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Community Assistance in Palm Kernel Processing Towards Economic Independence in Sosopan District, Padang Lawas Regency, North Sumatra_Indonesia

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Abstract
The community empowerment program in palm frond processing in Sosopan District, Padang Lawas Regency, aims to enhance economic self-reliance among residents by utilizing agricultural waste that has previously been underutilized. This program was implemented using a participatory method, involving technical training, the establishment of small business groups, and the provision of simple tools for processing palm fronds into marketable products such as broomsticks and household crafts. The results of the program showed improved community skills in processing palm fronds, the formation of new business groups, and increased income for residents who previously had no steady employment. This initiative demonstrates that with the right approach, local potential can be developed into a sustainable economic resource.
***Keywords**: Community Assistance, Palm Kernel Processing, Economic Independence*

INTRODUCTION

Background Of The Study

Indonesia is an agricultural country rich in natural resources, one of which is palm oil which has become a leading national commodity (W. R. Nasution et al., 2022). Palm oil production spread across various regions, such as Sumatra, Kalimantan, and parts of Sulawesi, not only produces palm oil (CPO), but also various waste from the harvest, one of which is palm fronds. Palm fronds are part of the palm frond that is usually thrown away or burned, thus causing potential environmental pollution. In fact, if utilized properly, palm fronds have high economic value because they can be processed into various household products and crafts such as broomsticks, woven bags, tissue holders, and even ecocraft-based interior decorations (Irianti et al., 2018).



However, the economic potential of palm fronds has not been fully utilized by rural communities, especially in palm oil centers (Yazid et al., 2024). Many farmer groups, housewives, and village youth have not realized that this waste can be a source of additional income. Limited technical knowledge about processing methods, lack of access to training and market information, and weak local economic institutions are the main inhibiting factors (Garnasih, 2020). On the other hand, the economic conditions of communities around palm oil plantations are still relatively vulnerable and dependent on a single sector, namely palm oil harvest workers or other informal jobs, making it difficult to achieve economic independence (Rosmayani, 2020).

Seeing this problem, a community empowerment approach based on local potential is needed (Dumaria et al., 2021). Community assistance in processing palm fronds is a strategic solution to answer two challenges at once: reducing organic waste from plantations and opening up new business opportunities based on local raw materials (Sari et al., 2023). The assistance carried out in a participatory and inclusive manner aims to grow community capacity in aspects of production, business management, product innovation, and marketing. This process can involve various parties such as academics, NGOs, local governments, and creative industry players to ensure the sustainability and success of the program. With this assistance, the community will receive technical training such as how to sort and dry palm fronds, broom or craft making techniques, to digital marketing strategies and microfinance management. Not only that, the assistance approach can also lead to the formation of joint business groups (KUB), cooperatives, or BUMDes which become the driving force of the local economy (W. R. Nasution, 2021). This is in line with the vision of sustainable development which emphasizes community empowerment as the main actor in resource management (Sembiring, 2023).

The assistance in processing palm fronds also has a long-term impact on the community, namely the creation of economic independence (Elpia & Asriati, 2024). The community is no longer fully dependent on the conventional palm oil sector, but is able to create locally-based creative businesses that are market-oriented. In addition to improving economic welfare, this program also contributes to strengthening the social identity and entrepreneurial spirit of the village community (Rasoki & Nurmalia, 2024). Therefore, the development of a program for assisting in processing palm fronds needs to be designed holistically, integrated, and sustainably, involving all elements of society and stakeholders. This approach is believed to be able to encourage social and economic transformation of the village, as well as being an example of good practice in managing local resources based on community wisdom and innovation (Sembiring,



2023). With proper processing and consistent support, palm fronds are no longer worthless waste, but rather a strategic asset towards community economic independence (Elpia & Asriati, 2024; Singal, 2021).

Research Gap

Community assistance in processing agricultural products is one of the strategic approaches to encourage economic independence in rural areas. One of the local potentials that has not been optimally utilized is palm fronds, namely the bones of oil palm leaves that have been considered waste but have high selling value if processed into craft products or export raw materials (Adianto et al., 2023). In Sosopan District, Padang Lawas Regency, the potential for palm fronds is widespread, but its use is still traditional and has not been supported by a systematic and sustainable assistance pattern. Various previous studies have highlighted community assistance efforts in the context of economic empowerment, but most of them are more focused on main agricultural products such as rubber, coffee, or coconut. Studies on assistance in processing palm fronds are still very limited, especially in a local context such as in Sosopan District which has its own geographical and social characteristics. This shows that there is a significant research gap that needs to be bridged immediately to enrich the literature and practices of local commodity-based economic empowerment (Dewi et al., 2022).

One of the research gaps that is visible is the focus of studies that are still dominant on production or technical aspects of processing, while mentoring approaches based on community empowerment and participation have not been widely developed. In fact, the key to success in managing the potential of oil palm fronds lies not only in the technological aspect, but also in the process of awareness, organization, and strengthening the capacity of the community as a whole (Dayu & Rianto, 2023; Rohayati et al., 2024). Research on oil palm frond processing is generally carried out in areas with relatively good access to transportation and infrastructure, such as in coastal areas or small industrial centers. Sosopan District, which is a remote and hilly area, has not been touched by much similar research. This limited access is actually a challenge as well as an opportunity to study how mentoring strategies can be adjusted to unique geographic and social conditions (Fatihah & Ariyanto, 2023).

Previous studies also tend to ignore local institutional aspects, such as the role of farmer groups, traditional leaders, or religious institutions in the mentoring process. In Sosopan District, these institutions play an important role in mobilizing participation and bridging external



interventions. The absence of studies that integrate institutional approaches in the mentoring process is an important gap that must be filled by future research. Most studies have not specifically measured the economic impacts arising from mentoring palm frond processing, either in terms of increasing income, creating jobs, or changing household consumption patterns. Existing evaluations are still qualitative and unsustainable. This makes it difficult to develop an effective intervention model based on empirical data (MILNAYANA, 2024; Syahrizal et al., 2023).

Given the various research gaps that exist, it is important to conduct comprehensive and contextual research on community assistance in processing palm fronds in Sosopan District. The research should ideally use a participatory approach, pay attention to local socio-cultural dimensions, and involve local institutions. Thus, the research results not only contribute to the development of community empowerment theory, but also provide real impacts in realizing economic independence based on local potential.

Rationale Of The Study

Sosopan District is one of the areas that has great potential in the plantation sector, especially oil palm. However, this potential has not been maximized in its entirety, especially in terms of processing non-productive waste such as palm fronds. People in this area generally only utilize the main product in the form of fresh fruit bunches (FFB), while other parts such as fronds are still considered waste. In fact, if managed properly, palm fronds can be a new source of income that has a direct impact on increasing community income (Ardiani et al., 2023). Low access to training, technology, and marketing are the main obstacles for people in processing palm fronds independently. Most residents do not yet have technical skills in processing, are not yet connected to micro-business networks, and do not understand the market potential for frond derivative products such as brooms, handicrafts, or raw materials for household industries (Pasaribu et al., 2022). This puts people in a passive position and dependent on the primary economic sector alone, without any sustainable business diversification (Adianto et al., 2024).

This study is based on the urgent need for a form of community empowerment-based assistance. Assistance in this context is interpreted as an educational and participatory process that aims to raise local potential, increase individual capacity, and encourage the formation of productive community-based business groups. With a systematic approach and based on local assets, this assistance is expected to create a long-term impact on the economic independence of the Sosopan District community (Suryani et al., 2021; Toni et al., 2022). Conceptually, this study refers to the Asset-Based Community Development (ABCD) approach which emphasizes the

development of the strengths that the community already has. Palm fronds, which have been considered waste, are seen as productive assets that can be utilized to create added economic value. In this context, palm frond processing is not only an economic activity, but also a symbol of social transformation and local independence (M. E. Kurniawan, 2024).

The urgency of this study is also motivated by the socio-economic conditions of rural communities that are vulnerable to fluctuations in the prices of primary commodities. Economic independence is a strategic need so that communities do not depend entirely on outsiders or a single market. With the palm frond processing activity, communities can have an alternative source of income that is more stable, while also opening up opportunities for community-based entrepreneurship that can absorb local workers, especially housewives and village youth. In addition, this study aims to answer the need for a contextual and applicable empowerment model. Many previous assistance programs have failed because they did not pay attention to local characteristics and did not actively involve the community. Through this study, researchers want to develop a mentoring approach that is relevant to the culture, resources, and social structure of the Sosopan community, as well as provide space for active participation in every stage of planning and implementing activities (Adnan et al., 2025).

The results of this study are expected to not only provide academic understanding of community assistance strategies, but also produce applicable policy recommendations for local governments, NGOs, and educational institutions in developing similar programs in other areas (Afif et al., 2023). Appropriate assistance will increase community empowerment, strengthen the local economy, and ultimately support sustainable development in remote areas such as Sosopan. Thus, this research is important to encourage a paradigm transformation from a passive community to an active actor in local economic development. Through planned and sustainable assistance, palm fronds will become a new symbol of the spirit of independence and economic revival of the Sosopan District community (Fatmawati & Dores, 2023).

Literature Review

Community mentoring is a participatory approach that aims to increase the capacity, independence, and welfare of certain groups through a continuous facilitation process. In the context of local potential-based economic development, mentoring is an important strategy that bridges the gap between natural resource potential and the community's ability to manage it (Firmansyah & Afriyanto, 2022). Several studies emphasize that mentoring is effective when



carried out through a contextual, asset-based approach that empowers the community as the subject of development. Palm fronds are one of the by-products of oil palm plants that are often considered waste, but have high economic value if managed properly (YONEFI, 2024). Several studies, such as those conducted by Siregar (2020) and Lubis (2021), show that palm fronds can be processed into various products such as brooms, handicrafts, and even industrial raw materials. However, limited knowledge, technology, and market access are often the main obstacles for communities in developing palm frond-based products independently and sustainably (Anjar et al., 2022).

In community-based development studies, the Asset Based Community Development (ABCD) approach is widely used to optimally develop local potential. The ABCD model emphasizes the identification of assets owned by the community, such as skills, social networks, and natural resources. This approach emphasizes collaboration between stakeholders and the active role of the community as the main actor in the economic development process (Hasibuan et al., 2023; Z. P. S. Nasution, 2020). The study by Kretzmann and McKnight (1993) is the main reference in this approach, which has been applied in various contexts of community empowerment in the agricultural and local economic sectors. Sosopan District, which is geographically located in a rural area dominated by oil palm plantations, has great potential in processing oil palm fronds. Several local reports indicate that the community has traditionally collected and sold oil palm fronds, but these activities are still subsistence and have not provided significant added value. Therefore, community assistance is a crucial strategy to transform these activities into something more productive and market-oriented (Tjilen et al., 2023).

In a study conducted by Hidayati (2022), it was stated that the success of mentoring is highly dependent on the sustainability of the program, the role of the facilitator, and the availability of access to training and capital (E. Kurniawan, 2024). This is in line with the results of research by Priyanto and Sumarni (2019) which showed that structured and local potential-based mentoring can increase community income by up to 40% within two years. Successful interventions usually include technical training, strengthening local economic institutions, and facilitating market access. In the context of palm frond processing, the aspect of appropriate technology is an important factor in increasing production efficiency and product quality. A study by Rukmana (2021) highlighted the importance of innovation in frond cutting and shredding tools to facilitate the household-scale production process. In addition, knowledge of product design and business management is also a primary need in supporting the sustainability of community

businesses. Therefore, integration between technical and managerial aspects needs to be the main focus in mentoring activities (Arini et al., 2023; Novira, 2024).

The literature also shows that synergy between local governments, universities, and non-governmental organizations is very important in supporting sustainable mentoring programs. A study by Dewi and Kurniawan (2020) emphasized the importance of strategic cross-sector partnerships to strengthen the local economic ecosystem. The involvement of these actors can accelerate the technology transfer process, expand marketing networks, and strengthen the competitiveness of local palm frond-based products from Sosopan District. Overall, the literature review shows that community mentoring in palm frond processing has a strong theoretical and empirical basis for encouraging economic independence. However, the success of the program is largely determined by the suitability of the approach to the local context, active community involvement, and support from various parties. Thus, planned and integrated mentoring can be an effective solution to raise the potential of palm fronds to become a new economic pillar in Sosopan District.

Novelty Of The Study

This study raises the theme of novelty in the context of community empowerment based on local potential, namely the processing of palm fronds, which so far has not been systematically touched upon in the community assistance approach. In Sosopan District, palm fronds have so far only been considered as oil palm plantation waste that does not have significant economic value. The novelty of this study lies in the effort to change this paradigm into a sustainable productive economic opportunity, through a mentoring model based on local assets and social innovation. Different from previous empowerment programs that were oriented towards direct assistance or conventional training, this study proposes a mentoring method based on the Asset-Based Community Development (ABCD) approach. This approach places the community as the main subject of development, by exploring potential, local knowledge, and social networks that already exist in the Sosopan community. This innovation is a step forward in the empowerment strategy because it encourages long-term sustainability and independence.

Another novelty of this study is the introduction of simple yet appropriate technology in the processing of palm fronds. If previously palm fronds were only collected and sold in raw form at low prices, in this study the community is assisted to process them into value-added products such as palm frond brooms, handicrafts, and even export raw materials. This development not only increases income but also opens up new business opportunities based on home industries.

Sociologically, this study also introduces a dimension of community-based empowerment that emphasizes strengthening local institutions. In this context, novelty emerges through the formation of a working group of palm frond craftsmen that is managed collectively, transparently, and democratically. This effort is able to form a new social structure that encourages collaboration and solidarity between residents, while reducing dependence on outsiders.

This study also presents novelty in terms of the training model used. The training in this program is not only technical, but also includes training in entrepreneurship, digital marketing, microfinance management, and local policy advocacy. This holistic approach makes this study different from similar interventions that tend to only focus on technical and product aspects, without considering the long-term economic resilience of the assisted community. From an ecological perspective, the novelty of this study also touches on environmental aspects. The processing of palm fronds, which were previously burned or thrown away, is now an alternative for environmentally friendly organic waste management. Thus, this study not only has an impact on social and economic aspects, but also on ecological aspects which are increasingly important amidst issues of climate change and environmental degradation. In addition, the novelty of this study is seen in its ability to build cross-sector synergy between the community, local government, universities, and the private sector. This study shows that multi-party collaboration at the village and sub-district scale can be a new model in village development based on social innovation. This opens up new space in the implementation of participatory and local data-based village development policies.

Finally, the novelty offered by this study is not only in the final result, but also in the process of mentoring that is dialogic, adaptive, and based on local wisdom. This process makes the community an agent of change that has control over the production and distribution process of palm frond products. With this approach, this study not only provides an innovative model of economic empowerment practices, but also presents relevant scientific contributions to the development of community empowerment studies based on local resources.

Purposes/Hypothesis Of The Study

This study aims to examine in depth the forms and strategies of community assistance in processing palm fronds in Sosopan District. The main objective of this study is to understand how the community empowerment process is carried out through a mentoring approach, and to what extent the program is able to increase local capacity in managing natural resource potential productively and sustainably. This study also aims to foster a spirit of community-based



entrepreneurship among village communities. By utilizing the results of the mentoring, it is hoped that there will be initiatives from residents to form joint business groups (KUB) or cooperatives that are able to manage palm frond production collectively and are market-oriented. Economic independence is not only achieved through increasing income, but also through strengthening local economic institutions.

This study also aims to explore the contribution of palm frond processing to family economic resilience, especially for vulnerable groups such as women and village youth. It is hoped that the results of this program will not only be enjoyed by a handful of people, but will have an inclusive impact on all members of society. By involving women and youth, palm frond-based economic activities can broaden the participation base and strengthen social cohesion. Finally, the purpose of this study is to provide data and recommendations that can be used by policy makers in formulating strategies for empowering rural communities. Based on field data and impact evaluation, the results of this study are expected to enrich local potential-based economic development policies, especially in the context of comprehensive and sustainable palm oil product management.

METHODS

Research Design

This study uses the Asset-Based Community Development (ABCD) approach, a method that emphasizes the potential, strengths, and assets owned by the community rather than focusing on deficiencies or problems (Adianto et al., 2022; Lubis et al., 2024; Pratama et al., 2022). This approach is considered relevant because it encourages active participation of residents in designing their own economic future. In the context of Sosopan, the assets in question include natural resources (palm fronds), local knowledge, social networks, and traditional skills in processing raw materials. The purpose of this study is to design an effective mentoring model in processing palm fronds into high-value products. In addition, this study also aims to identify and optimize local assets that can support the sustainability of community economic activities. In the long term, it is hoped that this study can be the basis for developing an independent and sustainable empowerment program in Sosopan District.

This research design is participatory with descriptive qualitative methods. The research process was carried out through field observations, in-depth interviews with community leaders, FGD (Focus Group Discussion), and community asset mapping. The researcher acts as a facilitator in exploring local potential and facilitating the decision-making process with the community. Data



were analyzed thematically to identify effective empowerment patterns (Pranata, 2019; Toni et al., 2021).

Research Target/Subject

This study targets rural communities living in Sosopan District, Padang Lawas Regency, North Sumatra Province. This area is mostly inhabited by oil palm farmers who have so far only sold their harvests in the form of fresh fruit bunches (FFB), while potential waste such as fronds and fronds have not been optimally utilized (Anggraini et al., 2022). The main subjects of assistance are farmer groups, housewives, and village youth who have the potential to be empowered in economic activities based on oil palm frond processing. The selection of Sosopan District as a research location was based on several indicators: (1) high availability of raw materials in the form of oil palm frond waste, (2) low levels of productive utilization of local resources, and (3) the large dependence of the community on primary commodities without downstream processes. In addition, local community participation in the development of micro, small and medium enterprises (MSMEs) is still relatively low due to limited technical knowledge and market access.

This mentoring targets subjects who have shown interest in participating in skills training, business management, and strengthening local economic institutions. Thus, the approach used is participatory and based on local potential, integrating social, economic, and environmental approaches. The final target is to create a sustainable palm frond processing business unit and encourage the growth of community-based economic independence in Sosopan District.

Research Procedure

This study uses the Asset-Based Community Development (ABCD) approach as the main procedure in community assistance activities to develop local economic potential based on palm frond processing. The ABCD method emphasizes exploring the internal strengths of the community rather than focusing on deficiencies. The research process is carried out in a participatory and collaborative manner, involving the Sosopan District community as the main subject in designing, managing, and evaluating the assistance program. The research procedure consists of four main stages:

1. Discovery (Asset Discovery):

   At this stage, researchers together with local facilitators identify and map assets owned by the Sosopan community. The assets in question include natural resources (abundant palm fronds), human resources (craftsmen, housewives, creative youth), social assets (farmer



groups, PKK mothers' groups), and available facilities and infrastructure. This process is carried out through interviews, focus group discussions (FGD), and field observations.

2. Dream (Formulation of Hopes and Ideals):

   This stage involves the community in formulating a collective vision for economic independence through the utilization of palm fronds. The community is invited to imagine the ideal conditions they want to achieve, such as the formation of a joint business unit, increased processing skills, and wider market access. These hopes are the basis for motivation and direction of the mentoring program.

3. Design (Action Design):

   After the hopes and potentials are identified, the community together with the assistance team designs real actions that can be carried out in stages. For example, training in palm frond processing techniques into products with sales value (broomsticks, handicrafts), strengthening local economic institutions, to planning digital marketing strategies. The action plan is made by considering available resources and a clear division of roles between community members.

4. Destiny/Delivery (Implementation and Sustainability):

   In the final stage, the plan that has been prepared is implemented with intensive assistance and periodic monitoring. The community is encouraged to build a sustainable production and distribution system. Evaluation is carried out in a participatory manner to see the achievements, challenges, and lessons learned. This activity aims to strengthen the sense of ownership and sustainability of the business by the community itself (Lumbantoruan et al., 2022; Mardatillah et al., 2022; Syahri & Afandi, 2023).

With this ABCD procedure, mentoring activities are not only oriented towards short-term results, but also build community capacity to be economically independent, utilize local potential, and strengthen social cohesion. Sosopan District, with its wealth of palm frond resources, has a great opportunity to become a model for sustainable community-based economic development.

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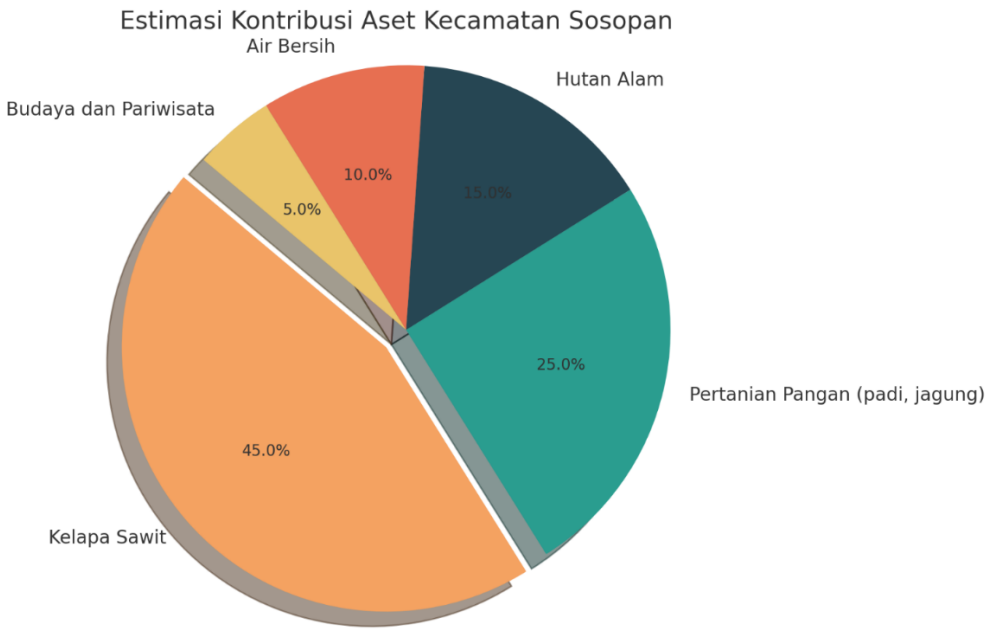
RESULTS AND DISCUSSION

Research Results

Potential Assets of Sosopan District: Palm Oil as a Pillar of the Local Economy

Sosopan District, located in Padang Lawas Regency, North Sumatra, is an area with abundant natural resource potential. The topography of fertile hills and valleys makes this district suitable for various types of agriculture and plantations. One of the main assets of Sosopan District is palm oil commodities, which have become the backbone of the local economy. Palm oil plantations are spread across various villages in Sosopan District, both those managed by large companies and by independent farmers. Palm oil land makes a significant contribution to household income, creates jobs, and is the main source of local revenue through levies and taxes. Palm oil plants also trigger the development of supporting sectors, such as transportation services, palm oil factories, and local trade. In addition to oil palm, Sosopan District also has other natural resource assets such as natural forests, clean water, and agricultural land that has the potential for developing food crops such as rice, corn, and coffee. In the socio-cultural sector, the richness of the community's traditions that are still thick with Mandailing customs is also an important asset that can be developed for culture-based tourism. With sustainable management, government policy support, and active community participation, these assets have great potential to encourage economic independence and the welfare of the Sosopan District community in the future.

Tabel. 1



Source: Identification of Agricultural Potential in Padang Lawas 2024



Sosopan District has a wealth of diverse natural resources, and from the various assets available, oil palm is a leading commodity. This can be seen from the estimated contribution of 45% to the local economy. Oil palm plants are widespread in various villages and are the mainstay of people's livelihoods, both through community plantations and private companies. In addition to oil palm, the food agriculture sector such as rice and corn also makes a large contribution, namely around 25%. This agricultural activity is still very dependent on traditional planting patterns and climate conditions, but remains a source of food security and additional income for many farming families. Optimizing this sector can improve the welfare of village communities in Sosopan.

Natural forest assets are also quite significant, contributing around 15%. These forests are not only a source of wood and non-timber forest products, but also play an important role in maintaining ecosystems, water sources, and biodiversity. Sustainable forest management is essential so that this potential is not lost due to deforestation. Clean water, although only contributing 10% in percentage, is a vital asset that supports people's daily lives and the agricultural sector. The availability of clean water is a challenge in several hilly areas in Sosopan, so appropriate infrastructure and conservation policies are needed. Finally, cultural wealth and tourism potential contribute 5%. Although economically small, the social values and community identity maintained through Mandailing customs and local traditions are very important to develop, especially in the context of sustainable culture-based tourism development in the future.

Community Assistance Activities in Palm Rib Processing Towards Economic Independence in Sosopan District

Community assistance activities in palm rib processing in Sosopan District are part of a strategic effort to empower the economy based on local potential. This district has a fairly large area of palm oil plantations, and so far palm frond waste, including ribs, has not been optimally utilized. In fact, palm ribs have high economic value if processed into value-added products such as brooms, crafts, or export materials. This assistance begins with mapping the potential of villages that have direct access to palm oil plantations, as well as identifying community groups who are interested and have an entrepreneurial spirit. This program collaborates with various parties, including related agencies, community empowerment institutions, and local figures, to ensure a participatory and sustainable approach.



One of the main focuses of the activity is technical training on how to sort, dry, and package palm fronds according to market standards. The community is taught simple but effective techniques to produce clean, strong, and marketable fronds. In addition, entrepreneurship training is also provided to improve community understanding of business management, marketing, and strategies for increasing added value. Mentoring also touches on institutional aspects, where communities are encouraged to form joint business groups (KUB) or cooperatives. This aims to strengthen the community's bargaining position against middlemen and facilitate access to a wider market. With this institution, the production process becomes more organized and the frond harvest can be collected on a scale sufficient to meet industry demand.

The initial impact of this activity has begun to be seen, where several community groups have succeeded in selling palm fronds outside the region, even collaborating with local entrepreneurs engaged in exports. Community income has also increased gradually, especially during the palm oil harvest season when palm fronds are abundant. This shows that the use of palm oil waste that was previously ignored has now become an alternative source of livelihood. On the other hand, this activity also fosters a spirit of mutual cooperation and ecological awareness. The community no longer burns or allows palm oil waste to pile up in the garden, but manages it productively. This helps maintain environmental cleanliness and reduces the risk of land fires. Palm frond processing is also part of the environmentally friendly circular economy movement.

To support the sustainability of the program, the local government and partners encourage the integration of this activity into the village program, including through the allocation of village funds. It is hoped that the palm frond processing activity can become an independent village business unit and continue to grow along with the increasing demand from domestic and international markets. Overall, the community assistance activities in processing palm fronds in Sosopan District prove that a local potential-based approach can encourage economic independence. With the right guidance, active participation of residents, and cross-sector support, village communities can rise and manage the natural wealth around them to become a source of sustainable welfare.

Palm frond processing is one form of innovation by the people of Sosopan District in utilizing the by-products of oil palm plantations. Palm fronds, which were previously considered waste, are now processed into raw materials of economic value such as broomsticks, skewers, handicrafts, and export commodities. This activity is part of an effort to empower the community

towards economic independence based on local potential. One of the main activities is technical training in palm frond processing initiated by farmer groups, village governments, and local NGOs. This training includes how to choose the right palm fronds, techniques for separating fronds from leaves, the drying process, to assembly into finished products such as brooms or crafts. With this training, the community has adequate basic knowledge and skills.

Another activity is the formation of a joint business group (KUBE) which is tasked with producing and marketing processed palm frond products collectively. Through KUBE, the community can access capital, simple production tools such as frond cutting machines, as well as a clear division of labor between collecting raw materials, processing, and selling products.

Figure 1



Palm Kernel Cleaning

The picture above shows the atmosphere of palm frond processing activities carried out by a group of mothers in a community meeting hall. They sit in a circle on mats while holding palm fronds that have been separated from their leaves. This activity shows the initial process in palm frond processing, namely the manual sorting and removal of fronds from the palm fronds, before being made into products such as broomsticks, satay skewers, or other crafts. The participants appear enthusiastic and active in this process, indicating that this activity is not only an economic routine, but also a means of togetherness and collective learning. Some of them wear batik uniforms, possibly from joint business groups (KUBE) or village training communities. The

clean and neatly arranged room environment, with piles of chairs in the background, indicates that this activity is formally facilitated, perhaps by the village government, cooperative office, or community empowerment institution.

This palm frond processing activity reflects an effort to utilize palm oil waste as a productive economic resource. In areas such as Sosopan District, palm fronds are usually just thrown away or burned, but through this initiative, the community can turn them into products with sales value. This contributes directly to increasing family income and the economic independence of the village community. Overall, this image illustrates the spirit of mutual cooperation, women's empowerment, and optimization of local potential. Palm frond processing is not only an economic activity, but also a smart strategy in processing neglected resources into sustainable business opportunities in rural areas.

Figure 2



the process of assisting in making palm leaf plates

The image above shows the atmosphere of training or joint activities in processing palm fronds that took place in a village hall or open hall. Several participants, the majority of whom were housewives, were seen sitting busy on the floor while working on palm fronds—separating, cleaning, or arranging materials into craft products. This activity took place in a relaxed but productive atmosphere, showing the active participation of the community in creative economic efforts based on local potential. Two men were also seen standing and holding palm fronds in

their hands, possibly facilitators or training resource persons. They appeared to be providing technical direction or examples to the participants. In the background, a banner was seen that read "Entrepreneurship Training" which reinforced the context of the activity as part of the community economic empowerment program.

Activities like this show real support from the government or supporting institutions in encouraging the economic independence of rural communities, especially through the processing of palm oil by-products. With technical guidance and collective work, participants can improve their skills, add economic value to products, and build sustainable small businesses. Overall, this image reflects the spirit of mutual cooperation, cross-gender collaboration, and the community's commitment to rise economically by utilizing local potential—especially palm fronds which have not been optimally utilized.

Figure 3



the process of assisting in making palm leaf plates

The image above shows two women focused on weaving palm fronds into handicraft products, possibly baskets, trays, or home decorations. They sit cross-legged on brightly patterned mats, indicating a relaxed yet creative atmosphere. The intricate weaving process reflects the skill and perseverance required to process raw materials into items of value. The women, who wear headscarves and modest clothing, show that this activity involves local communities, especially housewives, in an effort to empower the economy. They appear to be working collaboratively—one holds and shapes the woven frame, while the other weaves the fronds into a predetermined pattern. This activity suggests special skills that are inherited or learned through training.

The activity takes place in an open space or village hall, as seen from the presence of ceramic floors and red chairs on the left side of the image. In addition to being a production space, this place also functions as a center for social interaction and learning. Activities like this not only have an impact on increasing income, but also build solidarity between residents, especially women. Overall, this image depicts a real form of the transformation of palm fronds—usually considered waste—into products of economic value. Through the touch of the skilled hands of village women, palm fronds are transformed into a symbol of creativity, perseverance, and new hope for the economic independence of rural communities.

Figure 4



Palm leaf plate results

The image above shows a group of women in a production room or small warehouse filled with piles of palm frond crafts. They appear smiling and enthusiastic, showing woven products in the form of baskets, trays, or multifunctional containers made from palm fronds. These products are neatly arranged and in large quantities, indicating that this business has developed seriously and is capable of mass production. A woman in the foreground of the image is seen showing her woven products while smiling at the camera. This reflects pride in the work they have produced and confidence in the quality of their products. Beside her, two other women wearing modest clothing and brightly colored headscarves are sitting among piles of crafts, indicating a friendly, productive, and family-like work atmosphere.



The background of the image shows a simple but functional room, with piles of products ready to be marketed. This indicates that palm frond processing activities are no longer just household skills, but have become profitable micro-enterprises. This success is most likely supported by good training, mentoring, and group cooperation among village women. To support productivity, simple tools and technology are also provided by the government or private partners. For example, an automatic palm frond separating machine and a solar-powered drying rack. The use of this technology is very helpful in saving time and improving product quality, especially in meeting export standards. Marketing and product promotion activities are also an important part. Palm frond broom and craft products are promoted through MSME exhibitions, social media, and cooperation with souvenir shops in nearby cities. Several groups have also begun to explore cooperation with exporters who accept palm fronds in raw form for the South Asian and Middle Eastern markets.

In terms of sustainability, institutional assistance is provided so that the palm frond processing business is not only temporary. Assistance includes financial management training, production recording, and business legality management. With strong legality, business groups in Sosopan can access government assistance and a wider market. In addition, this activity also involves the role of women and village youth. Many housewives are now involved in assembling palm frond broom products from their respective homes as a part-time job. Young people have also begun to get involved in digital marketing and distribution, making palm frond processing part of a new economic ecosystem in rural areas. With this entire series of activities, palm frond processing in Sosopan District is not only a solution to agricultural waste, but also opens up job opportunities, increases family income, and strengthens the local economy. This is proof that economic independence can be built from the bottom, by utilizing potential that has so far been neglected.

Discussion

Community assistance in processing palm fronds in Sosopan District has shown a significant impact on local economic empowerment. The assistance process carried out through technical training, provision of tools, and the formation of joint business groups (KUBE) has been able to encourage the community to be more independent in managing natural resources that have not been maximized so far. Palm fronds, which were previously considered waste, have now turned into commodities with economic value, such as brooms, baskets, and various other woven



crafts (Syahputri et al., 2023). One important finding from this activity is the increasing participation of women in productive economic activities. The majority of palm frond processing actors come from housewives who previously did not have a steady income. Through active involvement in training and production, women in Sosopan now not only play a role as household actors, but also as producers and micro-entrepreneurs. This also contributes to strengthening the role of women in village economic development (Susanti & Wijaya, 2019).

From an institutional perspective, the establishment of joint business groups plays an important role in strengthening collaboration and production efficiency. Mentoring involving community leaders, extension workers, and village officials also facilitates the program, because it creates a sense of ownership and collective responsibility. In addition, the integration of this activity with village programs or CSR funds from palm oil companies is also a supporting factor for the success of mentoring. However, there are several challenges that still need to be overcome. One of them is the limited production tools and facilities, which are still manual and have an impact on production capacity. In addition, market access is also a major obstacle due to limited distribution networks and digital promotions that are not yet optimal. Therefore, further support is needed in the form of business management training, digital marketing, and marketing facilitation from local governments or partner institutions.

Overall, the results of community assistance in processing palm fronds in Sosopan District prove that local potential can be developed into a new, sustainable economic source. The transformation of waste into creative products not only increases community income, but also builds self-confidence, social solidarity, and entrepreneurial spirit. This model is worthy of being replicated in other areas that have similar potential, with an asset-based approach and participatory empowerment.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Community assistance in processing palm fronds in Sosopan District has shown a positive impact on increasing local economic capacity. Through a series of activities such as technical training, the formation of joint business groups, and the provision of simple production tools, the community—especially women—are able to process palm frond waste into products with high economic value, such as palm frond brooms, baskets, and various other crafts. This activity not only reduces organic waste, but also creates new job opportunities and strengthens social solidarity. The results of this program show that local potential that has been neglected, such as palm fronds, can be



optimized into a source of sustainable income if accompanied by appropriate assistance and institutional support. In addition, the active involvement of women's and youth groups in the entire production process to marketing proves that this program also contributes to social empowerment and strengthening the family economy.

Suggestions

1) Regional and village governments are expected to continue to provide support in the form of advanced training, access to business capital, and marketing facilities to expand the reach of Sosopan's palm frond products to regional and national markets.
2) Community business groups (KUBE) need to be strengthened in terms of management and legality to be more professional, transparent, and able to establish partnerships with industry players, cooperatives, and digital platforms for sales.
3) Increasing product innovation is very much needed so that palm frond crafts are not only traditional products, but also include modern and multifunctional designs that are in accordance with current market demand.
4) Support from educational institutions and universities is also needed, both in the form of product design research, business assistance, and marketing digitalization to increase competitiveness.
5) Socialization and campaigning for the success of this program are important so that they can become examples of good practices for other regions that have similar potential, so that the spirit of economic independence can grow more widely in rural Indonesia.



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