

EMPOWERING VILLAGE COMMUNITIES THROUGH DEVELOPING LOCAL POTENTIAL FOR CANDLECRON MANAGEMENT

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Abstract. Community service activities in the form of providing training in making soap and candlenut oil by lecturers and students of the economic education study program were conducted in Gero village, Nagekeo district. Commodity products processed into soap and candlenut oil were utilised with the village community as partners. The geographical conditions of fertile land, supported by a community aware of the importance of using natural resources around it, allow the Gero village community to live with an adequate economy. This training assistance aims to provide breakthroughs, knowledge for innovation, and the creation of new products to the village community in making soap from candlenut oil. The soap and candlenut oil products made can become the mainstay products of Bumdes and can be used daily to save household expenses. Utilising household materials and saving expenses can also be sold to increase community income.

Keywords: empowerment, local potential, management

Abstrak. Kegiatan pengabdian berupa memberikan pelatihan pembuatan sabun dan minyak kemiri dilaksanakan di desa Gero, kabupaten Nagekeo. Pemanfaatan hasil komoditas diolah menjadi sabun dan minyak kemiri ini dilakukan bersama masyarakat desa sebagai mitra. Kondisi geografis tanah yang subur serta didukung oleh masyarakat yang sadar akan pentingnya memanfaatkan sumber daya alam yang ada disekitar, menjadikan masyarakat desa Gero hidup dengan perekonomian yang memadai. Pendampingan pelatihan ini bertujuan untuk memberikan terobosan, pengetahuan untuk inovasi serta penciptaan produk baru kepada masyarakat desa dalam membuat sabun dari minyak dari kemiri. Produk sabun dan minyak kemiri yang di buat dapat menjadi produk andalan Bumdes serta menjadi produk yang dapat digunakan sehari hari sehingga bisa menghemat pengeluaran rumah tangga. dengan pemanfaatan bahan rumah tangga selain menghemat pengeluaran juga dapat dijual untuk menambah pendapatan masyarakat.

Kata Kunci: pemberdayaan, potensi lokal, pengelolaan

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INTRODUCTION

Indonesia is an archipelagic nation with extraordinary biodiversity and has the potential of local natural resources that have not been optimally utilised. One of these is the candlenut (*Aleurites moluccanus*), a native Indonesian plant known since ancient times as a spice, traditional medicine, and fuel (Muh Hidayatullah et al., 2022) (Yusup & Murtisari, 2024 (Ton et al., 2025). In the context of people's economic development, candlenuts offer significant potential for empowering rural communities (Dayat, 2017) (Sukri, 2022). Most candlenut farmers only sell their products as raw seeds at relatively low and unstable prices ranging from Rp 25,000 to Rp 35,000 per kilogram. This condition reflects an extractive economic pattern that does not provide optimal added value for local communities.



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Developing candlenut processing into value-added products such as oil and soap is an empowerment strategy with high economic potential (Indah et al., 2023) (Hafiz et al., 2023) (Luciany et al., 2025) (Shofiah et al., 2025). Candlenut oil contains high levels of unsaturated fatty acids, particularly linoleic acid (35-45%) and oleic acid (25-35%) (Tambun et al., 2020) (Mandey et al., 2021), making it highly valuable in the pharmaceutical industry (Rifdah, 2018) (Sari et al., 2024). A local-potential-based approach emphasises utilising locally available resources to create added value and prosperity. While local candlenut commodity development faces various challenges (Utang et al., 2023), including climate-related fluctuations in harvest yields and disease (Sri Wulandari et al., 2015), which hinder raw material availability, and limited knowledge of post-harvest processing (Hairiah & Ashari, 2013) (Kusumiyati, 2024).

Candlenut (*Aleurites moluccanus*) is an annual tree with good adaptation characteristics to soil and climate conditions (Sudarta et al., 2022), and can grow at altitudes of 0-800 meters above sea level (Buditama et al., 2021). Economic analysis shows that processing candlenuts in oil can increase added value by 100-200% compared to selling raw seeds. Assuming a 50% oil immersion and a selling price of candlenut oil of IDR 120,000 - IDR 150,000 per litre. For candlenut soap production, with a formulation using 30-40% candlenut oil, one kilogram of candlenut seeds can produce 15-20 bars of soap (100 grams per bar) with a selling price of IDR 12,000 - IDR 15,000 per bar. The total value of one kilogram of candlenut soap can reach IDR 180,000 - IDR 300,000, providing a handsome profit margin for household-scale businesses.

Gero Village is located in Boawae District, Nagekeo Regency, East Nusa Tenggara Province, and is the location of the community service program. Most of the residents work as farmers. Gero Village has considerable potential in terms of natural resources and human resources. In terms of natural resources, this village has fertile soil that allows crops and long-lived plants to grow and develop well. From the existing natural resources, the local community can meet the economic needs of their families. Meanwhile, the human resources there are adequate. This village is also a traditional village that is a destination for domestic and international tourists. The local community also works as weavers, whose woven products can be sold in markets and to regional and international visitors to promote the Gero traditional village. The community service program aims to provide enlightenment and training to the village community. With the training in candlenut oil and soap making, it can become an authentic village product and offer income benefits to the village community.

METHOD

Community service in the form of training activities in Gero village was conducted on Friday, February 21st, from 09.00 am until it finished. Before the training activities were carried out, the team did several things, including: first, the team conducted observations in Gero village to see directly and map the potential and problems that exist in the field, as well as meeting the village head and community representatives to find out more clearly the potential or issues that exist. Second, the team held meetings and socialisations to enlighten and increase knowledge and skills. In the socialisation, the team provided directions for preparation and equipment needed to make oil and soap from candlenuts, and to work together to achieve the target. Third: conducting training and how to manage oil and soap, starting from the selection of raw materials, processing, and packaging of products. Four: Preparation of tools and materials. For more details, the flow of the implementation of activities can be seen in the picture below:

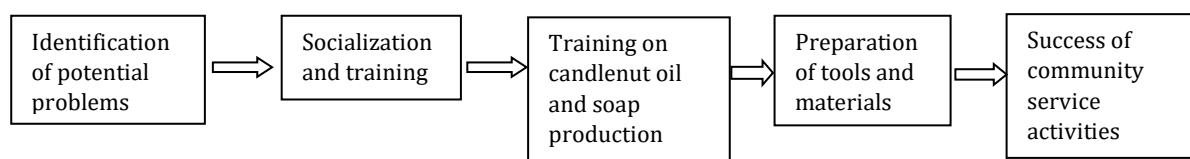


Figure 1. *The flowchart of community service implementation*

RESULT AND DISCUSSION

The training activity for making candlenut oil and soap was held on Friday, February 21, 2025, at 09.00 WITA, with participants from the community, students, and teams. Candlenut oil and soap are products whose manufacturing process does not take long, but the results are satisfactory. The materials and equipment that need to be prepared are whole and uncracked candlenut seeds, which are free from pests and diseases, sufficient water, a frying pan, a stove, a clean cloth for a filter, a pestle/blender, and a container for storing oil. Make sure all tools and materials are clean and ready to use. Next, candlenut oil is made using the roasting method (dry). This method is faster and produces candlenut oil with a distinctive aroma.



Figure 2. *The process of roasting candlenuts*

Steps to make it: Wash the candlenuts thoroughly and drain them so the candlenut seeds are dehydrated. Roast them in a frying pan without oil over low heat until the candlenuts are brownish and give off a fragrant aroma. Then grind the roasted candlenuts using a blender/mortar until they become a paste.



Figure 3. *The process of making soap and oil*

The finished paste is then cooked in a frying pan, using low heat while stirring continuously until it releases oil. The finished oil is then filtered using a clean cloth. Let the oil stand until it is separated from the dirt, then transfer it to a clean bottle. The candlenut oil is ready to use and sell. Next is the process of making soap, preparation of the ingredients and tools needed in the form of candlenut oil, NaOH, water, and molds, then several steps for the process of making soap, to get a base solution, dissolve NaOH in water, then the candlenut oil is heated. The mixing process involves mixing the base solution into the heated oil. Stir until trace (thin and thick). The mixed solution is then poured into the mold and left for several hours so that it becomes solid. After the solid solution has formed soap, please remove it from the mold so the soap becomes hard and the pH is stable.



Figure 4. *The process of producing soap*



Figure 5. *Soap and candlenut oil are ready to use*

The results of this community service are expected to be a driving force for the creative economy that can support increasing the income of the Gero village community. With this training, the local community is aware that the surrounding agricultural and natural resources can be processed into products to reduce or minimize expenses, because the training effectively increases the knowledge (Nugraha et al., 2019), skills and motivation of the community (Rahmi & Hidayati, 2019) (Mayasari et al., 2025), as well as the potential of candlenut which is then processed into candlenut oil is a local product that can increase community income (Siddik et al., 2018) (Baderan et al., 2024). Through this training activity, it also provides alternative skills and knowledge regarding the management of candlenut seeds to produce candlenut oil (Iskandar et al., 2016) (Shaah et al., 2021) (Jumiyati et al., 2021), thereby increasing the selling value and income of the community (Asyari et al., 2023) (Sulhatun et al., 2024). In line with this activity, it also helps the community in developing the quality of candlenut oil products as income for the village community (Refiyanni et al., 2024) (Jamu et al., 2025) (Nggego et al., 2025)

CONCLUSION

The community service activities conducted in Gero Boawae village aimed to empower local potential. Training in candlenut oil and soap production gave the community new knowledge and skills. This support is expected to equip the community to develop local resources and online marketing strategies, create jobs, and increase family income. Further training is needed to develop local potential and open up marketing and market access. The follow-up plan for this community service activity is to conduct advanced training in candlenut processing, which can produce products other than candlenut oil and soap, such as processed foods and natural cosmetics. In addition, funding support is provided by the local government,

including village funds, village-owned enterprises (BUMDes), and other partners. Furthermore, the Department of Industry, Cooperatives, and Micro, Small, and Medium Enterprises (MSMEs) provides additional support and training so that the products produced are not only for domestic consumption but can be utilized by the local community and become known outside the region.

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