



Strengthening Rural Communities with Smart Village Approaches: A Case Study of Teratak Village

Suhardi Suhardi¹, Dede Aprylasari^{2*}, Ari Wibowo³, Novrilia Atika Nabila⁴

¹⁻³ Mulawarman University, Indonesia

⁴ Sumatra Institute of Technology, Indonesia

Korespondensi: dedeaprylasari@faperta.unmul.ac.id *

Article History:

Received: Desember 18, 2024;

Revised: Januari 11, 2025;

Accepted: Januari 27, 2025;

Published: Januari 30, 2025

Keywords: Descriptive Research, Teratak Village, Smart Village, Socialization

Abstract: A smart village is a modern development effort to overcome problems. A bright town is a principle that includes concept development and technology implementation. This principle helps villages overcome issues that occur in villages, such as environmental problems, sanitation, environmental pollution, infrastructure, technological backwardness, and others. For this reason, this final report discusses the implementation of smart villages in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency. Research for Smart Village activities uses descriptive research methods consisting of activity targets, strategies, and implementation. The target of community service and Smart Village activities is, of course, the entire community of Teratak Village. All activities in the Smart Village are carried out in collaboration with officials, village officials, village organizations, and school residents, not forgetting the Teratak Village community. As for its implementation, Smart Village uses several different methods. Smart Village is an activity that consists of six main programs where the programs are grouped into superior group work programs, namely making directional signs, healthy living education, planting TOGA (Family Medicinal Plants), reactivation of social media accounts, activation of posyandu and dengue fever education, and waste collection activities. Apart from that, there are also seven other work programs, namely socialization of TOGA planting, making village maps, digital literacy education, developing village profile websites, socializing the importance of fish in children's growth and development, stunting education, and socializing the use of waste with eco-bricks.

1. INTRODUCTION

Indonesia has far more villages than cities. The large number of villages is a challenge for the central and regional governments to avoid creating striking disparities between cities and towns. This gap can be seen from various aspects, including access to education, health services, infrastructure, and so on (Subekti & Damayanti, 2019).

In order to overcome the problem of inequality that occurs in villages, the government issued Law Number 6, and this was confirmed by PP Number 43 of 2014 concerning Implementing Regulations of Law Number 6 of 2014 concerning Villages, and Minister of Home Affairs Regulation Number 44 of 2016 concerning Village Authority. The village laws and regulations contain policies that help villages gain their village autonomy (Premana et al.,

2022). Through these laws and regulations, villages can carry out modern development initiatives that have the potential to overcome village problems. In this case, the initiative that needs to be taken is applying the bright village concept, an alternative to modern village development (Hadian & Susanto, 2022).

Smart village is a modern village development effort that aims to overcome the problems in the village. The bright village concept was adopted from the brilliant city concept, previously known in Indonesia. The term "smart" is used not only to describe how villages deal with problems that occur intelligently and modernly but also to fight the negative stigma that villages have that has been attached to them for so long, such as villages that are often considered backward and less educated (Subekti & Damayanti, 2019).

A smart village is a principle that includes concept development and technology implementation. This principle helps villages overcome problems that occur in villages, such as environmental problems, sanitation, environmental pollution, infrastructure, technological backwardness, and others. Therefore, smart villages are expected to be able to create a smart village ecosystem combined with technological developments implemented from the smart city concept so that they can provide a decent life for village communities like people who live in cities but can still maintain the local wisdom found in villages. (Subekti & Damayanti, 2019). Therefore, this final report discusses the implementation of smart villages in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency.

Teratak Village is located in Muara Kaman District, Kutai Kartanegara, East Kalimantan, which consists of 3 hamlets and has a population of 1,898. In mid-July 2024, Teratak Village officially received the title of developed village after previously holding the title of developing village. Many needs must be provided to prepare the village to receive this title. One of them is the empowerment of natural resources and human resources within the village area. Seeing this condition, the research team was then moved to develop a work program by promoting Smart Village with the hope that community and environmental empowerment could be realized well and that it could support village development to be much better.

2. METHOD

Research for Smart Village activities uses descriptive research methods. Descriptive research itself is a method used to describe phenomena in society. (Thabroni, 2022)

Activity Targets

The target of community service and Smart Village activities is, of course, the entire community of Teratak Village. As for the healthy living socialization work program, education

on the importance of fish for children's growth and development, digital literacy, and using waste through eco-bricks are targeted at children. Meanwhile, the socialization and planting of Family Medicinal Plants, trash collection activities, and social media activation are targeted at all levels of society.

Activity Method

All activities in the Smart Village are carried out in collaboration with officials, village officials, village organizations, and school residents, not forgetting the Teratak Village community to launch the entire series of Smart Village activities.

Implementation of Activities

As for implementation, Smart Village uses several different methods. Several activities are carried out using socialization, community service, and cooperation methods.

3. RESULTS AND DISCUSSION

In line with the official title of the advanced village received by Teratak Village and to realize the theme of the Real Work Lecture at Mulawarman University class 49, which was given the theme "Developing Villages Towards Green Kaltim," the research team then proposed a work program with the name Smart Village activity. Smart Village comprises six main programs grouped into superior group work programs. Apart from that, there are also seven other work programs. This Smart Village activity is carried out to empower natural and human resources in Teratak Village. This activity occurs during the Real Work Lecture period, from July 1, 2024, to August 14, 2024. For details of various Smart Village activities, see the following description:

1. Featured Work Program

The superior work program in the Smart Village activity itself consists of six programs, among others:

a. Making direction signs

The directional sign showed the direction to the three hamlets in Teratak Village in the opposite direction. The installation was assisted by village staff and the community, so students were greatly helped while working on this work program.



Figure 1. Implementation of the Featured Work Program for Making Direction Signs

b. Healthy living education

Education targeted kindergarten and elementary school students in grades 1 and 2. Healthy living education provided material on how to brush your teeth and wash your hands properly. The students involved in this activity were Cemara Kindergarten students, grade 1 students at SDN 007 Muara Kaman, and grade 1 and 2 students at SDN 033 Muara Kaman.



Figure 2. Implementation of the Healthy Living Education Leading Work Program

c. TOGA Planting (Family Medicinal Plants)

This TOGA planting activity was carried out on August 3, 2024, involving PKK women from Teratak Village. The mothers who participated in this activity enthusiastically planted medicinal plants such as ginger and turmeric, which were then taken home to their respective homes.



Figure 3. Implementation of the TOGA Planting Featured Work Program

d. Reactivation of social media accounts

The village's social media accounts were activated because the existing village social media accounts were not being used properly. Therefore, the research team then took the initiative to reactivate the village's existing social media accounts so that the wider audience could easily access information about Teratak Village.



Figure 4. Teratak Village Social Media

e. Activation of posyandu and education about dengue fever

The activation of the posyandu was carried out because the stunting rate in Teratak Village was relatively high, so the research team took the initiative to participate in posyandu activities, which were held once a month. Apart from that, education regarding dengue fever was also carried out to the broader community. Dengue fever has recently become entirely endemic in the Muara Kaman area, so this education was carried out to reduce the number of people infected.



Figure 5. Implementation of the Featured Work Program for Posyandu Activation and Dengue Fever Education

f. Waste collection activities

This activity was carried out in cooperation with the entire community of Teratak Village on August 11, 2024, after routine cardiac exercise activities. The community as a whole took to the streets to clean their residential area and was commanded by a research team assisted by the village head.



Figure 6. Implementation of the Leading Work Program for Waste Collection Activities

2. Supporting Work Program

a. Socialization of the Use of Home Gardens for Family Medicinal Plants

Socialization on using home gardens for family medicinal plants was conducted in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency. This socialization aims to increase public awareness of the importance of adding beauty and coolness to home gardens. Also, medicinal plants can be used as herbal medicines for health. The difficulty of getting medication in this village is also one of the reasons for this outreach. With family medicinal plants, it is hoped that minor illnesses such as coughs, flu, and headaches can be treated immediately by utilizing the resources available in each home's yard.

The socialization was held on August 3, 2024, and was attended by PKK women from Teratak Village. The method for introducing Family Medicinal Plants uses a PowerPoint which contains the definition of family medicinal plants, the benefits of planting medicinal plants from various aspects, good and correct planting methods, as well as business opportunities that can be developed from the results of planting medicinal plants in the home yard. During socialization, the mothers were enthusiastic and orderly when listening to the discussion material.



Gambar 7. Implementation of the Supporting Work Program for Socialization of the Use of Home Yards for Family Medicinal Plants

Cultivating medicinal plants has business opportunities to revive the community's economy. Apart from being medicines, family medicinal plants can be used as traded commodities to increase people's income because most medicinal plants are cooking ingredients mothers often use in the kitchen. Apart from that, medicinal plants that are processed first can increase the selling value of the product, thereby bringing in greater profits. For example, turmeric, ginger, and other spices can be processed into herbal medicine.

The output is in the form of a pamphlet containing types of family medicinal plants and their benefits for health, as well as how to make herbal medicine from family medicinal plants. This pamphlet was distributed to PKK women during the socialization and to residents so that it could become a medium for information regarding the use of medicinal plants.



Figure 8. Outcomes of Socialization on the Use of Home Yards for Family Medicinal Plants

The contents and health benefits of several examples of medicinal plants above :

- **Ginger**

Ginger rhizomes contain chemical compounds including oleoresin 2.39 – 8.87%; essential oils 0.78 – 4.80 %; Gingerol 0.49-1.37 %, Shogaol, Zingeron, Starch 39-45 %, Fiber 5.60-8.60 %, several vitamins and minerals. The anti-inflammatory substances in ginger can reduce inflammation so that coughs and sore throats can also be relieved.

- **Turmeric**

Turmeric consists of 10% curcumin, essential oils, 1-3% fat, 3% carbohydrates, 30% protein, 8% starch, 45-55% vitamin C, iron, phosphorus and calcium. Turmeric contains curcumin, which increases the body's endurance. This means the body's defense system against disease-causing viruses or bacteria is enhanced, controlling excessive stomach acid and bile production.

- **Lemongrass**

Lemongrass contains various nutrients such as vitamins A and C, magnesium, iron, potassium, phosphorus, and calcium. The eugenol content in lemongrass functions similarly to aspirin, namely relieving headaches. Eugenol helps prevent blood platelets from clumping. This content can release the hormone serotonin, which regulates mood, sleep, appetite, and cognitive function.

- **Temulawak**

Temulawak has germacrene, xanthorrhizol, alpha-beta curcumin, and others. It has benefits as an anti-inflammatory and antibiotic and increases bile production and secretion. Since ancient times, ginger has been widely used to reduce fever, stimulate appetite, and treat jaundice and diarrhea.

- **Betel leaf**

Betel leaves contain saponins, tannins, and polyphenols. Saponin acts as an antioxidant, which accelerates wound healing. The phenol and flavonoid content in betel can prevent the risk of infection. The benefits of betel leaves for treating acne are obtained from the antioxidant chavicol content in betel leaves. This content has anti-inflammatory and antibacterial properties, which can treat acne and itching on the face.

b. Making village maps

The village administration map was made in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency. A map depicts the earth's surface on a flat plane at a particular scale through a projection system. According to Law No. 4 of 2011, the village map was prepared based on high-resolution upright imagery that has been georeferenced, referring to the Indonesian/RBI Earth Map system. This activity aims to reform by improving the quality and coverage of existing map information so that village government policies are more integrated. This work program aims to improve the quality of village maps and as a form of support for higher education institutions in improving community welfare.

Community service activities in making village administration maps were conducted in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency. Community service activities are implemented in several stages. Among them are:

- Submit a survey permit to the Teratak Village government explaining the objectives and benefits obtained.
- Survey or collection of primary data in the form of an Indonesian Earth Map at a scale of 1: 50,000; Village Boundary Delineation 1:10,000 scale; arc gis imagery 2024
- The map-making process is based on BIG Head Regulation No. 3 of 2016
- The draft village administration map is printed in A0 size and then verified by village officials to see whether it is appropriate or whether other information needs to be added.
- If so, print the village map 1: 6,000 A0 size and frame the map.
- The village administration map is submitted at the Teratak Village Office and witnessed by village officials



Figure 9. Submission of Village Map

The work program was implemented on Monday, August 14, 2024, at the Teratak Village Office, Muara Kaman District, Kutai Kartanegara Regency. This activity produces a village administration map that contains geospatial information in the form of administrative boundaries, roads, Teratak Village Head's Office, Mosque, Supporting Community Health Center, and Education. The fundamental contribution of this activity is increasing community knowledge regarding planning, implementation, and evaluation of development carried out according to the needs of local communities—evidence of the implementation of the work program in the form of an output report.

The resulting output is an administrative map of Teratak Village, Muara Kaman District, Kutai Kartanegara Regency, which contains map attributes in the form of title, points of view, scale, legend, inset, data source, and added logo. This map was symbolically handed over to the Head of Teratak Village.

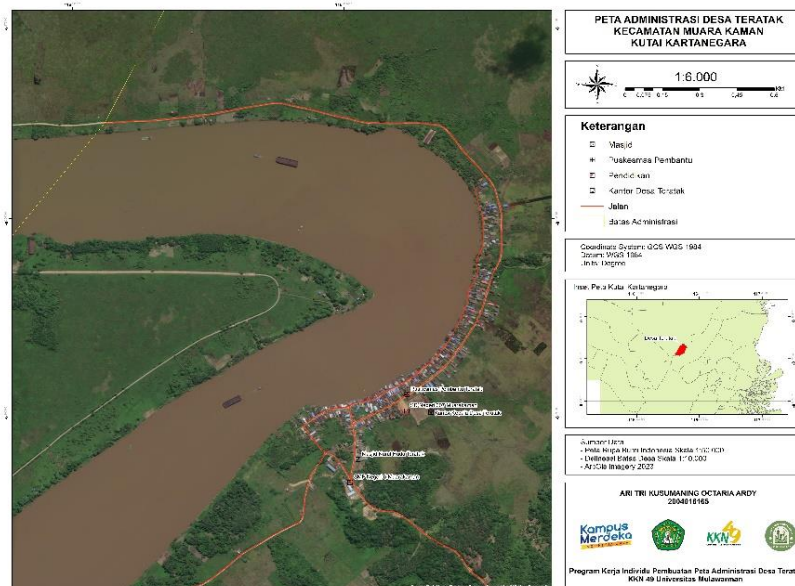


Figure 10. Output of the Supporting Work Program for Making Village Maps

The meaning of the attributes contained in the Teratak Village Administration Map is as follows:

- **Title**

The title shows the identity of this map itself, namely the Administrative Map of Teratak Village, Muara Kaman District, Kutai Kartanegara Regency

- **Wind Eyes**

The cardinal points are used to guide directions. In the Administrative Map of Teratak Village, Muara Kaman District, Kutai Kartanegara Regency, the orientation is north (N), east (E), south (S), and west (W).

- **Scale**

The scale on a map compares the distance on the map with the actual distance on the ground. The scale used is a line scale with a size of 1:6000.

- **Legend**

A legend is a part of a map consisting of symbols or information about the prominent appearances on the map to describe places on the earth's surface. This map shows one mosque, one supporting community health center, education consisting of SDN 007 Muara Kaman and SMPN 6 Muara Kaman, and the Teratak Village Head's Office. The main road lines and administrative boundaries of Teratak Village.

- **Inset**

An inset is a small map in the main map whose function is to indicate the location of the mapped area relative to other, larger areas. The mapped locations are shown in red on this map.

- **Data source**

Data sources include data obtained from the Indonesian Earth Map at a scale of 1:50,000, Village Boundary Delineation 1:10,000 scale, and Arc GIS imagery 2024.

c. Digital literacy education

Education regarding the importance of digital literacy for every digital citizen was carried out on August 1, 2024, involving grade 5 students at SDN 007 Muara Kaman as the audience. This education is carried out to introduce students to the ethics, prohibitions, and actions that every audience needs to pay attention to when using social media. Education is also provided about cyberbullying, cybercrime, and detrimental trends so that students can minimize the high level of digital crime.

Socialization begins with an introduction to what digital literacy is and why it is essential, and then it continues with education about the negative impacts of low digital literacy. In this socialization, I raised three phenomena whose impact is quite visible around us. Namely cyberbullying, cybercrime, and detrimental trends.

In cyberbullying, the understanding is that when using social media, fellow users must watch each other's words, use each other's ethics, and not hurt each other by insulting each other. Then, regarding cybercrime, it is understood that when using social media, you must be able to protect the data contained in cyberspace. Because most students are game players, give an example of the importance of safeguarding account

passwords so that irresponsible people do not easily hack and steal game accounts or other social media accounts. Then, a detrimental trend. The author saw that a singing trend was spreading among children at that time, and from what the author also saw on social media, several people felt disadvantaged by this trend. So, students understand that not all trends are good, and as internet users, you have to be selective when following a trend.



Figure 11. Implementation of the Digital Literacy Education Supporting Work Program at SDN 007 Teratak Village

During the socialization, the students were enthusiastic when the presenter asked them questions. Even though the material presented is quite heavy for elementary school children, it is hoped that knowledge related to media literacy can be well-embedded and applied to the student's daily lives until they grow up. As a continuation of this outreach, it is hoped that education regarding children's screen time and the effects of cellphone screens on children's eyes can also be disseminated.

d. Development of village profile website

Information technology nowadays is very advanced, and with this progress, it would be a massive loss if it wasn't utilized, right? One form that can be used for helpful information technology is by developing a website. Developing a website containing information about Teratak Village, Muara Kaman District, will benefit the Village, the Village Community, and anyone interested in Teratak Village. With a village profile website, it is hoped that the Teratak Village community and outsiders will be able to get to know Teratak Village more. The Teratak Village Profile Website was developed in the 2nd to 6th weeks using the Multimedia Development Life Cycle (MDLC) method. The MDLC method has six implementation stages which are used to create the Teratak Village Profile Website, and the stages consist of :

- Concept
- Design
- *Material collecting*

- Assembly
- Testing
- Distribution

In the 2nd week, the Conceptualization and Design Stage was carried out by determining the concept, design, and features for the Teratak Village Profile Website; in the 3rd to 6th weeks, the Material Collection Stage was carried out at the Teratak Village Office assisted by Teratak Village Office Staff and Material and information from the 2022 Teratak Village Statistics Book which is guaranteed by the village and collecting content obtained from the internet, after the material collection stage, continues with the creation stage where the website is entirely open. Create it by coding using the HTML, CSS, JS, and PHP programming languages created in VScode software.

In the 6th week, the Testing Phase is carried out and assisted by a second person; that way, it will be easier to find out if there are problems and deficiencies and get suggestions; after the Testing Phase, the Distribution Phase is carried out. The distribution stage is created by creating an online Teratak Village Profile Website that can be accessed online by subscribing to Hostinger; Hostinger is a Web hosting provider and Internet domain registrar.

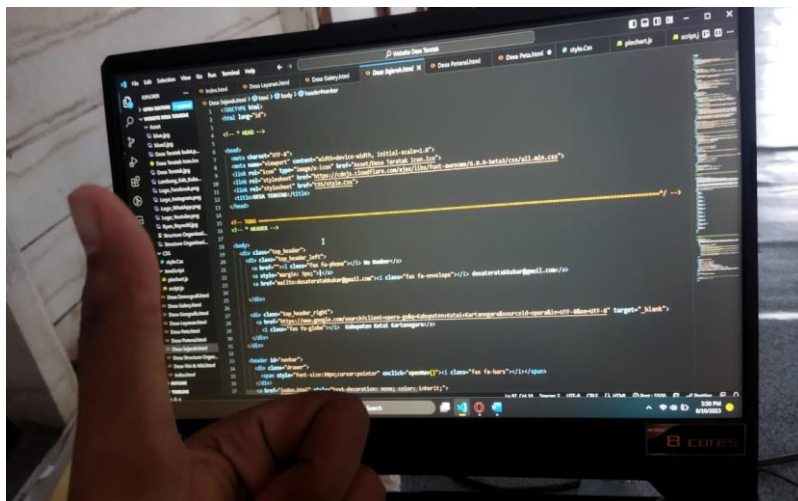


Figure 12. Website Creation Process

For Hosting, there is a monthly payment for Hosting Services and an annual payment for Domains, and this has been explained to the Village where the Village Head appointed one of the staff as Teratak Village Profile Website Admin to clarify how to Set Up a Website it has been demonstrated directly. With a Module, After the implementation is complete, the final step is to provide the Teratak Village Profile Website to the Village Office with the hope that it will continue. With this website, it is

hoped that outsiders will more easily recognize Teratak Village as a meaningful, helpful, and easily accessible source of information. The website can provide information to anyone who wants to know more about Teratak Village, Muara Kaman District. Apart from that, this website can also be used as a promotional tool for the Village.



Figure 13. Website QR code (desa-teratak-kukar.online)

e. Socialization of the importance of fish in children's growth and development

Teratak Village is a village in Muara Kaman District, Kutai Kartanegara Regency, East Kalimantan. Teratak Village is located along the Mahakam River, but the utilization of the fisheries sector in this village is still not optimal. This means that the level of fish consumption in Teratak village still tends to be low, so children's understanding of the benefits of fish is still poor. The growth and development of children are fundamental aspects of forming a healthy and potential generation. A balanced and nutrient-rich diet is key to achieving optimal growth and development. However, not all children know enough about the benefits of fish as an excellent food source for their growth. When children do not understand fish's benefits, they may not be motivated to eat it regularly or find it less appealing. This can hurt their nutritional intake and affect optimal growth and development. In this context, efforts are needed to reach children regarding the benefits of fish for their growth and development. This outreach will give them a better understanding of the importance of consuming fish regularly in their daily diet.

The work program to socialize the benefits of fish on children's growth and development aims to increase children's knowledge in Teratak Village about the benefits of fish as an essential source of nutrition for growth and development, raise awareness of the nutrients contained in fish, encourage healthy eating patterns by consuming fish regularly, and produce children who become agents of change who spread knowledge and understanding about the benefits of fish to friends, family, and the wider community. The method for implementing socialization on the benefits of fish on children's growth and development will be implemented at SDN 007 Teratak Village, which involves preparing interesting material, contact with the school, delivering direct outreach using

an interactive approach, discussion, and question and answer sessions, as well as monitoring and evaluation to ensure the effectiveness of the program.

f. Stunting education

Stunting is a nutritional problem due to a lack of nutritional intake, which describes stunted growth due to long-term malnutrition, which usually occurs in children aged 2-3 years. Factors causing stunting can be grouped into direct and indirect causes. The practice of giving colostrum and exclusive breastfeeding, children's consumption patterns, and infectious diseases suffered by children are direct causal factors that influence children's nutritional status and can have an impact on stunting. Meanwhile, the indirect causes are access to and availability of food, sanitation, and environmental health. The effect of stunting not only interferes with physical growth (short/stunted stature) but can also disrupt brain development, which significantly influences ability and achievement at school as well as productivity and creativity in productive ages. Stunting prevention can be done by meeting nutritional needs from the time of pregnancy, giving exclusive breast milk until the baby is 6 months old because breast milk has the potential to reduce the chances of stunting because of the micro and macronutrient content in breast milk, providing complementary foods for breast milk that can fulfill nutrition, always maintaining a clean environment. It can be seen that the average height of a typical child in Indonesia is Age 2 years: The average height of boys is around 86 cm and girls around 85 cm. Age 3 years: The average height of boys is around 94 cm and girls around 93 cm. Age 4 years: The average height of boys is around 101 cm and girls around 100 cm. Age 5 years: The average height of boys is around 108 cm and girls around 107 cm.

Stunting education was carried out at the Posyandu, Teratak Village, Muara Kaman District, Kutai Kartanegara Regency, which aims to educate the public about the importance of maintaining adequate nutrition and maintaining a healthy lifestyle, especially for children so that stunting can be prevented. Based on the interim evaluation, it was found that many children in Teratak Village are still affected by stunting, likely due to poor environmental conditions such as clean water and air pollution. Stunting education activities are carried out by providing posters containing the meaning of stunting and how to prevent stunting to the posyandu. It is hoped that the community will be educated about this poster.



Figure 14. Outcomes of Stunting Education



Figure 15. Implementation of the Stunting Education Support Work Program

g. Socialization of waste utilization with eco-bricks

Ecobricks are a simple innovation developed as an effort to process plastic waste. "eco brick" consists of two words, eco and brick, simply interpreted as environmentally friendly bricks. Ecobricks are plastic bottles filled with plastic waste that has been previously cleaned and dried. The topic of eco-bricks was raised to be socialized because the people in Teratak Village have the habit of throwing rubbish in the river or burning rubbish. This habit arises because there is no TPA (Final Disposal Site) available in this village, so residents easily throw trash into the river or burn it because there are no other alternatives that residents can use.

The socialization was done at SDN 007 Muara Kaman, and the target material was given to grade 6 students. The material presented included the meaning of eco-bricks, the benefits of eco-bricks, how to make eco-bricks, and an explanation of the products that can be produced from eco risks. Apart from that, an answer was also given regarding the impacts of littering on the people living around Teratak Village.

The socialization process went smoothly because the students were familiar with plastic waste, so they listened carefully to the explanation of the material. At the final stage of socialization, questions were given with prizes for students who could answer the questions correctly. This provides exceptional enthusiasm for students to listen to explanations of the material.

During the ongoing activities and work on the Smart Village program, the entire community, including parents and children, was always enthusiastic about participating. It is common for the community to help the research team facilitate the work program. Collaboration from various parties is also one aspect that supports the program's success



Figure 16. Implementation of Socialization on Waste Utilization with Ecobricks at SDN 007 Teratak Village

Socialization to grade 6 students at SDN 007 Muara Kaman is the first step to introducing one method of utilizing plastic waste: eco-bricks. This ecobrick can later be implemented in Teratak Village with the initial stage of creating a waste bank that sorts organic and inorganic waste from residents in the village. From this collected rubbish, many eco-bricks can be made. Products produced from eco-bricks include tables, chairs, and various decorations in schools, and they can also be used as bricks to build walls or buildings.

The result of socializing the use of plastic waste with eco-bricks is a pamphlet containing an understanding of eco-bricks meaning and how to make eco-bricks. This

pamphlet was distributed to children during socialization in the hope that it would make it easier for them to understand eco-bricks.



Figure 17. Outcomes of the Socialization of Waste Utilization with Ecobricks

4. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This activity discusses village empowerment efforts through "Smart Village" activities in Teratak Village, Muara Kaman District, Kutai Kartanegara Regency. The main aim of this activity is to overcome various problems faced by villages, such as environmental problems, sanitation, infrastructure, technological backwardness, and others. Through the "Smart Village" approach, the research team is trying to create a village ecosystem that is smart and modern but still maintains local wisdom.

"Smart Village" activities consist of six main programs and seven supporting programs. The main programs include making directional signs, providing education on healthy living, planting TOGA (Family Medicinal Plants), reactivating village social media accounts, activating posyandu and dengue fever education, and engaging in waste collection activities. Meanwhile, supporting programs include outreach on TOGA planting, making village maps, digital literacy education, development of village profile websites, outreach on the importance of fish for children's growth and development, education on stunting, and outreach on using waste with eco-bricks.

The results of this activity show that the people of Teratak Village are very enthusiastic about participating in the various programs being held. Collaboration between the research team, village officials, village organizations, and local communities is the key to success in implementing these programs. This activity also increased public awareness of the importance of protecting the environment, health, and technology.

Recommendation

Based on the results of Smart Village activities in Teratak Village, the following are several recommendations that can be considered for further development:

1. Increasing Community Capacity in Technology Management:

- Continuing digital literacy education programs will increase public understanding of the wise use of information technology.
- Provide further training on managing social media and village websites to be used optimally for village promotion and information

2. Environmentally Based Economic Development:

- Further developing the Family Medicinal Plant planting program as a source of additional income for the community, especially PKK women, by utilizing medicinal plants as raw materials for herbal or herbal products.
- Encourage the creation of creative products from eco-bricks, such as tables, chairs, or decorations, which can be sold as an additional source of income

3. Improving Community Health and Nutrition

- Continuing stunting education and nutrition education programs, especially for pregnant women and toddlers, will prevent stunting cases in the future.
- Increase the frequency of posyandu activities and health education to ensure the community can access adequate health information and services

4. Sustainable Waste Management:

- Building a waste bank in Teratak Village to sort organic and inorganic waste and encouraging the use of eco-bricks as a solution for managing plastic waste.
- Carrying out routine waste collection activities and community service to maintain the cleanliness of the village environment

5. Strengthening Village Infrastructure and Governance:

- Continue to create more detailed and informative village maps to support village development planning.
- Improve coordination between village government, village organizations, and the community in managing village development programs

6. Promotion and Development of Village Tourism:

- Utilize the village profile website as a promotional tool to attract the interest of tourists and investors.

- Develop local tourism potential by utilizing natural and cultural resources in Teratak Village

By implementing these recommendations, it is hoped that Teratak Village can continue to develop into an independent, modern, and sustainable village and become an example for other villages in East Kalimantan.

REFERENCES

- Hadian, N., & Susanto, T. D. (2022). Pengembangan Model Smart Village Indonesia: Systematic Literature Review. *Journal of Information System, Graphics, Hospitality and Technology*, 4(2), 77–85. <https://doi.org/10.37823/insight.v4i2.234>
- Premana, A., Sucipto, H., & Widiatoro, A. (2022). Pengembangan Desa Berbasis Smart Village (Studi Smart Governance pada Pelayanan Prima Desa Tegalreja). *JILPI: Jurnal Ilmiah ...*, 1(1), 43–54. <https://journal.insankreasimedia.ac.id/index.php/JILPI>
- Subekti, T., & Damayanti, R. (2019). Penerapan Model Smart Village dalam Pengembangan Desa Wisata: Studi pada Desa Wisata Boon Pring Sanankerto Turen Kabupaten Malang. *Journal of Public Administration and Local Governance*, 3(1), 18. <https://doi.org/10.31002/jpalg.v3i1.1358>
- Thabroni, G. (2022). *Metode Penelitian Deskriptif Kualitatif (Konsep & Contoh)*. Serupa.Id. <https://serupa.id/metode-penelitian-deskriptif-kualitatif-konsep-contoh/>