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Community Service (PKM) empowerment of kokoda tribem papuan community based on green mosque at Babul Jannah Mosque, Sorong

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ABSTRACT

The purpose of this Community Service activity is to provide clean water facilities based on science and technology at Masjid Hijau. This concept aims for environmental preservation, such as waste management as an effort to address climate change, as well as clean water management and education for teenagers and children, raising public awareness about the importance of waste management as an effort to tackle climate change, and 3) making mosques centers for community development. In its implementation, it is divided into two parts: workshops and green mosque practices. The hope is that after this service ends, the Babul Jannah Mosque in the Kokoda complex will truly implement the eco-mosque concept in mentoring the youth, making it a model for other mosques, especially those in Sorong City. For that reason, the community service program aims to provide clean water facilities and infrastructure, Green Mosque IPTEK training in well water filtration using the absorption method, training on the procedures, maintenance, and upkeep of clean filter equipment, character-building training for the Green Mosque, which includes environmental love, community IPTEK training on composting to produce fertilizer, equipping waste disposal facilities based on organic, inorganic, and hazardous waste categories, Trainer of Trainer training for mosque administrators to guide the youth and children around the mosque, and capacity-building for the mosque's BKM team. The training was with 18 participants out of 23 registered. The target of this activity is to gradually produce posters, HAKI, scientific journals, activity videos, and partner skill enhancement.

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A. INTRODUCTION

Human Resource Development in the Land of Papua is the government's top priority. This program is outlined by Bappenas in 2022 in the Papua Development Master Plan (RIPP) (Bappenas, 2023). From the data (RIIP) Papua found that the carrying capacity of institutions and governance, the range and quality of basic infrastructure, the quality of education, the quality of health services, the quality of natural resource management, community sanitation and education are still low, so it is a top priority in development. This data is supported by the findings of BPS Sorong City in 2023 that education is still low and the availability of clean water is still lacking (BPS Kota Sorong, 2023). Therefore, service activities in the Land of Papua, especially the city of Sorong, are very relevant to the DRTPM service program which prioritizes the Sustainable Development Goals (SDGs).

When we hear about Papua, we think that it is a Christian land. This is increasingly believed because we often hear one of the cities in Papua such as Manokwari as the city of the gospel. Like Aceh, which is famous as the city of Mecca. The facts on the ground are that not all Papuans are Christians. Some local Papuans such as the Kokoda tribe, the Irarutum tribe, and the Arandai tribe have been adherents of Islam since the past (Prabawati, 2023). The Kokoda tribe is one of the largest indigenous tribes in Papua who live in South Sorong Regency, Sorong Regency and Sorong City. The Kokoda tribe is predominantly Muslim and makes the mosque a place that has high social and cultural value. The mosque is not only a place of worship, but a facility to fulfill their water needs as well as a place to increase solidarity and silaturrahim among them.

Babul Jannah Kokoda Mosque is located in the Kokoda tribe housing complex, Klasabi Village, Sorong Manoi District, Sorong City. The existence of the Babul Jannah Mosque Kokoda complex for the Papuan Kokoda tribe in Sorong City is important. This mosque is not only for worship but also as a forum for social activities of the Kokoda Papuan community such as community service for religious events and a source of water in fulfilling daily needs. The Babul Jannah Kokoda Komples Mosque also has the potential to be used as a forum for education and the development of public facilities for local residents such as clean water in order to make the lives of Kokoda Papuanese healthy and prosperous according to development goals.



Figure 1. Babul Jannah Mosque Kokoda as target partner

Based on primary data obtained from direct interviews with mosque administrators. Priority problems of the target partners of the Babul Jannah Kokoda Mosque management are 1) Availability of clean water so that the application of clean water management science and technology is needed, 2) Waste Management, so it is important to form the character of awareness of throwing garbage in its place and waste management, 3) The lack of continuousmosque-based youth development, so that continuous development of children

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and adolescents around the mosque is very necessary. This aims to prevent and reduce counter-productive activities such as thoughts of state disintegration, brawls, gambling, alcohol, promiscuity and others.

This service aims to 1) provide clean water availability facilities based on Green Mosque science and technology. This concept aims to preserve the environment such as waste management as a form of effort to deal with climate change, as well as clean water management and education for adolescents and children, 2) raising awareness to the community of the importance of waste management as an effort to deal with climate change and 3) making the mosque a coaching center. The implementation is divided into two, namely workshops and green mosque practices. It is hoped that after this service ends the Babul Jannah Kokoda complex mosque will really apply the concept of eco-mosque in fostering teenagers so that it becomes a model for other mosques, especially those in Sorong City.

Literature Review

Access to basic sanitary facilities and clean water is still a problem in many places today. As a result, the community must deal with failing public health standards, rising clean water costs, and declining health quality. Public health issues like these are brought on by hazardous drinking water, poor environmental quality, and poor health. Continued consumption of contaminated water can lead to the development of cholera, ringworm, scabies, diarrhea/dysentery, or typhus, among other illnesses (Sabilu et al., 2022).

Water is one of the environmental media that must be established with Environmental Health Quality Standards and Health Requirements. The issue that arises due to environmental developments, namely climate change, includes one aspect of the environment, which is water, such as the changing patterns of rainfall. This causes a decrease in the availability of clean water for sanitation hygiene needs (Basri et al., 2023)

Waste and other environmental issues are often brought up society. One of the reasons drainage systems in cities become clogged during rainy months is improperly treated waste and littering. Trash is often referred to as rubbish or worthless waste. The community itself avoids waste the most, despite the fact that waste is produced daily(Fadlil & Rahman, 2024). Waste has up until now been managed using the ideas of dig as well as cover (sanitary landfill), burn it (burn it just like that) to harm the air environment, and throw it away (open dumping) (Basri et al., 2023). However, these approaches have not shown to be effective, particularly if they are not implemented with discipline. Organic waste is household waste in the form of food scraps. like vegetables or fruits. In addition, it can also be in the form of unused kitchen spices no longer used or fallen leaves.

Mosques are often used as places of worship, and they are also frequently used for Quranic education or recitation. In the history of Islam, mosques are considered to have a very significant role in strengthening the teachings of Islam. To maintain, develop, and enhance the functions of mosques, creative and innovative thinking, as well as cooperation between the government, mosque administrators, and the community, are required (Amin, 2022).

Mosques are often used as places of worship, and they are also frequently used for Quran education or recitation. In the history of Islam, mosques are considered to have a very significant role in strengthening the teachings of Islam. To maintain, develop, and enhance the functions of the mosque, creative and innovative thinking, as well as cooperation between the government, mosque administrators, and the community, are required. Mosque management is generally divided into two aspects, namely (1) Management of the Physical Development of the Mosque, which includes administrative management, construction, and

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physical maintenance of the mosque, as well as the maintenance of cleanliness and beauty, and the management of facilities such as gardens. (2) Development of the Mosque's Function, which relates to the utilization of the mosque as a place of worship, preaching, and the development of Islamic civilization.

B. METHODS

- 1. Stages of Service Implementation
- a. Lack of clean water availability

The implementation of training activities provided to the administrators of the Babul Jannah mosque in Kokoda complex to meet the availability of clean water, the first stage: conducting socialization related to the activity program program to be implemented. The second stage: continued with training in making clean water facilities with absorption-based Ecomasjid science and technology (Rahman et al., 2024)(Rahman & Difinubun, 2023). Mosque administrators are trained to design the tool first and then put well water to be absorbed using matoa leaves in the filter tool (Setyobudiarso & Agnes, 2022). Furthermore, the training presenters will directly demonstrate to the mosque management how to use the filter device. Stage three: Equipping clean water facilities and infrastructure. This aims to increase the availability of clean water not only for mosque worship needs but also for the needs of the surrounding community. The last stage: providing training to mosque administrators on how to care for and maintain water filter equipment.

b. waste management

Training was conducted not only for the management but also for the community around the mosque. The first stage: training was conducted to form the character of environmental love in maintaining environmental cleanliness. The community was informed about the environmental impacts caused by poorly managed waste such as the emergence of various diseases, floods and others. Second stage: Training related to processing organic waste into fertilizer (Wartama & Nandari, 2020) (Winursita & Johan, 2024). The resulting fertilizer can be used for mosque plants and community plants. The last stage: Equipping waste bin facilities based on organic, inorganic, and hazardous waste categories by including posters and instructions for good and correct waste management.

c. Lack of continuous mosque-based youth development

This training is carried out to mosque administrators by conducting *Training of Trainer* activities for mosque administrators to foster the Community in sustainable HR Development (Zollanvari, 2023). This activity will be given Gen-Z youth coaching material that will be interesting for teenagers and children as well as problem solving practices in fostering teenagers (Harahap, 2020). The next and final stage: Increasing the capacity of tamwork by socializing the importance of cooperation in building a team and providing training related to teamwork in building a team.

2. Partner Participation

Babul Jannah Mosque Kokoda Complex was established with a social purpose for a place of worship for the Papuan Kokoda tribe in Sorong City. This mosque is not only a place of worship but also as a public facility for residents to take clean water for their daily needs. In addition, this place is a place of learning education for children and adolescents of the Papuan community in the city of Sorong to develop their potential and prevent negative things.

3. Program Implementation Evaluation

In evaluating the implementation of the program and the sustainability of the program, several things will be done, namely: a) setting the objectives of evaluating the

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implementation of activities covering three partner problems, b) identifying criteria and indicators, c) effectiveness assessment includes the extent to which the implementation of this activity is achieved and adjusted to the initial objectives d) efficiency assessment is carried out by looking at how the utilization of time, energy and budget is adjusted to the implementation of activities, e) data collection and analysis is carried out by conducting observations and interviews, then the data that has been collected is then analyzed on an ongoing basis, f) identification of shortcomings and recommendations that will end in the implementation of sustainability activities after the implementation of this activity.

C. RESULTS AND DISCUSSION

This community service activity is in the form of community empowerment. This activity was carried out directly at the target partner location and was attended by 18 people. Yusuf Irirwa as the Chairperson of the target partners took an active role in supporting the implementation of this activity and contributed in preparing the venue for the implementation of the activity and determining the material according to the needs and urgency of the target partners. The process of this activity is divided into five stages which will be explained as follows.

1. Preparation.

On August 5, 2024, prior to the implementation of community service activities, preparations were made by conducting observations and requesting permission to carry out service activities on community empowerment based on green mosques. From the results of the observations made, information was obtained that the administrators who would participate in the activities were 23 people.



Figure 2. Activity with partners

Training Implementation. Extension activities were carried out on August 29 - September 17, 2024. The activity participants were attended by 18 worshipers and administrators of the Babul Jannah Kokodamosque. Extension activities include Green Mosque Science and Technology Training in filtering well water with the absorption method, training in the care and maintenance of clean filter equipment, training in the formation of Green Mosque characters, namely environmental love for the surrounding community in maintaining cleanliness, community science and technology training in processing composters into fertilizer, and *Training of Trainers* for mosque administrators to develop teenagers and children around the mosque.

2. Application of Technology.

After holding the training, the training material will be applied directly to the target partners to solve their problems. The application of technology consists of: Equipping clean water facilities and infrastructure with water filter technology based on papaua local wisdom, namely matoa leaves, Organizing trash bin facilities based on organic and inorganic categories.

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3. Evaluation

In the evaluation of program implementation and program sustainability, several things will be done, namely:

- a. Determining the objectives of the evaluation of the implementation of activities includes three partner problems, identification of criteria and indicators,
- b. Effectiveness assessment includes the extent to which the implementation of this activity was achieved and adjusted to the objectives.
- c. Efficiency assessment is carried out by looking at how the utilization of time, energy and budget is adjusted to the implementation of activities,
- d. Data collection and analysis are carried out by conducting observations and interviews, then the data that has been collected is then analyzed continuously.

4. Program Sustainability

The continuation of this activity program is the identification of shortcomings and recommendations that will end in the implementation of sustainability activities after the implementation of this activity.

D. CONCLUSION

With this community service activity

- 1. This training can provide understanding and ability of target partners of Babul Jannah mosque management in Sorong City in the maintenance and maintenance of clean water supply technology for mosques and surrounding communities and waste management so that the environment remains. The Babul Jannah mosque management in Sorong City can understand the role in empowering the human resource potential of the mosque management to benefit the.
- 2. This service activity has helped the SDG's program and the government in providing access to clean water and improving the quality of human resources by providing non- formal education to the community.

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F. AUTHOR CONTRIBUTIONS

Activity implementation: Ainul Alim Rahman, Budi Santoso, Zulkifli, Nirmalani Muzdhalifah, Ahmad Bachtiar. Article preparation: Ainul Alim Rahman, Budi Santoso.. Article revision: Ainul Alim Rahman, Zulkifli.

G. REFERENCES

Amin, A. (2022). PRINSIP PRINSIP KOMUNIKASI ISLAM DALAM MASYARAKAT MUSLIM DESA BUDAYA LINGGA, KEC.SIMPANG EMPAT, KAB.KARO. In *Nazharat: Jurnal Kebudayaan* (Vol. 28, Issue 1, pp. 18–23). Universitas Islam Negeri (UIN) Sultan Thaha Saifuddin Jambi. https://doi.org/10.30631/nazharat.v28i1.77

Bappenas. (2023). RENCANA INDUK PERCEPATAN PEMBANGUNAN PAPUA (RIPPP)

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2022-2041: HARAPAN BARU PERCEPATAN PEMBANGUNAN WILAYAH PAPUA. Porgam Unggulan. https://regional-beta.bappenas.go.id/program-unggulan/detail?id=7

- Basri, Kasma, A. Y., Hatta, M., & Ayumar, A. (2023). Perilaku Pemanfaatan Air Bersih dan Jamban Keluarga dalam Dimensi Program Indonesia Sehat dengan Pendekatan Keluarga (PIS-PK). In *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)* (Vol. 6, Issue 4, pp. 647–656). Universitas Muhammadiyah Palu. https://doi.org/10.56338/mppki.v6i4.3326
- BPS Kota Sorong. (2023). *Indeks Pembangunan Manusia Kota Sorong*. https://sorongkota.bps.go.id/indicator/26/329/1/-metode-baru-indeks-pembangunan-manusia.html
- Fadlil, F., & Rahman, A. A. (2024). Review Penanganan Sampah di Kota Sorong. Agitasi, 3(1).
- Harahap, M. K. (2020). Peran Manajemen Masjid Dalam Pembinaan Keagamaan Remaja di Tasik Serai Kecamatan Tualang Mandau. *AL-QOLAM: Jurnal Dakwah Dan*. http://www.journal.staihubbulwathan.id/index.php/alqolam/article/view/318
- Prabawati, D. (2023). Resepsi Masyarakat Muslim Papua Suku Kokoda Terhadap Al-Qur'an [Ushuluddin]. In *Repository.Uinjkt.Ac.Id.* https://repository.uinjkt.ac.id/dspace/handle/123456789/66644%0Ahttps://repository.uinjkt.ac.id/dspace/bitstream/123456789/66644/1/11170340000029_DIAN PRABAWATI.pdf
- Rahman, A. A., & Difinubun, M. I. (2023). Pengaruh pH Terhadap Kemampuan Absorben Daun Matoa Menyerap Logam Fe (III). *G-Tech: Jurnal Teknologi Terapan*, 7(3), 1110–1117. https://doi.org/10.33379/gtech.v7i3.2706
- Rahman, A. A., Fadhil, F., Tuheteru, H., & Halijah, S. (2024). IDENTIFIKASI POTENSI LIMBAH KULIT PINANG SEBAGAI ABSORBEN LOGAM BERAT Cu (II). *Jurnal.Untagsmg.Ac.Id*, 5(2), 1–8. http://jurnal.untagsmg.ac.id/index.php/chemtag/article/view/5030
- Sabilu, Y., Yuniar, N., Jafriati, Lisnawaty, Pratiwi, A. D., & Irma. (2022). Pemberdayaan Masyarakat Dalam Pembuatan Penyaringan Air Untuk Memenuhi Kebutuhan Air Bersih di Desa Wonua Marini Kecamatan Morosi Kabupatan Konawe. *Jurnal Pengabdian Masyarakat*, 3(2), 146–156. https://doi.org/10.52423/ANOA.V2I2.XXXX
- Setyobudiarso, H., & Agnes, A. T. (2022). Pemanfaatan Ampas Tebu Sebagai Media Filter Untuk Menurunkan Nikel, Krom Dan Tss Pada Limbah Cair Elektroplating. *Prosiding SEMSINA*. https://ejournal.itn.ac.id/index.php/semsina/article/view/5117
- Wartama, I. N. W., & Nandari, N. P. S. (2020). Pemberdayaan Masyarakat Dalam Pengelolaan Sampah Rumah Tangga melalui Bank Sampah di Desa Sidakarya Denpasar Selatan. *Parta: Jurnal Pengabdian* https://journal.undiknas.ac.id/index.php/parta/article/view/2574
- Winursita, W., & Johan, R. C. (2024). Strategi Literasi Sampah dalam Penanggulangan Masa Tanggap Darurat Sampah. In *Jurnal Kesehatan Lingkungan* ejournal.undip.ac.id. https://ejournal.undip.ac.id/index.php/jkli/article/view/61020
- Zollanvari, A. (2023). k-Nearest Neighbors. In Machine Learning with Python (pp. 133–150).

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