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MORALITY BEFORE KNOWLEDGE

Green finance and local wisdom synergy in enhancing community-based drinking water sustainability

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ABSTRACT

Background: Access to safe drinking water remains a challenge in Sukadana Village due to geographic conditions, limited infrastructure, and financial constraints. The *Danu Kerthi* concept, rooted in *Tri Hita Karana*, promotes sustainable water management by balancing human, environmental, and spiritual aspects. Green finance, through green bonds and Pay-As-You-Go (PAYG) schemes, enhances financial sustainability. Integrating these approaches with technology can ensure long-term water access through community, government, and private sector collaboration. **Methods:** This study uses a descriptive qualitative approach to explore phenomena related to access, management, and challenges of community-based drinking water sustainability in Sukadana Village, Karangasem. The data collection technique was carried out through in-depth interviews with 30 respondents who were selected using the purposive sampling method. The data obtained was analyzed inductively to identify relevant patterns and themes. **Findings:** Data were analyzed to identify key components and organized into specific indicators and sub-indicators, forming a comprehensive model for sustainable system development. The resulting framework includes aspects such as access to clean water, management systems, financial sustainability through green finance, challenges faced, and strategies grounded in local wisdom (*Danu Kerthi* concept). These findings are systematically presented to guide future policy and implementation efforts for resilient and inclusive water management systems. **Conclusion:** The creation of a well-defined and systematic model offers a practical foundation for improving the sustainability, resilience, and inclusiveness of water management, particularly in rural and culturally traditional communities. Integrating green finance with local wisdom, as reflected in the *Danu Kerthi* concept, enhances the long-term viability of community-based drinking water systems, as exemplified by the model implemented in Sukadana Village, Karangasem, Bali. **Novelty/Originality of this article:** This study intoduces a new approach to community based drinking water management by integrating the *Danu Kerthi* concept with green finance through Pay-As-You-Go (PAYG) for sustainable funding.

KEYWORDS: green finance; community based drinking water; sustainability; local wisdom; Sukadana Village.

1. Introduction

Safe and sustainable access to drinking water is a fundamental right of every individual. However, in rural and remote areas, challenges such as geographical conditions, limited infrastructure, and lack of funding still hinder their availability. In Karangasem Regency, water problems are increasingly complex due to rocky terrain, uneven rainfall, and limited spring water sources (Karangasem, 2023). One of the areas in Karangasem Regency that experiences problems with the availability of drinking water is Sukadana Village, Kubu

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District. Sukadana Village has a hilly topography and quite varied rainfall, so that in meeting the drinking water needs of the community, it is not uncommon to collect rainwater which will later be used during the dry season. In addition to collecting rainwater, the village community currently relies on springs, shallow wells with a simple piping system managed by community groups (Machado et al., 2019). The problem that currently arises is the increase in water demand in the community due to population growth and economic activity, so that the fulfillment of drinking water supply is experiencing obstacles, especially during peak hours of water use (Yanti, 2024).

The lack of infrastructure and simple technology used in the distribution of drinking water, which still uses manual piping systems that often experience leaks and damage (Ambuehl et al., 2022). The challenge faced by Sukadana Village, Karangasem Regency is the increase of human resources (HR) for the management of community-based drinking water institutions who are more professional both in financial reporting and the improvement of their drinking water infrastructure, it is not uncommon for drinking water managers in Sukadana Village to be based on their yadnya without salary compensation. In supporting the improvement of access to drinking water services in the community, the funding system plays a very important role, but in the development of infrastructure and human resources, Sukadana village still relies on the assistance of the central, regional and village governments with assistance issued through village funds or private parties. Ketergantungan terhadap pendanaan eksternal ini membuat pengelolaan dan pengembangan infrastruktur air minum di desa Sukadana rentan terhadap ketidakpastian jangka panjang.

In the midst of these challenges, *Danu Kerthi* can be a relevant solution in ensuring the sustainability of water management in Sukadana Village. *Danu Kerthi* is part of the *Tri Hita Karana philosophy* that emphasizes the balance between humans, the environment, and spirituality (Arsana et al., 2022). In the context of water management, the concept of *Danu Kerthi* teaches that water is not only an economic resource, but also an important element that must be maintained in balance for a harmonious life, between humans and their environment (Arsana et al., 2022). Some of the local practices that reflect this philosophy include a water management system based on mutual cooperation and harmony with nature, fair water distribution based on customary agreements, and efforts to conserve spring water sources through rituals and respect for nature (Arsana et al., 2022; Suardi et al., 2022). However, although these values have been entrenched in community culture, a more systematic implementation of community-based drinking water management still needs to be strengthened.

One of the aspects that needs to be developed in an effort to provide sustainable drinking water services in Sukadana village is to develop a sustainable funding mechanism (Brears, 2023; Sutherland & McNaughton, 2021). So far, the community-based water system in Sukadana still faces major obstacles in terms of financing for infrastructure maintenance and development. Green finance can be a potential solution in bridging this funding gap. Green finance includes a variety of instruments, such as green bonds, environmental investment funds, as well as sustainability-based credit schemes that can be used to strengthen water management systems (Jiang, 2024). The application of green financial technology can help increase transparency and efficiency in the financial management of community-based drinking water systems (Nasir & Ahmed, 2024). The implementation of payment with Pay-As-You-Go (PAYG), is very appropriate to be used, this aims to be able to monitor the use of water by the community so that the people of Sukadana can easily pay for water that is adjusted to the number of cubic feet of water used, by using this payment, it is hoped that the sustainability of drinking water management in Sukadana village can run well so that access to safe drinking water for all Sukadana people can be realized (Smith, 2017).

The integration of the concept of *Danu Kerthi*, green finance, and technological innovation and human resources into the water management system in Sukadana Village can be a strategic step in realizing the sustainability of drinking water access for the community. Collaboration between communities, customary institutions, governments, and

the financial sector is needed to ensure that this system can run effectively in the long term. With a more holistic approach, it is hoped that the people in Sukadana will not only have better access to clean water, but also be able to maintain the sustainability of water resources as part of cultural heritage and environmental balance.

2. Methods

This study applies a descriptive qualitative approach with analytical induction to explore the causes and explanations behind certain phenomena (Mahyuni, 2021). The main objective of this study is to understand the access, management, and challenges of community-based drinking water sustainability in Sukadana Village, Karangasem. This study used a sample of 30 people who were selected using purposive sampling techniques.

This approach refers to Integrated Water Resources Management Theory (IWRM) (Al Radif, 1999) which serves to design in-depth semi-structural interview questions related to management access conditions, challenges, the concept of local wisdom (*Danu Kerthi*), the role of green finance and strategies in achieving community-based water sustainability. Interviews last an average of 20 minutes and are recorded with an audio recorder after obtaining permission from the participant or informant.

The audio data is then carefully transcribed and analyzed to identify codes that represent similar ideas or thoughts. The codes are grouped into main themes. The analysis is carried out through the process of coding and theming to identify the relationships between themes according to the theory used (Mahyuni, 2021; Stadtländer, 2009; Wicks, 2017). The data is recorded in the spreadsheet office software following the guidance of Integrated Water Resources Management Theory. To maintain anonymity, participants were given codes P1-P30 included in the citation of the research results.

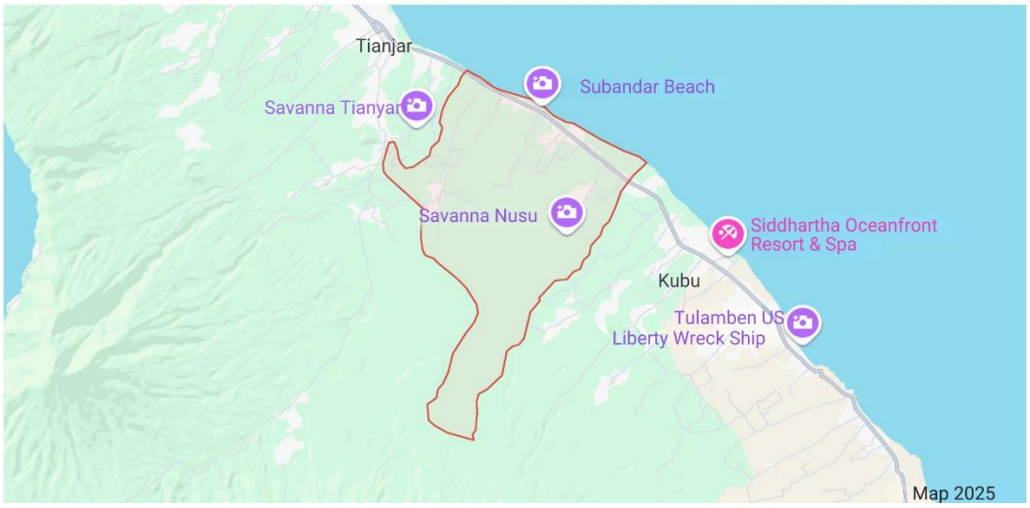

Fig. 1. Research location of Sukadana Village, Kubu Karangasem Regency

3. Results and Discussion

3.1 Results analysis

In this study, data were collected through interviews with 30 informants, each possessing over five years of experience in community-based drinking water management. The information gathered was meticulously analyzed and synthesized to extract key insights. These insights were then organized into specific indicators and sub-indicators, facilitating the development of an interconnected model cycle aimed at promoting a sustainable system. The resulting indicators and sub-indicators are systematically presented in Table 1, providing a clear framework for understanding the components of the sustainable system.

Table 1. Results of determination of indicators and sub-indicators

Indicator	Sub Indicators
Access Conditions	1. Availability of clean water sources
	2. Range of drinking water services
	3. The quality of water consumed by the community
	4. Water infrastructure and distribution facilities
Management System	5. The role and participation of the community in management
	6. Funding m echanism and financial sustainability
	7. Technology in water monitoring and distribution
	8. Involvement of the village government and management agencies
Overall Challenge	9. Decrease in water discharge due to climate and environmental change
	10. Limited funding for maintenance and development of the system
	11. Inequality in water distribution between regions
	12. Lack of coordination between relevant parties (government, community, private sector)
Danu Kerthi Concept	13. Sustainable water management and protection based on local wisdom
	14. Spiritual value in water management where water is a sacral element
	15. Mutual cooperation in the maintenance of the water network
	16. Prohibition of dumping garbage into water sources
Green Finance	17. Funding sources and financial independence based on green and sustainability
	18. Efficiency with financial management and funding platform
	19. Community Contributions Gotong Royong Fund
	20. Multi-stakeholder collaboration
Strategy	21. Strengthening governance, funding, and collaboration to ensure the system runs well.
	22. Community savings schemes for financial sustainability.
	23. Structural and policy-based.

3.2 Drinking water conditions, management and challenges of community-based drinking water sustainability

This analysis is based on interviews with 10 informants (P1-P10) regarding the management and challenges of the water distribution system in Sukadana Village, Karangasem. The main source of water comes from dug wells, but the rocky soil conditions limit their amount. P1 & P2 stated as follows.

"*The water source in our village is still very limited*." (P1)

"*The water discharge is not always stable, especially during the dry season*." (P2)

Management is carried out by community groups under Village-Owned Enterprise/*Badan Usaha Milik Desa* (BUMDesa), with a transparent contribution system. P4 explains and P5 complained as follows.

"*We manage this water with a usage-based fee system*." (P4)

"*If there is damage, sometimes it takes a long time to repair."* (P5)

Key challenges include limited infrastructure and the impacts of climate change. P7 noted and P10 highlighted as follows.

"*During peak hours, the water pressure weakens*." (P7)

"*Public awareness of paying the levy is still an obstacle*." (P10)

Overall, access to drinking water in Sukadana Village is greatly influenced by natural conditions and existing management.

The main source of water comes from dug wells, but rocky soil conditions limit the number of wells. The community relies on one dug well built with the help of village funds and the Pamsimas program. Water availability often decreases, especially during the dry season, resulting in distribution disruptions. People sometimes buy water from the private sector at a cost of around IDR 500,000 per tank for one week. Water distribution systems face technical challenges, such as high electricity requirements to pump water from reservoirs to households. Water management is carried out by community groups who are selected through deliberation, with transparency in financial records. Despite the support from the village government, challenges such as the incontinuous quantity of water and the limitation of human resources in infrastructure improvements are still a problem. Climate change also affects the quality and quantity of water, while public awareness to pay for water use needs to be increased so that management can run better.

It has been the case in previous studies in different countries and regions that many communities, especially rural areas, still face difficulties in accessing safe and affordable drinking water. This is a significant obstacle to achieving sustainability goals (Ghosal & Ruj, 2023). The challenges that arise also look similar to previous research that stated that challenges in access to safe drinking water, especially in rural areas. The main source of water comes from dug wells, but availability often decreases, especially during the dry season. Active community participation as a solution in the management of drinking water projects contributes to social welfare and good governance (Ghosal & Ruj, 2023). The project demonstrates a positive impact on people's quality of life, including improved health and reduced healthcare costs. This means that access conditions are a problem that is not only faced by one region but also another that needs to be reviewed.

Community-based management is a solution that can help coordinate water availability easier (Yasmita, 2023). Challenges are not spared in any analysis because the challenge will actually be the location of people's thinking so that they are more aware of their concern for water availability (Kativhu et al., 2022). Challenges also arise as a result of each community having different norms, values, and habits. These differences can affect the way communities receive and manage water projects (Ajith et al., 2022) The challenges faced from a financial perspective can be seen that people still buy water from the private sector, which means that the implementation of the concept of financial sustainability is still relatively low, which is caused by the absence of water management rules and weak constitutional enforcement due to kinship reasons. This statement is also in line with previous research that states that weak rules and agreements of constitutional enforcers in lowering the quality of financial sustainability (Kativhu et al., 2022).

3.3 Application of the Danu Kerthi concept as a sustainability of community-based drinking water management

The application of the *Danu Kerthi* concept in Sukadana Village is reflected in respect for water sources through the mapag toya ritual and efforts to protect the environment. The concept of mutual cooperation is the key to community-based drinking water management. However, key challenges related to funding remain. P11, P13, and P14 states; then P15 emphasized as follows.

> "*In the teachings of Danu Kerthi, we are taught to maintain balance and purity of resources*." (P11)

> "*Without sufficient financial support, it is difficult to sustain this practice*." (P3)

> "*Community involvement in water management is essential, but it is often hampered by funding issues*." (P14)

> "*We need better solutions to ensure the sustainability of our water resources*." (P5)

The concept of *Danu Kerthi* is part of the teachings of *Sad Kerthi* in the philosophy of life of the Balinese people which emphasizes the balance, sustainability and purity of water resources in maintaining the harmonization of the sanctity of water sources not only in ceremonies, but also reflected in the daily lives of humans (Wiana, 2018). Interviews with traditional leaders and religious leaders in Sukadana Village revealed that *Danu Kerthi* teaches the community to respect and protect water sources as part of a life in harmony with nature, including by protecting the environment around the spring, especially by taking care of the plants around it. The Balinese Hindu community believes that in every activity related to the interests of the lives of many people, especially in this case making reservoirs, it is not uncommon for people to carry out a religious ritual called mapag toya, which in this ritual is expected to always be sufficient and provide blessings to all mankind.

Water is not only seen as a physical resource but also has spiritual value, so that in every use of water it should be accompanied by a sense of responsibility and awareness to maintain the preservation of water sources. This provides a similar explanation to previous research that the approach of local wisdom in water management is embedded in the principle of *Tri Hita Karana*, the Balinese philosophy of life that emphasizes the balance between humans, nature, and God, plays an important role in water management. The application of this principle in rural areas helps to maintain the sustainability of water resources. The local wisdom of the Balinese people contributes to the preservation of the environment and natural resources, which supports sustainability in ecological, economic, social, and institutional aspects (Arsana et al., 2022).

One of the interviews with community-based drinking water managers also explained the concept of mutual cooperation in water management, protecting water sources is not only the task of water managers but also involves the entire community where the community very voluntarily participates in water network maintenance activities by not throwing waste on water sources, planting plants around water sources and participating in protecting the environment so that the water used does not experience pollution. One of the main challenges in the sustainability of water management in Sukadana Village is limited funding. In an interview with water management agencies and village officials, it was emphasized that the application of the *Danu Kerthi* concept can be strengthened with the integration of green finance.

(a)  (b) 

Fig. 2. (a) Interview with Sukadana village drinking water manager ; (b) Interview with Sukadana village apparatus

The application of the *Danu Kerthi* concept can be strengthened by the integration of green finance, which refers to the use of financial resources to support sustainable and environmentally caring projects. This integration is critical because it can help ensure that water resource management focuses not only on environmental aspects, but also on finances. By combining the financial principles of sustainable development with local values, communities can more easily protect and care for existing water resources. In addition, people can become more aware of the need to maintain ecosystem balance, which can manifest community participation in water resource management and in turn feel a sense of belonging (Kurniadi et al., 2025; Yasmita, 2023).

3.4 The role of green finance in supporting community-based drinking water system funding

There is also a high potential of green finance for financing community-based piped water system in Sukadana Village. The water manager has a big challenge of operational and maintenance issues due to financial constraints. Interview with P16, P17, and P18 mentioned as follows.

> "*We have a problem related to operation cost, like pipes network maintenance and clean water availability. Our financing source is still limited, and we often need to find alternatives to make this system sustainable*." (P16)

> "*We need support from the government and finance institution to develop sustainable project*." (P17)

> "*Application of green finance can help us to secure needed fund for the infrastructure improvement*." (P18)

All participants also express their expectation that the community-based piped water system will develop further and will be expanded with other fund source from non-governmental organizations. Lastly, interview with P20 emphasized as follows.

> "*Piped water system's sustainability is highly dependent on community active participation and sustainable fund support*." (P20)

Managers of drinking water institutions acknowledge that the main challenge in water management is the high operational costs, including the maintenance of the pipeline network and the development of water. The Pay-As-You-Go (PAYG) system can be a solution, this can be seen from the obedience and compliance of the community by paying for the service of using drinking water in accordance with actual consumption so as to reduce the burden of fixed monthly payments (Pierce et al., 2021). Compliance with public payments also has a positive impact on the manager's income so that operating costs are easier to manage (Komakech et al., 2020).

With payment compliance carried out by the community, it is hoped that dependence on government subsidies related to the maintenance and development of drinking water infrastructure will result in the system becoming more independent and sustainable (Solgi et al., 2020). The use of PAYG in the community requires a fairly high challenge, if the drinking water management institution will use the PAYG method, what must be done is to use a water meter in each customer's household so that it is easier for drinking water officers to calculate how much is charged to customers every month, while for the community itself the advantage is that the community can better manage household expenses, especially drinking water so that The community feels unburdened and feels fair in every expected stage regarding the quality of water services provided by the management agency (Coulson et al., 2021). The PAYG method provides new challenges for institutional managers, the implementation of PAYG requires technological infrastructure such as water meters because only a few customers in Sukadana Village use water meters and the next obstacle is the capacity of human resources managers that need to be increased, especially water meter readings and digital bookkeeping so that collaboration with stakeholders such as banks in an effort to support this implementation, ensuring the financial sustainability of water management institutions and supporting the sustainable development of drinking water in Sukadana Village.

3.5 Strategy for the integration of local wisdom, green finance, and technological innovation in drinking water management

Drinking water management in Sukadana Village faces challenges such as declining water discharge due to climate change. To answer this challenge, it takes the integration of local wisdom, green funding, and technology. P21 said as follows.

"*The concept of Danu Kerthi teaches us to maintain the purity and sustainability of water. The Mapag Toya ritual is still routinely carried out as a form of commitment*." (P21)

The community is also aware of the importance of protecting the environment as explained.

"*Water has spiritual value, so planting trees and not polluting the environment is a shared responsibility*." (Community Sukadana Village)

In terms of funding, P23 and P24 said as follows.

"*We are exploring cooperation with environmentally friendly financial institutions*." (P23)

"*We are ready to participate in the community's savings for the maintenance of the water network*." (P1)

In terms of technology, P25 and P26 revealed, than P29 and P30 conclude as follows.

"*Water distribution is not even. Technology can help regulate distribution as needed*." (P25 and P26)

"*Revolving funds or grants must be supported by clear management. The key to success lies in the integration of local wisdom, sustainable finance, and technology*." (P29 and P30)

Community-based drinking water management in Sukadana Village has complex challenges, ranging from uneven water quantities to the development and sustainability of drinking water systems that are still experiencing obstacles. The availability of declining water discharge is caused by several factors, including climate change and environmental changes which can strengthen the urgency to be able to implement a sustainable drinking water system strategy in an effort to maintain the continuity of water resources. Facing challenges or risks as climate reduces risks, there is a need for long-term planning adaptation that plays an important role in improving adaptability and reducing vulnerability and exposure (Dehghani et al., 2024). With the increasing demand for water, long-term sustainable planning is crucial, and more contributions from social institutions and NGOs are needed to meet these challenges (Imani et al., 2023). Local wisdom plays an important role in building public awareness and participation in the importance of maintaining the balance of nature, especially water resources (Abas et al., 2022). It is contained in the previous discussion that local knowledge and local wisdom play a significant role in water management, but it is important to integrate various knowledge systems, including local knowledge and local wisdom in their respective regions to ensure the sustainability of water adaptation in the future. It is contained in the previous discussion that local knowledge and local wisdom play a significant role in water management, but it is important to integrate various knowledge systems, including local knowledge and local wisdom in their respective regions to ensure the sustainability of water adaptation in the future (Zvobgo et al., 2022). Local wisdom plays an important role in the conservation of water resources by indigenous peoples in different parts of the world. As in Thailand,

indigenous people believe that the upstream of the river is protected by the goddess of good fortune, so the people only use the downstream part for their daily needs (Abas et al., 2022). In Indonesia, the practice of "*Aia Adat*" regulates the distribution of irrigation water from 18.00 to 06.00 under the supervision of "*kapalo banda*". Indigenous Chinese people develop comprehensive water management systems to address seasonal floods and water shortages (Abas et al., 2022). These practices show how local wisdom contributes significantly to maintaining ecosystem balance and ensuring the availability of clean water for communities (Abas et al., 2022). The concept of *Danu Kerthi* aims to maintain the value of purity and sustainability of water so that it becomes the basis for building a system, management that is not only oriented to current needs, but also considers sustainability for future generations (Arsana et al., 2022).

The effectiveness of community-based water management requires support from various aspects, including a more inclusive financing system and the need for technological innovations that can improve the efficiency of water resource management. The Pay-As-You-Go (PAYG) system is one way to provide funding for the infrastructure and operations of drinking water systems, so that people can access sustainable clean water (Machete & Marques, 2021). Project financing can provide an advantage in funding large-scale infrastructure projects, including in developing countries, and that careful planning through project evaluation procedures is indispensable (Machete & Marques, 2021). The application of appropriate technology can also support efficiency in water management, this can be done by monitoring water quality in real time or with a flexible payment system (Singh et al., 2022).

According to one of the village officials, the combination of local wisdom, sustainable financial management and technological innovation is expected to create a system that provides long-term benefits to the community. Collaboration between the village government, the community and water management agencies has a sustainability impact on community-based drinking water management. The sustainability of community-based drinking water does not depend only on one factor, but on the alignment between cultural values, financial management and the use of technology. Therefore, synergy is needed by various parties in an effort to realize inclusive, sustainable and value-based drinking water management.

3.6 Model of community-based drinking water system

The sustainability of community-based drinking water services in Karangasem Regency is built through a dynamic cycle that is firmly rooted in the value of local wisdom of *Danu Kerti*. The researcher named this cycle model the Model of Community-Based Drinking Water System in Sukadana Village, Karangasem, Bali with the aim of clarifying how sustainability can be carried out which is firmly rooted in the value of local wisdom of *Danu Kerthi*. This value instills the principle of the sacredness of water as a source of life, encouraging people to protect and manage water resources with full responsibility and respect. *Danu Kerthi* is a moral as well as spiritual foundation that strengthens the community's sense of ownership of existing water sources.

The initial stage of this cycle starts from Access Conditions or access conditions to water. The distribution of drinking water in Karangasem Regency is often uneven due to rocky and hilly geographical conditions and fairly limited rainfall. Improving and equitable access to drinking water does not only focus on the development of physical infrastructure such as pipelines and reservoirs, but also on structuring a distribution system that is fair, efficient and responsive to the needs of different communities.

The sustainability of community-based drinking water services can also be strengthened through adaptive and participatory water management. Management should involve all stakeholders who receive drinking water, especially the community. This management includes the protection of spring water sources, the regulation of water use distribution, infrastructure maintenance and risk management for prolonged dry seasons that can disrupt the stability of water quality in the community, improving the quality of

managers in distributing and maintaining water infrastructure is needed, as well as in administration and financial recording so that a strong institution is needed technically and administratively. Participation and trust of the community in the management institution is something that can help in improving the performance of the Institution, the community should be actively involved in monitoring, minor repairs and environmental conservation activities around the water source in order to maintain the continuity of drinking water supply to the community.

The preparation of institutional strategies based on community strength is one of the things that is done in facing the dynamics of challenges that continue to develop. This strategy is directed at diversifying water resources, using appropriate technology, strengthening water management institutions, and creating collaborations with village governments, NGOs, and the private sector. The development of this strategy is key in building a water service system that is more resilient to environmental and social shocks. The limitation of natural resources, especially drinking water, causes Karangasem, especially Sukadana Village, to make an innovation. The innovations created do not have to be in the form of advanced technology, but creative adaptations to simple technologies that are appropriate to the local context. Examples are the development of rainwater harvesting systems, the use of simple filters made from local, or the use of smartphone-based recording applications to facilitate the management of water services at the community level.

The fundamental problem in the sustainability of community-based drinking water management is the limited operational funds so that it is necessary to strengthen green finance. The implementation of a social justice-based contribution system, the establishment of reserve funds for infrastructure improvements and maintenance, as well as efforts to access alternative funding sources such as CSR programs or government grants that can support environmental conservation. The implementation of innovative management and the strengthening of sustainable finance mechanisms contribute directly to institutional capacity building in expanding and improving community-based drinking water access conditions.

Fig. 3. Model of community-based drinking water system in Sukadana village, Karangasem, Bali

Improvements in this aspect of Access Conditions further regenerate the sustainability cycle, creating drinking water services that are more inclusive, adaptive, and responsive to the needs of the community. Thus, the sustainability of drinking water services in Karangasem Regency can be maintained and strengthened progressively, despite continuing to face external pressures such as climate change, natural resource degradation,

population growth, and social and cultural shifts. These findings confirm that the resilience of community-based water services relies heavily on the integration of managerial capacity, technological innovation, financial resilience, and institutional adaptability to the dynamics of external environmental change in a sustainable manner. However, all activities carried out in this cycle all depend on financial readiness, which means that it cannot be separated from the green financial base that helps to complement this sustainability, although each activity presents various challenges in it. So, the role of the entire community, the government and even the private sector needs to always carry out a reliable and efficient collaboration system for this sustainability.

4. Conclusions

This study highlights the complexity and interconnectivity of sustainable community-based drinking water management. Through interviews with experienced informants, key insights were identified and structured into comprehensive indicators and sub-indicators across six critical areas: access conditions, management systems, challenges, local wisdom (*Danu Kerthi* concept), green finance, and strategic actions. The findings emphasize the importance of community involvement, technological integration, financial sustainability, and the inclusion of cultural and spiritual values in water governance. Moreover, the development of a clear and structured model provides a practical framework for enhancing sustainability, resilience, and inclusivity in water management systems, especially in rural and traditional settings. Community-based drinking water systems can be further strengthened through green finance mechanisms, which not only ensure long-term financial sustainability but also align with local wisdom embodied in the *Danu Kerthi* concept—creating a culturally rooted and economically resilient model as demonstrated in the Community-Based Drinking Water System Model in Sukadana Village, Karangasem, Bali.

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During the preparation of this work, the author used Grammarly to assist in improving

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