

ASSISTANCE FOR THE USE OF USED BRICKS IN FISH PONDS

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Abstract

Dasekan hamlet is known as the center of the cottage industry for brickmaking. Almost all residents become brickmakers. However, this business gradually gets sluggish, and the price is lower. The type of Research used in this study uses a qualitative case study. The method used is Participatory Action Research (PAR). The PAR method has three key variables: Participatory, Action (action), and Research (Research). The results of the initial observations indicate the potential economic value of the excavated pits for raw bricks that have yet to be utilized. During the outreach activities, the community learned how to use ex-brick excavation land in fish ponds. The follow-up to this community service activity is to carry out continuous monitoring and evaluation with STAI Lecturer Syubbanul Wathon. To facilitate coordination, a brickmaking community in Dasekan hamlet is formed so that this socialization activity has valuable benefits that the community can feel.

Keyword: *Ex-brick excavation; Participatory Action Research; Community service.*

Abstrak

Dusun Dasekan dikenal sebagai sentral industri rumahan pembuatan batu bata. Hampir semua warga menjadi pembuat batu bata. Namun lambat laun usaha ini kian lesu dan harganya lebih murah. Jenis penelitian yang digunakan dalam penelitian ini menggunakan studi kasus kualitatif. Metode yang digunakan yaitu Participatory Action Research (PAR). Metode PAR memiliki tiga variabel kunci yaitu, Partisipatoris, Action (aksi) dan Research (penelitian). Hasil observasi awal menunjukkan adanya potensi nilai ekonomis dari lubang-lubang bekas galian tanah untuk bahan baku batu bata yang belum dimanfaatkan. Pada kegiatan Sosialisasi masyarakat mendapatkan pengetahuan mengenai cara-cara dalam memanfaatkan lahan bekas galian batu bata menjadi kolam ikan. Tindak lanjut dari kegiatan pengabdian kepada masyarakat ini adalah dengan melakukan monitoring dan evaluasi yang berkelanjutan bersama dengan Dosen STAI Syubbanul Wathon, Dan untuk mempermudah koordinasi, dibentuk komunitas pembuat batu bata Dusun Dasekan. Sehingga kegiatan sosialisasi ini benar-benar memiliki nilai manfaat yang dapat dirasakan masyarakat.

Kata Kunci: *Bekas galian batu bata; Participatory Action Research; Pengabdian Masyarakat*

1. INTRODUCTION

Tempuran District is a sub-district in the administrative area of Magelang Regency. Tempuran District is part of the territory of 21 Districts in Magelang Regency.

Dasekan hamlet is one of the villages in Sumberarum, one of the 15 villages included in the administrative area of Tempuran District, Magelang Regency. Headed by a village head and assisted by a village secretary and all village officials. The livelihood conditions of the people in the Dasekan Hamlet area work as brick makers, farmers, farm laborers, factory workers, breeders, traders, private employees, and civil servants.

Dasekan hamlet is known as the center of the brick-making home industry. Almost all of the residents became brickmakers. This business center has been running for many years, and until now, it still exists. However, gradually this activity slowed down, and the prices became cheaper. This situation is exacerbated during the rainy season, as the drying and firing processes take longer, reducing sales profits. Therefore, another alternative business is needed to provide additional income for brick artisans. Preliminary observations indicate the potential economic value of the holes dug for the untapped bricks.

The brick industry is an activity in the form of converting raw materials into clay and then adding water through a molding and burning process to become a ready-to-use product in the form of bricks. The brick industry has an important role and function in supporting the construction of government buildings and infrastructure, especially for housing needs. The red brick industry not only has a positive impact on the community but also has a negative impact on land and other conditions. Continuous exploitation of land in large quantities will hurt the nutrients in the soil. Soil excavation during brick production leads to the degradation of soil resources in terms of quality and quantity (Apriyanti & Mutia, 2017).

Physical symptoms visible at brick production sites are soil depletion which makes the soil's ability unstable, meaning that the soil's ability to support plant life is reduced compared to soil. Not yet used as a red brick in the industry (Apriyanti & Mutia, 2017). Conditions on the ground were already worrying; the holes dug to use red bricks were visible. The hole size caused by the red brick production process is quite large, with a depth of up to 2m, which is quite common in red brick production sites. The smoke and dust produced while manufacturing red bricks have become commonplace. However, it can affect people's health status. This is very ironic in Dasekan hamlet, which has fertile land; a red brick industry must replace it because it is only for temporary commercial needs. In addition, if things like this continue, it is feared that much agricultural land will be used for making red bricks. The consequences of this will hurt the condition of the land used for red brick excavation; namely, the quality and quantity of the soil will be different from those previously.

Land is one of the critical factors for human life. Humans widely use the land to meet their needs; besides that, it is also used as a place for human habitation. The land is part of the landscape, which includes the notion of the physical environment, including climate, topography/relief, hydrology, and even natural vegetation, all of

which will potentially affect land use. It was further explained that land has specific properties or characteristics. Each land on the earth's surface has its identifier, such as agricultural land, non-agricultural land, residential land, protected forests, and others, depending on its use. Land use is defined as all forms of human intervention on land to meet material and spiritual needs (Suhara, 2021).

Physically, land use cannot be separated from land use. Especially land that is considered the surface of the earth. Land use also depends on the interests and perspectives of those who use the land. Soil can be thought of as land, and land can be thought of as space. Soil is one of the elements of the geosphere that cannot be separated from human life because human life is very dependent on it. Communities use the land for productive activities such as housing, public facilities, industry, and agriculture. The land is part of a landscape that defines the physical environment, including climatic conditions, topography, relief, hydrology, and the state of natural vegetation that can affect land use (Basir, 2019).

From the background above, we are making efforts by conducting socialization on the introduction of MSMEs and recovery of former brick-making land in Dasekan Hamlet. This is expected to instill understanding, competence, and entrepreneurial spirit in the community, especially stone makers, so it is expected to create business/business units, especially around the utilization of old brick excavations, to improve the people's economy. Dasekan Hamlet, Sumberarum Village, Kec. Combat, Kab. Magelang.

2. METODE

The type of research used in this study uses qualitative case studies. According to McMillan and Schumacher, the qualitative method is a particular tradition in social science that fundamentally depends on observing humans in their own area and relating to these people in their language and their terms. Qualitative research examines the perspective of participants with strategies that are interactive and flexible. Qualitative research aims to understand social phenomena from the participant's point of view. Thus this qualitative research is a study used to examine the condition of natural objects where the researcher is the key instrument. Qualitative research aims to gain a general understanding of social reality from the participants' perspective. This understanding is not predetermined but obtained after analyzing social reality, which is the focus of Research (Sudrajat & Moha, 2015). The data collection technique was observation and in-depth interviews with community leaders and brickmakers.

The method used is Participatory Action Research (PAR). The PAR method has three key variables: Participatory, Action, and Research. Meanwhile, based on the order of the PAR work methodology, the three variables are formulated as follows:

- a. Research, this stage is the stage of research on the problems faced by the community; the problem is understood in such depth and detail that the cause and effect of the problem can be identified.
- b. Action, after knowing these problems in depth and detail, then enter the second step, namely the search for alternative solutions to solve the problem, which is then translated into several work program items to be implemented.
- c. Participatory, the two points above are carried out in a participatory manner, involving all components of society in identifying problems and solving techniques together (Aini et al., 2018).

From the three principles of PAR, servants can identify problems, plan, and act together with the community to solve their problems. Apart from that, the nuances of the research and constructive criticism of the assisted conditions are an independent task as a form of accountability report for their involvement in the change process along with the assisted communities. The various stakeholders involved in this community service are the brick-making community in Dasekan Hamlet, Sumberarum Village, and Kec. Combat, Kab. Magelang, which can utilize former brick land to be used as fishery land. This activity took place in Dasekan Hamlet, Sumberarum Village, Tempuran district, Magelang with a prolonged activity of 45 days.

3. RESULTS AND DISCUSSION

Research

This Community Service activity was carried out in Dasekan Hamlet, Sumberarum Village. Most of the currency for the people in Dasekan hamlet are brick makers. The research began with examining the problems faced by the community by conducting field observations and direct interviews with some red brick craftsmen. Before conducting the outreach, we initiated an FGD. This FGD activity was attended by several residents, such as the Kadus, the Head of the RT, and several residents as participants who discussed the problem of the former brick-making land in the Dasekan hamlet. The representatives who attended this event were invited to come up with the right solution to eradicate less productive land because it has been made of bricks which causes holes in the ground. This is due to the need for land use management for the former brick-making.

The impact arising from the problem of former brick land is that the soil becomes less fertile, the environment becomes worse, and so on. one of them stated that he wanted to switch to another, more profitable profession because the community was already bored. Another expressed his opinion regarding the need for more public knowledge about using used bricks. The result of this discussion is that the community wants to process the former brick land into something of added value to add to the community's economy. Therefore we are trying to provide a solution by holding socialization regarding the Establishment of MSMEs and the restoration of

former brick-making land. The speaker, Mrs. Widhiyani Mokhamad is a member of the Indonesian MSME synergy cooperative.

Before carrying out the outreach, we also dug up information about bricks in Dasekan Hamlet by interviewing several residents, one of which was based on the results of an interview with Mr. Hadi Warsono, a brick maker. In an agricultural area. However, some people rent land to produce red bricks, and red brick makers have been in the brick business for a long time. The community has been in the red brick business for quite a long time, and they have experience in making red bricks.

Regarding the availability of raw materials, based on the results of an interview with Mr. Ngalimun, a brick maker, some choose to use the same land for brick production, while others move locations when the raw materials run out. Suppose the red brick manufacturing area is far from the road, making it difficult for transporters to pick up the bricks. In that case, the community will prefer a location with easier road access for red brick transportation. There will also be a change in the brick manufacturing location. Changing locations is also caused when the brick-making community rents land and landowners increase the rental price; this also affects the location of brick-making.

Interview with Mr. Muhsin that most people make bricks because it has been hereditary. Many artisans inherited brick-making skills from their parents as an effort passed down from generation to generation. Moreover, people believe they cannot switch to other businesses because of capital. So we made socialization about the introduction of MSMEs and the recovery of land for making bricks.



Figure 1. Former brick-making land

The land is an area on the surface of the earth whose characteristics include all pretty stable attributes, which can be assumed to be cyclical from the biosphere, atmosphere, soil, geology, hydrology, plant and animal populations, and the results of human activities in the past. Moreover, as long as these identifiers have a significant

effect on land use in the present and future. Land use is the permanent or cyclical human intervention of a group of natural and artificial resources, collectively called land, intended to meet material and spiritual needs. Land properties are attributes or conditions of land elements that can be measured or estimated, such as soil texture, soil structure, rainfall amount, rainfall distribution, temperature, soil drainage, types of vegetation, and so on. The nature of the land is a characteristic of everything that is found in the land, which is a differentiator from one land to another (Indah et al., 2019).

Land for rural areas and residents is a dominant factor: paddy fields, dry fields, yards, or land for residence. In social units, the land is a determining social status; in household units, the land is the most valuable inheritance; and in economic units, the land is the primary source of income. Land can be viewed as a system composed of various components. These factors can be divided into two categories: (1) structural factors, often called soil properties, and (2) functional factors, often called soil quality. Soil quality is a group of soil elements that determine the level of capacity and suitability of the soil for a particular type of use. Land as a system has specially configured components whose behavior leads to a specific goal. These land components can be viewed as resources related to human activities to meet daily needs (Undra, 2019).

Action

The socialization was held on May 23, 2022. The team personnel and their roles in organizing the socialization consisted of 1) The moderator, Sheila Oktavia Wakhidun Nagib, who acted as a regulator of the discussion, both substantive and process; 2) The assistant moderator, namely Milhatun Nisa, whose role is to observe the socialization process and assist the moderator in controlling time, the focus of discussion, material for discussion, and the active role of participants; 3) The note taker, namely Ulin Ni'matul Mustaniroh, whose role was to record the process and material issues discussed. For the smooth running of their duties, they are usually assisted by a recording device in the form of a laptop; 4) participant liaison, namely Lailatul Khasanah, whose role is to contact and ensure the presence of socialization participants; 5) logistics providers, namely Lina Faizah, Inayatul Mustafidah, and Nasriani whose role is to help smooth socialization related to the provision of transportation, transit, and consumption; 6) documentation officers, namely Muhammad Fauzan and Saniatun Fatimah who are in charge of documenting the process and socialization documents; and 7) general officers, namely Luthfi Agustiana, as needed, for example, shuttle officers, consumption, socialization "security" guards from various disturbances (Bisjoe, 2018).

The socialization was carried out using the direct delivery or presentation method by Mrs. Widhiyani Mokhamad, a member of the Indonesian MSME Synergy Cooperative, acting as a speaker on the introduction of MSMEs and how to recover

land for making bricks followed by a question and answer session and discussion. The venue for the implementation was Madrasah Diniyah Rohmatul Falah. It was recorded that 50 participants attended the Dasekan hamlet community.



Figure 2. Socialization Activities

Through socialization activities, the community learns how to use the land of former brick excavations into fish ponds. The key to the success of fish farming, including the selection of superior seeds, can be seen from their physical characteristics; the easiest way is that the seeds are actively moving. Another key to success is paying attention to the environment, including controlling water temperature and keeping the pond clean from disturbing plants and animals. Besides that, another essential thing to note is the circulation of water. Water with good circulation will have a good effect on fish health. Land use is humans' use or utilization of the natural environment to meet their life needs. A complete definition of land use is as follows: "Land use is all kinds of human intervention either permanently or cyclically towards a collection of natural resources and artificial resources which as a whole is called land, to meet their needs both material or spiritual or both. Land, the object of research, is complex and does not constitute an independent physical or socio-economic element. However, it is the result of the interaction of the biophysical environment. The success of an increase in agricultural production depends on land use planning that follows the capabilities of the land (Suhara, 2021).

Participatory

In the implementation of the socialization, it was evident that the socialization participants consisting of 50 community members, were very enthusiastic about participating in the socialization. The participants were very active in asking various questions about how to use excavated land to become fish ponds and expressed their problems. There was an active two-way dialogue in this outreach. The residents of Dasekan Hamlet were very enthusiastic about participating in this socialization because they considered that this socialization was essential and could provide them with the latest skills in utilizing excavated land into fish ponds even though it was

only the basics and the socialization participants could refresh their knowledge about this - Matters relating to the utilization of ex-excavated land into fish ponds. Tarpaulin ponds are a type of pond that is widely used by aquaculture businesses. In the journal (Haryoko & Jaya, 2020), cultivators often choose Tarpaulin ponds because they have many advantages. This means they are more practical, relatively inexpensive to manufacture, can be built in tight spaces, and are easy to move and install. Plastic sheeting ponds have efficiency and effectiveness ratings for fish farming.

Based on the socialization with Mrs. Widhiyani Mokhamad, it is less fertile when viewed from the fertility level of the soil used for making bricks compared to land that has not been used as a place for making red bricks. Based on this, it can be concluded that the former excavation of red bricks needs to be fertile enough to be used as agricultural land or land used for farming. Because before the red brick excavated land is reused, soil processing must be carried out first using organic or inorganic fertilizers before reusing, which takes time. Then the land used for making bricks can be used for fish farming.

At the end of the socialization activity, the participants obtained helpful information to increase their knowledge about making tarpaulin fish ponds and how to cultivate fish which had never been obtained into new information. This activity has only reached the socialization stage. It has yet to reach the implementation stage of making fish ponds because it requires a process that is not short. So the results of the socialization were then followed up by carrying out ongoing monitoring and evaluation together with STAI Syubbanul Wathon Lecturers. Moreover, a community of brickmakers in Dasekan Hamlet was formed to facilitate coordination. This socialization activity has a value that the community can feel.

a. This community service activity yielded the following results:

- 1) There is an opportunity for red brick artisans to get additional income by utilizing the holes/cobs of excavated soil material as raw material for red bricks.
- 2) During the presentation on fish farming from Mrs. Widhiyani Mokhamad as the speaker, the residents looked enthusiastic and listened carefully. Several essential points conveyed by the informants are the key to the success of fish farming, including the selection of superior seeds, which can be seen from their physical characteristics; the easiest way is that the seeds are actively moving. Another key to success is paying attention to the environment, including controlling water temperature and keeping the pond clean from disturbing plants and animals. Besides that, another essential thing to note is the circulation of water. Water with good circulation will have a good effect on fish health.
- 3) The follow-up of this community service activity is to carry out ongoing monitoring and evaluation with STAI Syubbanul Wathon Lecturers. A community of brickmakers in Dasekan Hamlet was formed to facilitate

coordination. So that this socialization activity has a value that the community can feel

b. The benefits of this activity in detail are as follows.

For brick makers, this service provides benefits by a) Gaining knowledge and skills about fish farming by utilizing used brick excavations. b) The hope is to provide additional income and profits from fish farming using former brick-making land. For the Village, this dedication provides benefits in the form of a) in the long term, an increase in the economy of the village community with the emergence of new business units/business units, as well as an effort to increase Regional Original Income (PAD) in Magelang Regency.

4. CONCLUSION

Dasekan hamlet is known as the center of the brick-making home industry. Almost all of the residents became brickmakers. This business center has been running for many years, and until now, it still exists. The conclusion that can be drawn from this community service activity is that there is potential for the former excavation of brick material to become ponds for fish farming as additional income for brick artisans. Efforts to utilize the land for making bricks using a qualitative method at the research site in Dasekan Hamlet, Sumberarum Village, Kec. Combat, Kab. Magelang. is one of the incomes increasing the economy desired by the people. The people who participated in this socialization gained knowledge about the Utilization of Former Brick Quarry Land, introduction to fish farming, and Making Tarpaulin Ponds. The land used as a pond is a former brick-making are planned to be made of tarpaulin ponds. The existence of this socialization will later provide social transformation in the future to be more empowered with the economy from income from the use of former brick-making land. It can also change the community to recognize the potential it has. In the future, people can take advantage of this knowledge to realize the dreams that they have been longing for for their welfare of themselves.

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