate

schistosomiasis in 2 areas in Poso, namely the Bada Valley and the Napu Valley. The Bada Valley's triumph in 2020, thanks to the Head of the Poso District Health Office Napoleon Taufan Karwur's policy innovation breakthrough. The success of policy innovation due to the efforts of other institutional structures demonstrates that a policy's leadership orientation is critical to its success.

The failure of Bappenas' eradication policy, which was started in 2018, is thought to be due to the government's engagement, which has not been working as expected. Each institution operates on its own. This should not happen in the age of decentralization, when local government policies are meant to be implemented through regional autonomy, bringing services closer to the people. This state persisted until 2018. After initiating the eradication, Typhoon Karwur announced that the Center, under the National Development Planning Agency (Bapenas), was working smoothly. The head of the health department believes it will be difficult to meet the aim for a pattern of handling that does not undergo such adjustments. This is because it appears that the government is taking on too many tasks in the central program, and there isn't enough community involvement. As a result, Taufan Karwur, who was present at the Second Diklatpim in Makassar at the time, took the initiative and elevated it as a working paper for innovation to speed up previously difficult policy change.

The fundamental reason for the failure to control and eliminate this extremely hazardous schistosomiasis is the community's lack of understanding. The implication is that individuals do not make an effort to develop a behavior culture that will allow them to avoid interaction with the schistosomiasis intermediate snail. The second issue is a lack of public awareness about how to handle livestock farming in such a way that livestock are not exposed to schistosomiasis and do not become intermediary media. The different studies mentioned above demonstrate that the community has come to comprehend the need of controlling and eliminating schisto, which poses a threat to their life. However, the desire for a better living with limited land ownership, such as an area around the protected forest, pushes the population to be unconcerned about the situation, leading them to choose to overlook the schisto ramifications for them.

The government's follow-up activities, particularly those led by the Donggala Health Research Center (Balitkes) as a vertical institution under the Ministry of Health, have aimed to foster the development of GEMA BERAKSI, which is an innovative idea born out of the DIKLAT PIM II Dr. Taufan Karwur, As the Director of the Poso District Health Office, I promoted village ordinances for the prevention and control of snail fever (schistosomiasis). Although there is coordination between certain institutions within the Poso Regency government in regards to the issuance of village policies, the position of the village's existence in the policy hierarchy according to Law No. 12 of 2011 concerning the Establishment of Legislation in Indonesia is unknown. Unfortunately, village regulations must be able to relate to higher rules and/or unique situations within the policy framework, which necessitates a policy constructed on the process carried out by organic mechanisms in the village community in question. Although it is a community necessity, the existence of village laws and village head decisions on selected schisto cadres is carried out by encouraging the Gema Beraksi activity to fulfill its goals This was spearheaded by the head of the Poso Health Service and backed by the Donggala Balitkes, and engaged the necessary OPD as well as political assistance from the Regent and Deputy Regent of Poso.

Of course, this is not the norm in the process; in fact, a law enacted in one area must be able to



cover a broad range of issues, or it would conflict with others. The existence of an umbrella policy that will be employed so that it can become legal certainty and not merely the whim of a group of individuals or particular interests is the relevance of regulatory requirements. In fact, Schistosomiasis provisions were not implemented as part of the national legislation agenda, despite the fact that it was considered a national problem. Districts have never been incorporated in the regional legislation program as a term in the Law 32/2004 regime or in the Regional Regulation Agency (Banperda) under the Law 23/2014 regime on local government at the provincial level.

Even though the legality of the provisions of the regulations in Indonesia are not in accordance with existing regulations, village regulations regarding Schistosomiasis in villages in the District of West Lore are able to manage and systematize community work in the management and control of Schistosomiasis. A policy breakthrough established by the village head with the assistance of research from the Donggala Health Research Center and the Poso District Health Office is a structured work scheme that gives certainty for schistosomiasis cadres. This was previously maintained by the Lore Barat health center. Although each village's financial method is insufficient, it can motivate schisto cadres to work. The Village Regulation No. 1 of 2019 and Village Head Decree No. 01/140/DL/V/2019 offer a policy framework for allocating monies from the Allocation of village funds handled by Lengkeka village, for reprianus Ratode, who presently acts as the acting head of the Lengkeka village (Lengkeka 2019)(Village Head Decree 2019) (Interview Reprianus Ratode, 2020).

The funding provided by the village in response to the existence of this village regulation is used to prepare funding for schisto cadres who work tirelessly to assist with a variety of tasks, including providing information about schisto and promoting a healthy lifestyle, as well as collecting feces once a year. Village ordinances and decisions serve as the foundation for local leaders providing pocket money or honoraria, as well as training for village cadres. According to Leo Baturu, a schisto cadre in Kageroa village, the Cadre Team was initially voluntary until 2019 when it was founded by a village head decision. Initially, there were only five persons, but it was later expanded to ten. The squad, which was also known as the Peda Team at the time, was in charge of collecting excrement, performing snail surveys, and interacting with the community. (Interview, 2020). There is also a Mobasa Team for teachers and village extension workers, as well as a Mepaturo Team for traditional and religious leaders, in addition to the Peda Team.

According to the epidemiologist at the Poso District Health Office, the achievement of the schistosomiasis target is 0(Zero) percent, based on the examination of feces samples as a method of knowing the impact of schistosomiasis in the Bada valley area, although the collection of feces has not reached 100 percent of the total population in 6 villages in West Lore. This milestone will enable the implementation of the Declaration of Indonesia's Achievements in the Elimination of Schistosomiasis in 2025, according to the 2018-2025 Schistosomiasis Eradication Road Map. The incidence of disease in humans, animals, and intermediate snails has been zero percent since 2020-2025, which is a key indicator. The achievement of zero percent must, of course, be backed up by animal incidence and the presence of intermediary snails, which must be eradicated.

In the context of Poso district, achieving 0% in 2020 could be in keeping with the topic of the 2020 Government Work Plan (RKP), which is Human Resource Development for Quality Growth. Human Development and Poverty Reduction are two of his top concerns. This strategy is

expected to be included in Poso Regency's Local Government Innovation, which supports the control and elimination of schistosomiasis under the topic "Independent Community Movement to Fight Schistosomiasis Conch / Gema Beraksi (Mobago Schisto)". Improving the quality of life and the family economy by focusing on land processing into land that can support the family economy in the Poso and Bada Valley areas in particular will help to achieve these national priorities.

The Regent and Deputy Regent's involvement in the mobago schisto movement, which was heavily involved in the Gema Beraksi activities, had a significant impact on the achievement of policy objectives. The presence of the Regent's leadership has the power to entice other institutions and community connections to participate. The main capital in achieving the Gema Action program is the Poso people's traits of always respecting leaders. The employment of localized words (languages) in the institutionalization of work can also raise community awareness about the ideologicalization of schistosomiasis as a local concern. Institutionalization of three teams in the village, the Peda Team for fecal collectors, the Mobasa Team for teachers, and the mepaturo Team for traditional and religious leaders, all in the local language. This success can be attributed to cultural awareness, which was sparked by leadership initiatives based on the state's cadre leveling mechanism, which included mandatory PIM II Training for prospective leaders in the regions who would occupy or are currently occupying positions equivalent to echelon II.

Table 1. Financing related to the Schistosomiasis Control program at the Poso Regency Regional Apparatus Organization

No	Regional Apparatus Organizations & Related Work Programs	Budget (Rp. 000)			
		2017	2018	2019	2020
1	<b>Office of Public Health</b>				
	Health promotion control and eradication of communicable diseases	223645	387756	351127	297346
	Health Promotion & community empowerment	30000	150000	91842	70475
	Environmental Protection	5765	66560	44900	11935
	Renovation of an office building		10813014		
2	<b>Service of Fisheries</b>		167700	582824	260000
3	<b>PMD</b>		20119	19804	12944
4	<b>Department of Education and Culture</b>		5000	254	80200263
5	<b>Department of Public Works and Spatial Planing</b>				
	Improved Irrigation Network	7109971	24035922	64304800	3298493
	Development of Drinking Water & Wastewater Management Performance	2120000	1959878	2450646	850000
6	<b>LH service</b>		66055		
7	<b>Department of Agriculture</b>				



Increase in Agricultural/plantation Production	3768000	3177390	2446500	1209741
Prevention & control of livestock disease				46711

Source: Poso Regency local government, 2020

According to the data in the table above, funding for the Scistosomiasis Prevention Scheme has not been explicitly stated in the Poso Regency Regional Budget (APBD) from 2017 to 2020. The financial component is an important part of a government management structure. Even with proper control, good planning and methodical organization will not be able to create good activities without the involvement of adequate people resources, funding, and equipment.

The absence of treatment continuity is one of the most significant barriers to schistosomiasis eradication in the body. In terms of concern for this subject, the difference in attention between the political interests of the Regent of Darmin and Piet Inkiwang appears to be different. This is apparent in the governor's, as well as other governors', concern, who has a pharmaceutical background in his two terms in office. Although there are already two laboratories for schistosomiasis examination in these two places, the laboratories in Bada are in poor condition, as evidenced by the human resources who operate them, all of them are temporary staff recruited from retired health workers. The laboratory in Napu, which was awarded by the provincial government in 2018, is a fairly good laboratory.

The removal of mass treatment since 2020 is one of the measures resulting from schistosomiasis eradication. This differs from the viewpoint presented previously Kawur & Taufan (2019) that most schistosomiasis eradication initiatives focus on infection control by preventive chemotherapy. Praziquantel is a cost-effective schistosomiasis treatment. Another study conducted in Indonesia backs with the government's policy decisions, claiming that there is no link between treatment and the level of reduction in worm impact on the community (Nurwidayati et al. 2016). The Indonesian government has taken a different strategy, focusing solely on the impacted populations. This policy was chosen as a reality because of the advances in schistosomiasis treatment that have been made to far.

If utilizing an evaluation approach with a comparison in China, Taufan Karwur and Ms Heningsih, as two leader figures who have directly seen and experienced the two circumstances, state that the central government's engagement in the policy of managing and eliminating schisto is quite significant. China is hosting the event. The availability of relatively contemporary supporting infrastructure and superstructure demonstrates this condition. (Interview with Heningsih, 2020). When compared to what is now being implemented in Indonesia, the implementation is still based on self-help and community social capital. Culture's power combined with mutual cooperation is a valuable advantage in attaining contemporary schist control and removal (interview with Taufan Karwur, 2020).

Indeed, the outcome of the chosen policy will be influenced by leadership. Policy leadership, as stated (Alias & Ismail 2017), would provide an opportunity to understand the role of leaders involved in policies in order to achieve organizational success. Leadership, of course, necessitates institutionalization in order to be realized. Leadership, according to studies Capano (2009), is a major motivator of political and policy change. Furthermore, something unique in leadership

creates a space for something specific to manifest, which means "institutions" play a significant role in the political and policy process.

## Conclusion

Leadership orientation will determine the success of cross-sectoral schistosomiasis control and management policies. The absence of leadership caused the policy to not receive maximum institutional support, including taking sides in financing during the leadership period in Poso. Because schistosomiasis was regarded an issue that was not "sexy" or "important," it received less strategic focus in order to secure funding, the involvement that was actually carried out by all government entities in accordance with existing rules was not carried out adequately. Because of leadership innovations that can synergize to be able to intensely implement the program, success in the Bada valley is possible. Policy change innovation that includes the community as a potential for policy achievement by involving the community's local cultural component can aid in the implementation of these policies kebijakan. The system for tiering jobs and requiring training as part of leadership management development has the potential to accelerate regional development innovation. The chief of the health office was able to exhibit his managerial leadership skills in the form of a policy paper in PIM II Education and Training as a result of his participation as a condition. Community-based policies that may transfer eradication programs broadly, with the ability to develop stakeholder involvement and activate formal and non-formal potential in Poso. The eradication effort for the prevention and control of schistosomiasis in Poso, which aims to attain a prevalence rate of 0% by 2020, is showing signs of progress.

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