



## TAMBAKNEGARA VILLAGE COMMUNITY PERCEPTION OF THE SERAYU MANGROVE ADOPTION PROGRAM

**Tundjung Linggarwati\***, Arief Bakhtiar Darmawanr, Soni Martin Anwar, Resya Nur Intan Putri

Faculty of Social and Political Sciences, Universitas Jenderal Soedirman, Purwokerto, Cetral Java, Indonesia

\*Email: tundjung.el@unsoed.ac.id

**Abstract.** The Serayu Mangrove Adoption Program is an environmental conservation initiative aimed at restoring the function of the mangrove ecosystem along the Serayu coast, particularly in Tambaknegara Village. This study aims to determine the perceptions of the Tambaknegara Village community regarding the program's implementation, as well as the extent to which the community is involved and feels its impact. The method used is a qualitative approach with data collection techniques through in-depth interviews, field observations, and documentation studies. The results show that the majority of the community has a positive perception of the mangrove adoption program, especially in terms of increasing environmental awareness, economic potential through ecotourism, and protecting riverside areas from abrasion. However, there are also several challenges such as the lack of comprehensive socialization and limited community participation in decision-making. This study concludes that the success of the mangrove adoption program is highly dependent on collaboration between the community, government, and program management institutions in creating environmental sustainability based on local participation.

**Keywords:** Community perception, environmental conservation, Serayu mangrove adoption, participation

### 1. Introduction

Climate Change has become an important global issue considering its impacts that can trigger food crises, health and cause natural disasters, so that the United Nations (UN) through the United Nations Framework Conference on Climate Change (UNFCCC) issued an agreement aimed at addressing global climate change, namely the Paris Agreement in 2015. [1] Indonesia has signed the agreement and ratified it through Law number 16 of 2016, thus Indonesia is bound by the obligation to implement the rules in the Paris Agreement. [2] To implement the Paris Agreement in Indonesia, the government implemented the Climate Village Program (Proklim) through the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.84 / Menlhk-Setjen / Kum.1 / 11/2016 concerning the Climate Village Program. Proklim is a national program that involves all components of society with the aim of controlling climate change by providing recognition for the active participation of communities that have implemented integrated climate change mitigation and adaptation efforts. The Indonesian government targets the achievement of 20,000 climate villages by 2024 [3]. When linked to sustainable development or the Sustainable Development Goals (SDGs), ProKlim is highly relevant and aligned with SDG achievement efforts, given that ProKlim's activities include climate change management, food security, health, sanitation and clean water, energy efficiency and renewable energy, and gender equality in its implementation, which involves the participation of all community components in accordance with SDG principles.[4]



In Banyumas Regency, ProKlim began its implementation in 2021, and by 2024, there will be 74 Climate Village locations, 28 of which have received the National Main ProKlim Award.[5] Tambaknegara Village in Rawalo District is one of the villages implementing ProKlim in 2024. As a tourist village with a strong indigenous community, the Kasepuhan Kalitanjung Indigenous Community, is characterized by its traditional character and diverse traditions and beliefs in daily life, distinguishing it from other villages.[6] Initially, the ProKlim program in Tambaknegara Village was primarily intended to support the interests of tourist villages, focusing on developing sustainable tourism. However, as it evolved, ProKlim acquired a broader purpose than just a government program or tourism interests. The weakening environmental resilience caused by the erosion of the Serayu River banks and declining public awareness of environmental conservation have raised serious concerns among the Tambaknegara Village community, given its location on the banks of the Serayu River.

Despite differing traditions within the community, when it comes to nature and environmental conservation, the Kasepuhan Kalitanjung Traditional Community now places equality between men and women in environmental management and preservation, a role previously dominated by men. Women now have the right to protect the environment as an alternative to preserving the Kasepuhan Kalitanjung Customs, which is manifested in daily activities and various traditional rituals aimed at environmental safety and sustainability, given the importance of the integration of humans and nature in traditional life.

This concern is shared by various community members, including the ProKlim Team and the Tourism Village Management. However, internalizing climate change adaptation and mitigation efforts is not easy among intensive and specific indigenous communities, considering that the life of the Kasepuhan Kalitanjung indigenous community is still relatively traditional and less in touch with technology and global issues. Various myths and traditions, beliefs and ways of life that surround the indigenous community make it lacking information about various programs that require the active participation of all citizens. This condition requires the right strategy and approach to create a match between adaptation and mitigation efforts and local wisdom believed in by the community to be able to reduce the potential for conflict within the community due to these programs. Despite having traditions in different communities, when it comes to nature and environmental conservation, the Kasepuhan Kalitanjung Indigenous Community currently places equality between men and women in environmental management and preservation, which was previously dominated by men. Currently, women have the right to protect the environment as an alternative to preserving the Kasepuhan Kalitanjung Customs, which is manifested in daily activities and in various traditional rituals aimed at environmental safety and sustainability, considering the unity of humans and nature is essential [7]

Serayu Mangrove Adoption [8] is a program initiated as one of the ProKlim activities in Tambaknegara Village to maintain the river ecosystem, reduce greenhouse gas emissions and increase the mangrove population to prevent the risk of flooding due to overflowing Serayu River. This study identifies how the Tambaknegara village community perceives climate change adaptation and mitigation and how it is synchronized with existing local wisdom and the extent of the role of the Kasepuhan Kalitanjung indigenous community in Tambaknegara Village in the Climate Village Program, especially the mangrove adoption program. The novelty of this study is the involvement of indigenous communities in development programs that refer to the implementation of international environmental regimes

## 2. Methods

The research was conducted in Tambaknegara Village, Rawalo District, Banyumas Regency. This study used qualitative research methods using primary and secondary data. Primary data



were obtained from interviews with the initiators and managers of the Serayu mangrove adoption program, community leaders, in this case the Kalitanjung traditional leader, and also survey data from the Tambaknegara Village community. There were 70 respondents representing the Tambaknegara village community. During the pre-research, researchers had obtained information about the conditions of the Kalitanjung indigenous community in Tambaknegara Village and the Proklim activity in the form of Serayu mangrove adoption which began in 2024. During the research period, the community's perception of the Serayu mangrove adoption program in the Tambaknegara Village community and the role of indigenous communities in the mangrove adoption program as one of the climate change mitigation activities will be further explored.

### 3. Results And Discussion

Tambaknegara Village is administratively located in Rawalo District, Banyumas Regency, Central Java Province. This village is located in the easternmost part of Rawalo District, located on the central highway between Purwokerto City and Cilacap. This village is bordered by, among others, Losari Village in Kebasen District to the south, separated by the Serayu River, Notog Village in Patikraja District to the east, Rawalo Village, Pesawahan, and Sidamulih to the west, and Perum Perhutani Mountains to the north. Demographically, Tambaknegara village consists of seven RW and eight groups (Grumbul), including: Kalitanjung RW 1, Kalitanjung RW 2, Bonjok Kulon RW 3, Palsus/Perhutani RW 4, Bonjok Wetan RW 4, Tunggak Putra RW 5, Karangdadap RW 6, Kaliwangi RW 7, Tumpang RW 7. [9]

Residents of this village generally maintain kinship ties with each other, especially within a single neighborhood unit (RT), where they may be related by blood. The majority of residents make their living from farming, livestock farming, fishing, labor, home-based businesses, and a small number are civil servants and soldiers.

The people of Tambaknegara Village, who hold different faiths, live side by side in their daily lives. Despite their differences in religion and belief, each community in Tambaknegara Village has established social contact and good communication. This social contact and communication foster harmonious interactions and fosters mutual respect and tolerance in daily life. This mutual respect and tolerance can be observed through the various activities held by the Kejawen Islamic community, as well as by non-Kejawen Islamic communities, who invite each other to certain religious activities. The Kejawen Kalitanjung Islamic Community still performs the religious ritual of "selamatan" (prayer offering) to commemorate major holidays, commonly known as Grebeg Suran. This ritual consists of two main events: a shadow puppet performance and an earth offering, accompanied by the planting of a goat or cow head at the intersection that serves as the entrance to the earth offering.

"During the earth offering, people, without being asked, will carry out the earth offering by bringing food sourced from the earth, such as cooked vegetables. They then line up along the street, beginning with a prayer, then planting the goat or cow head, and then eating together." [10] Efforts to maintain their traditional culture include holding rituals before planting rice and before harvesting, birth rituals, and death rituals. The Kejawen Kali Tanjung Islamic Community maintains its religious identity through family institutions, namely through socialization from parents to children, and through customary institutions, namely through the process of becoming elders through customary processes.

The Serayu Mangrove Adoption program is a program initiated as part of the Proklim program in Tambaknegara Village to maintain the river ecosystem, reduce greenhouse gas emissions, and increase the mangrove population to prevent flooding caused by overflowing Serayu River waters. While mangroves are typically planted on the coast, this time they were planted in the river to prevent abrasion. This program was initiated by a community group concerned with preserving the Serayu River ecosystem. Launched in 2024, the program

received a positive response from environmentalists [11]. However, within a year of its launch, the program has not yet attracted much public interest. The data below shows that this program is not yet widely known and interested in the wider community.

Table 1. Serayu Mangrove Adoption Data as of October 2025

No	Adapter group	Percentage
1	Individuals	27,3%
2	School	20,3%
3	Organizations	16,3%
4	Private Sector	5,7%
5	Government agencies	9,3%
6	Local Government and universities	12%

Source: mangroveserayu.com

The data above shows that by October 2025, the Serayu mangrove adoption program had 171 adapters with a donation value of IDR.15,925,000. This shows that even though this program has very good intentions, if we look at the low adoption rate, it shows that there are obstacles in implementing the program even though this program can be accessed via a digital platform.

Mangrove adoption activities, in addition to environmental conservation goals by preventing abrasion and discouraging river fishing practices with nets and other ecosystem-damaging methods, also serve social and educational purposes: raising public awareness of the importance of mangroves, providing practical learning opportunities about mangrove ecosystems (in schools and communities), and engaging communities in conservation, thereby strengthening solidarity and mutual cooperation. Serayu mangrove adoption is digitalized, allowing adopters to adopt, pay adoption fees (seedlings and maintenance), and monitor adopted seedlings via smartphone. Each adopter receives a QR code tree tag that can be scanned with a smartphone and contains both the adopter's and the adopted mangrove seedlings' data. In the planting process, adopters can do it themselves with guidance from the managers, but if we don't have the opportunity to plant it ourselves, volunteers will do the planting and report to the adopters if the seeds have been planted.



Figure 1. Tree tag and Adopted Mangrove

Source: Personal documentation

The Kasepuhan Kalitanjung indigenous community is part of the Tambaknegara village community, specifically those living in Grumbul Kalitanjung (RW 1 and RW 2). The Kalitanjung community is a traditional community that highly values environmental preservation. This is evident in the various local wisdoms that are part of their lives, both in the form of beliefs and traditional rituals related to the environment. For example, the Kalitanjung community believes that the earth is a "mother" and must be cared for and nurtured. If damaged, the earth will become "angry" and cause many disasters for humans (results of interviews with Kalitanjung traditional leaders). The Kalitanjung community has a spiritual bond with the Serayu River, as research conducted by researchers indicates. This spiritual bond stems from

the belief that the Serayu River possesses supernatural or spiritual powers and is guarded by ancestral spirits.

The villagers regularly hold an earth offering ritual during certain months or after the harvest, expressing gratitude and praying for continued prosperity for the earth, water, and plants. 55% of the community believes that the Serayu River contains supernatural powers which underlie the traditional rituals carried out in the Serayu River to provide safety and prosperity.

The Serayu mangrove adoption program is well-known and familiar to the Tambaknegara community. Data shows that most people learned about this program from traditional leaders or kyai (the term for Kalitangjung traditional figures/leaders).

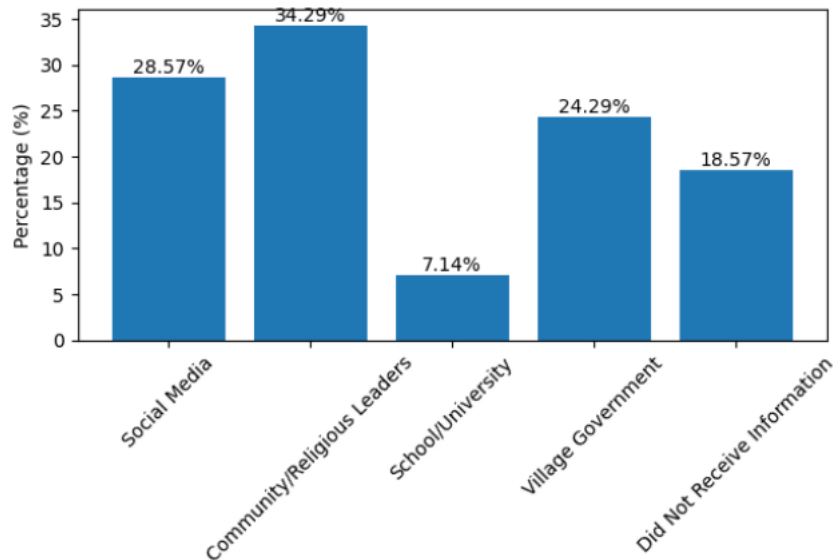


Figure 2 Information about the mangrove adoption program

Source: survey data from 70 respondents

The data shows that traditional leaders play a significant role in disseminating information related to environmental conservation activities. This is reinforced by community opinion, which states that traditional leaders are very active in various environmental activities. Survey data showed that 94% of traditional leaders actively participate in environmental conservation activities and serve as role models for their communities. The active and consistent involvement of traditional leaders in promoting and implementing environmental conservation in accordance with customary rules. The community is aware of and familiar with these rules, including various customary rules that strongly support environmental conservation, including provisions, prohibitions, ceremonies, and other customary rituals. 90% of respondents stated they were aware of customary rules related to environmental conservation.

Regarding the mangrove adoption program which is already known by indigenous communities, research shows that there is a role for the community in the program where the community knows the benefits of the program.

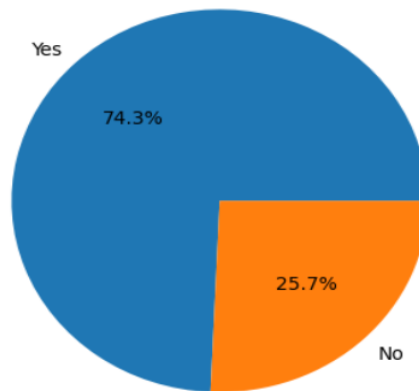


Figure 3. Knowledge of the benefits of the mangrove adoption program

Source: data survey from 70 respondents

Knowledge of the program and its benefits has fostered a positive perception among the Tambaknegara Village community. Interviews revealed that the Serayu mangrove adoption program is excellent and a manifestation of environmental stewardship. Caring for the earth is a traditional teaching passed down through generations, but it can now be implemented in a manner that adapts to changing times. The community also believes that environmental conservation programs, such as river protection, can safeguard human life.

The positive public perception of the mangrove adoption program does not correlate positively with the direct participation of the Tambaknegara Village community in the program. Only about 25% of all respondents stated that they had participated in adopting mangroves. When further information was sought, the reason why many had not adopted was because the adoption program was paid for, namely for the purchase of seedlings and maintenance for 1 year with package A options of Rp. 100,000 and package B Rp. 150,000. Meanwhile, if seen from the economic conditions of the Tambaknegara community, they are lower-middle class and mostly rely on garden produce for daily living considering that in their customs there are several restrictions and in their lives. Furthermore, most of them do not use smartphones, and even if they do, literacy about adoption procedures, transfer fees and scan treetags is not sufficient. So technological barriers are a factor in the low level of adoption in the village itself. However, they actively participate in this program activities in other forms, for example helping with maintenance, helping with supervision with Pokwasmas (Community Monitoring Groups) and disseminating information about this program at various meetings in the Tambaknegara village environment.

To facilitate the community's adoption of mangroves at a more affordable price, the Pokwasmas is collaborating with tourism awareness groups (Pokdarwis) to incorporate mangrove planting into educational tourism packages, providing hands-on experience in planting and maintaining mangroves. Furthermore, the Pokwasmas is collaborating with the Climate Village Program (Proklam) team in Tambaknegara Village, making mangrove planting a mitigation measure for climate change.

#### 4. Conclusion

The Serayu Mangrove Adoption Program is an environmental conservation program implemented in Tambaknegara Village to protect the ecosystem and prevent erosion of the Serayu River. This program encourages the community to adopt mangrove seedlings to be planted along the banks of the Serayu River. The program uses a digital platform. The Tambaknegara Village community has a positive perception of the program because it aligns



with customary rules to protect the earth and the active role of the traditional leader in environmental conservation activities serves as a good example for the community.

However, direct community participation in mangrove adoption remains limited due to financial constraints and technological literacy. Therefore, the community's role is more focused on assisting with maintenance, protection, and disseminating information.

## 5. Acknowledgement

Thank you to the Chancellor of Unsoed, Head of LPPM Unsoed, Pokwasmas and the manager of the Serayu mangrove adoption program, Head of the Kalitanjung tradition, Tambaknegara Village

## References

- [1]. Ditjen PPI, KLHK, (2023), Roadmap of Indonesia Climate Programme
- [2]. Ayuningsih AN & Oktaviani, MA (2023), Ratification of the Paris Agreement and Implementation of Indonesia's National Determined Contribution (NDC), *Jurnal Ilmu-ilmu Sosial dan Ilmu Politik Universitas Jambi (JISIP UNJA)*, 2023-04-28
- [3]. <https://ppid.menlhk.go.id/berita/siaran-pers/6011/pemerintah-targetkan-20000-kampung-iklim-pada-2024>
- [4]. Linggarwati, Tundjung (2023), The Alignment of the Climate Village Program (ProKlim) with Efforts to Achieve the SDGs in Indonesia, in Yamin, Muhammad, Sustainable Development Goals in Intermestic Perspective (Internasional Domestik), SIP Publishing, Banyumas
- [5]. Dinas Lingkungan Hidup Kabupaten Banyumas (2024) Implementation of Climate Programme in Banyumas Regency
- [6]. Resticka. GA et.al (2024). Sedekah Bumi as a Traditional Convention of the Kasepuhan Kalitanjung Indigenous Community in Preserving Local Culture, *Jurnal Salingka*, Vol 21 no 1
- [7]. Sifa, Aqiel, Putra, A, Luthfi, M (2023), Indigenous Eco-feminism in Kalitanjung Kejawen Peoples as an Alternative to Preserve the Nature, *Jurnal Dialog*, Volume 46, No. 2, Kemenag RI
- [8]. <https://mangroveserayu.com/>
- [9]. Monograph of Tambaknegara Village
- [10]. Interview with Ki Sumi, Traditional leader of Kalitanjung, Tambaknegara Village
- [11]. Interview with the manager of the mangrove adoption program (Tursin and Novi)