

Assistance in Making Green Products Based on Used Waste, and Dissemination of Brand Legality

Sri Rahayu^{a,1,*}, Mieke Yustia Ayu Ratna Sari^{b,2}, Susi Sulastri^{a,3}, Eka Pariyanti^{a,4}, Hikmatul Aliyah^{a,3}

^a STIE Lampung Timur

^b Universitas Tulang Bawang

¹ hayu7704@gmail.com; ² mieke@gmail.com; ³ susi@gmail.com; ³ eka@gmail.com; ³ aliyah@gmail.com

* Corresponding Author

ABSTRACT

The increase in cooking oil consumption is directly proportional to the increase in post-consumption used oil or also known as used cooking oil. This increase was not matched by an increase in public awareness of the negative impacts on health and the environment. Used cooking oil can damage the environment if disposed of carelessly. Used cooking oil should be managed by processing it into useful products, such as recycled soap. By processing used cooking oil into recycled soap, it not only provides benefits for one's own needs, it even has the opportunity to become a small and medium enterprise (MSMEs). Therefore this community service activity aims to provide training to the community, starting from how to make used cooking oil into recycled soap, marketing strategies and legality; trademark registration, terms, fees and others. Implementation of this activity by giving lectures on the importance of managing used cooking oil, marketing strategies, brand legality, and product manufacturing practices. Product making is guided by resource persons, followed by the community by participating in direct practice. The results of this activity are expected to increase public knowledge and awareness of the negative impacts of used cooking oil on health and the environment. Become a new business opportunity for the community that can be developed into MSMEs, understand marketing strategies, and the importance of creating a brand, and understand brand legality.

KEYWORDS

Community Awareness;
SMEs;
Green Product;
Green Behaviour;
Brands



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1. Introduction

Environmental pollution is still a problem that needs attention from all parties [1]. This is because environmental pollution can have a negative impact and interfere with the survival of humans and other living things such as animals and plants [2]. A polluted living environment is an environment that has been contaminated by substances, energy or components so that the environment is the result of human behavior or natural factors [3]. However, pollution due to human behavior is more numerous than natural factors [4].

There are three types of pollution, namely soil, air and water pollution [5]. Soil contamination can be caused by the disposal of chemical substances as well as non-organic waste that cannot be decomposed [6]. Meanwhile, the cause of pollution or air pollution is due to substances or pollutants that enter the atmosphere which can reduce the function and quality of the air [7]. Meanwhile, disposal of waste originating from households, industries or factories can cause water pollution [8]. These three types of pollution make the environment unbalanced, and disrupt human life and the environment including animals and plants [9].

Environmental pollution, especially water and soil originating from household waste is throwing used cooking oil into waterways [10]. Used cooking oil is cooking oil that has been used for frying foodstuffs, then stored for some time, then used again for frying or thrown away [11]. Used waste that is dumped into waterways can cause a foul odor and contaminate waterways [12]. Not only that, the effect it has, furthermore, the water contaminated with used cooking oil can flow into the fields or into the river so that the water in the fields or rivers becomes polluted [13]. This pollution can cause microorganisms and

living things to not be able to live in it [14]. This is because the nature of oil floating on the surface of the water can block the entry of sunlight and air into the water [15].

In addition to polluting the environment, using used cooking oil repeatedly can also be harmful to health [16]. Used cooking oil contains high saturated fatty acids, so it is very harmful to the body and can trigger various diseases such as heart disease and stroke [17]. Even consuming food that is processed with used cooking oil in the long term can cause cancer [18]. Even though it can harm the environment and health, the use of used cooking oil in society still exists, both on a business or industrial scale, as well as households [19].

The need for cooking oil for cooking oil, especially palm oil for the food category (food) nationally in 2019 reached 9.86 million tons, an increase of 49 percent from the previous year. This amount is the total consumption of industrial and household scale. Consumption on a household scale also increased by an average of 4.72% from 1.94 million tons in 2014 to 2.32 million tons in 2019. The increase in consumption of palm cooking oil from year to year was due to public consumption and the food industry use a lot of cooking oil in the processing. This has the potential to produce more used or used cooking oil [20].

Used cooking oil or used cooking oil is edible vegetable oil that has been used for frying and is usually discarded after the color of the oil turns dark brown. Based on research conducted by the International Council on Clean Transportation (ICCT), Indonesia has the potential to produce 157 million liters of used cooking oil from restaurants, hotels and schools in urban areas. For household scale, it can reach 1,638 million liters. This is due to an increase in population causing an increase in cooking oil consumption, which in turn has the potential to produce high used cooking oil [21].

Used cooking oil can actually be managed as a source of value that provides many benefits, including being reprocessed into alternative fuels, soap, carbolic acid, aromatherapy oil, and biodiesel [22]. Therefore it is also necessary to carry out outreach activities to the community which aims to increase knowledge about chemicals in order to improve efforts to maintain the quality of the environment around the household [23]. Understanding the negative impacts arising from the careless disposal of used cooking waste, as well as repeated consumption, efforts are needed to overcome them [24].

Efforts to prevent environmental pollution due to used cooking oil are to process it into useful products, such as recycled laundry soap, floor cleaning fluids, aroma therapy, and biofuels [25]. Processing used cooking oil into various products besides being able to reduce negative effects on the environment and health as well as economic benefits for the community [26].

Recycled laundry soap can be categorized as an environmentally friendly product/green product. Green products are defined as products that are produced using environmentally sound processes [27]. Another definition of green products according to the European Community Commission (2001) is products that use fewer resources, have a lower impact and risk on the environment and prevent waste generation at the conception stage. Businesses have to ensure that any production process they put into the environment is less harmful to the environment, therefore they are responsible for reducing environmental pollution [28].

This definition emphasizes the importance of creating environmentally friendly products from the conceptualization stage [29]. Based on these two definitions, a green product is a product that must pay attention to matters related to being environmentally friendly, starting from conception to product even after the product is used [30]. Green products have characteristics that non-green products do not have states the characteristics of green products include recycling, long durability, biodegradability, renewal, low emissions, local production and energy efficiency [31]. Referring to the opinion the characteristics of green products are products that produce little pollution, production processes save energy and resources, products that are developed and designed use less materials (reduce), and use recycled materials, can be reused, and are easy to use. decomposed (decomposed). Green products are believed to improve economic performance [32], therefore they need to be developed.

Green brand (green brand) is defined as a group of certain brand attributes and benefits associated with minimizing the environmental impact of the brand and its perception as a healthy environment, [33]. This definition means that a green brand must be able to provide more benefits to consumers in order to become more environmentally conscious. An eco-friendly brand strategy needs to offer real environmental advantages that other brands don't have and aim for consumers who value and care about

environmental issues. That means that an eco-friendly brand must communicate with its target group, or a group consisting of people who are concerned about the environment. These people are called green consumers. Green brands have a special market segment, namely green consumers. Consumers who have confidence in ecological or environmentally friendly performance will have a positive attitude towards the brand [34].

Sumberejo Village is a village located in Way Jepara District, East Lampung Regency. The village community did not know about the dangers of disposing of used cooking oil to environmental damage. The community also does not know if used cooking oil can be managed into a useful product. In addition, they do not know about the importance of the brand and the process of brand legality for a product. Therefore it is necessary to hold a mentoring activity, namely socialization and training to provide solutions to these problems. This activity is specifically aimed at women and housewives in Sumberejo Village. The intended participants are women not without reason, because according to [35] women are more likely to have concern for the environment than men.

2. Method

This mentoring activity begins with field observations, by visiting residents' homes, and conducting interviews. The aim is to find out the problems faced by residents. The survey results show that the villagers do not have knowledge about the bad effects of used cooking oil, how to clarify and reprocess it into useful products. Besides that, they don't understand the importance of registering a brand for a product.

Based on the survey results, an activity was designed including forming a team that participated in the training. The activity plan was submitted to the RT head in the village, in order to establish cooperation to organize training activities for residents. After obtaining a cooperation agreement, the team held a meeting whose agenda determined the day, date and time of the activity. In addition to preparing, practice materials and training materials.

The method of implementing this community service activity is lectures and practice of making products. Training and assistance to partners is prioritized for: 1) providing insight materials regarding the negative impacts of disposal of used cooking oil, and marketing strategies 2) providing information on the economic potential of waste used cooking oil into soap products 3) assisting in the practice of making soap, 4) providing material assistance on brand urgency for products, and brand licensing.

Materials and Equipment

Soap Making Practice Materials

1. Cooking Oil
2. NaOH
3. Water
4. Coffee powder
5. Wood charcoal

Equipment:

1. Basin / plastic bowl
2. Wooden stirrer
3. Gloves
4. Face mask
5. Print

Implementation of activities regarding environmental awareness and soap-making practices is divided into three stages, namely:

Prior to Implementation of Activities

The resource person has several times practiced making soap from used cooking oil at home. The manufacture of soap products was carried out by the resource persons in an effort to understand and master the technique of making soap from used cooking oil. The practice of making recycled soap has been carried out several times, to get maximum results. After doing it many times, and sources have also proven the benefits of recycled soap, it is effective in cleaning stubborn stains on clothes. In addition, recycled soap is useful for washing household items, such as plates, spoons, pans and other equipment. Equally important, the sources managed to prove that recycled soap is safe for the skin, does not cause side effects. This experience has made the interviewees feel confident that the science of making recycled soap is worth sharing with the community, so that the benefits can be felt by a wider audience. It is even worth developing into a product worth selling and a business.

Implementation of Activities

The implementation of Community Service activities (PKM) is divided into 3 stages, viz

1. Giving material about the bad effects of throwing used cooking oil anywhere. Then proceed with the practice of clearing used cooking oil using wood charcoal.
2. The practice of cleaning used cooking oil is carried out with the aim of training people, especially housewives, to be skilled at cleaning used cooking oil using wood charcoal. This cleaning activity is expected to provide knowledge and motivation to the community to change people's behavior by disposing of used cooking oil indiscriminately, and utilizing used cooking oil in the right way. The expected output is that the community does not waste used cooking oil anymore, but can manage it properly, by clearing it, before it is processed into a product.
3. The practice of making soap from used cooking oil
 - The resource persons were assisted by the committee in preparing the necessary materials and equipment
 - The ingredients are divided into 4 portion parts
 - Participants were divided into 4 groups, each group received 1 portion of the material
 - The resource person showed directly how to make soap, starting from preparation until the material was ready to be printed
 - The molded soap dough cannot be used immediately, you have to wait about one month.

After the Implementation of Activities

Characteristics of recycled used cooking oil soap that requires a long time, at least one month. This prompted the resource person to make a return visit after one month, with the aim of seeing the results of the practice. The soap has been removed from the mold and can be used. Soap was distributed to participants and used for various purposes. The resulting soap is not perfect, it still takes several times to get the desired results.

3. Results and Discussion

The training activities were held on Saturday, January 9 2021, at the house of Mrs. Umi Haniah who is a resident of Sumberejo Village RT/RW 08/04, East Lampung Regency, Lampung province. The implementation of the activity was carried out by two resource persons and a team is shown in Figure 2. The figure shows that the first informant explained the negative effects of carelessly disposing of used cooking oil, also provided training on how to purify used cooking oil with wood charcoal, making soap products. Complementing these activities was also explained the importance of environmentally friendly packaging, and its marketing strategy. Meanwhile, the second informant socialized the importance of brands for products, the legality of brands including how to register brands and others.

The flow of activities is carried out by providing an explanation of the bad effects of throwing used cooking oil anywhere. Then proceed with the practice of clearing used cooking oil using wood charcoal. The practice of cleaning used cooking oil is carried out with the aim of training people, especially housewives, to be skilled at cleaning used cooking oil using wood charcoal. This cleaning activity is

expected to provide knowledge and motivation to the community to change people's behavior by disposing of used cooking oil indiscriminately, and utilizing used cooking oil in the right way.

It is hoped that this activity can change the habit of disposing of used cooking oil or using it repeatedly. The community becomes aware of the dangers of used cooking waste so they don't waste used cooking oil anymore, but can manage it properly, by clearing it, before it is processed into a product.



Fig. 1. Socialization of Used Cooking Oil Management

Material on Environmentally Friendly Behavior and Product Strategy

The definition of consumer behavior is an action that is directly involved in the acquisition, consumption, and use of products/services, including the processes that precede and follow the action. The inventors of the Theory of Planned Behavior (TPB) and Theory Reasoned of Action (TRA) argue that the basic assumptions made in this theory are that humans behave in a conscious way and consider all available information. Based on this theory a behavior is done or not done is determined by one's intention. Meanwhile, the intention to perform or not perform certain behaviors is influenced by two basic determinants, namely first, matters relating to attitudes (attitude towards behavior) and second, matters relating to social influences, namely subjective norms.

The difference between TRA and TPB is the addition of the perceived behavioral control variable, this variable did not exist before in TRA. The purpose of adding this behavioral control perception variable is to better understand the limitations that individuals have in order to perform certain behaviors. That is, doing or not doing a behavior is not only determined by attitudes and subjective norms but also determined by the individual's perception of the control that can be carried out and comes from self-confidence in that control (control beliefs). Referring to these two theories, it is hoped that the community, especially the residents of Sumberejo village, will have environmental awareness and be willing to change negative behavior that pollutes the environment into positive behavior.

In marketing management, it is known as the marketing mix strategy, namely product, distribution, promotion and price, there are also opinions that there are 10 components of the marketing mix namely product, price, place, promotion, people, process, physical evidence , packaging, partnership, and policy perspective . However, this mentoring activity only focuses on one component, namely the product. The product elements starting from the manufacture, shape, size, aroma, and color of the soap are shown in Figure 2. The figure shows that colors use natural materials, such as suji leaves for green, red from teak leaves, or you can also use beets. Purple uses dragon fruit, yellow uses turmeric rhizome, and other natural and safe ingredients. The smell of soap, you can use natural ingredients such as ginger, pandan leaves, lemongrass, coffee, rose, jasmine and other natural scents. Understanding these things is believed to help marketing be more effective. In order for soap to have a sale value, various additional ingredients are needed, such as essence with various aromas, packaging, and promotion.



Fig. 2. Used Waste Oil Recycled Soap

Socialization of Brand Urgency, and Registering Brands

During the socialization, it was conveyed about the function of trademark registration and the function of using the mark. In trademark registration it is used as evidence for owners who are entitled to the mark, as a basis for rejecting the same brand as a whole, and as a basis for preventing other people from using the same brand as a whole shown in Figure 3. The figure shows that the use of a mark is used for identification so that it can differentiate production results, as a promotional tool, as a guarantee of the quality of goods, and indicates the origin of the goods and/or services produced. Regarding the trademark registration fee, refer to PP No. 28 of 2019 concerning Types of Tariffs for Types of PNPB that there is a difference in trademark registration rates for MSMEs and non-MSMEs or the general public, namely for MSMEs of Rp. 500,000,- (five hundred thousand rupiah) and Rp. 1,800,000,- (one million and eight hundred thousand rupiah). The difference in tariffs is very significant, which aims to provide relief for MSMEs in processing licensing for brands used in their businesses.



Fig. 3. Socialization of Brand Urgency

It was also discussed at the socialization activity regarding collective brands that can be used as an alternative solution for MSMEs in order to increase competitiveness. After discussing the brand, the group

photo was continued as shown in Figure 4. According to Law no. 20 of 2016 concerning Trademarks and Geographical Indications Article 1 paragraph (4) that collective marks are brands that are used with the same characteristics including characteristics, characteristics and quality that are traded by persons or legal entities together to differentiate goods and/or other services. This collective mark can be used by MSMEs or a combination of MSMEs as a joint business group that has standards and controls for product quality.

For MSMEs, fulfilling licensing is very important as business legality because they can get a number of benefits including access to financing, access to business assistance, obtaining empowerment assistance from the government, and obtaining facilities in the form of reduced registration fees for trademarks. Mark registration is carried out online at DJKI by submitting several requirements including a brand label, the applicant's signature, and an MSME certificate if the applicant is an MSME.



Fig. 4. Speaker with Participants and Teams

4. Conclusion

This community service activity has various benefits, namely increasing public insight and knowledge about the negative effects of waste cooking oil on the environment. Helping the community to have new skills in utilizing waste cooking oil. Creating new business opportunities based on environmental concern and creating products with economic value. Opening public awareness and changing people's behavior so that they participate in reducing environmental pollution by not throwing used cooking waste indiscriminately. Improving public health by not consuming used cooking oil repeatedly. In addition, this activity is useful for the community regarding how to market recycled products, especially used cooking oil soap, starting from product design, manufacture, packaging, branding, promotion and product sales. It even adds to public knowledge about the importance of a brand for MSMEs, the process of registering a mark for products produced by MSME businesses, as well as registering a mark. In many ways it proves that brands can increase profits, besides that brands are also useful for product identity. Public understanding of the urgency of a brand will be very useful, especially for starting or developing a business. Understanding the many benefits of this activity, it is hoped that in the future this activity can be increased and carried out in other areas. Thus the benefits of this activity will be wider..

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Author Contribution

This community service activity aims to provide training to the community starting from how to make used cooking oil into recycled soap, marketing strategies and the legality of registering trademarks, requirements, costs and others..

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We would like to thank STIE Lampung Timur and the Tulang Bawang University, as the higher education institutions that provided resource persons, the committee as well as financial support so that this training activity could be held properly and smoothly.

Conflict of Interest

The authors declare no conflict of interest.

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