

Eco-Printing: The Eco-Friendly Economy Empowerment in the Pandemic Era

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Abstract

Eco-print is a fabric dyeing technique from ecology or plants commonly known as eco-dyeing. Eco-print aims to print patterns and colors on fabrics to produce unique, natural, and authentic motifs. The principle used is to attach flowers, leaves, stems, or other parts of plants that contain color pigments to the fabric media. Fabrics that are given motifs and colors with eco-print techniques can evolve into batik products, bags, umbrellas, and other crafts. In other words, Eco-print products do not use synthetic or chemical dyes but utilize natural patterns and colors from plant parts such as twigs, leaves, stems, and flowers. The eco-print method is thus very environmentally friendly by utilizing materials found in the surrounding environment. In addition, eco-print-based products have economic prospects during the COVID-19 pandemic because people have started to care about the environment. This product is also exclusive and unique because the motifs and colors produced are never the same. The uniqueness of the motif is unlimited depending on creativity. Each cloth has a variety of motifs according to the type and layout of the plants used. Each fabric is different from other fabrics in terms of motifs and colors. It is an economic potential that causes eco-print products to have a higher selling value than synthetic products. Thus, eco-print products are not mass products. Each product uses a set of plants as a pattern and is disposable. The primary color dyeing process, the length of steaming, the technique of placing plants on the cloth, the rolling technique, and the intensity of sunlight when drying will produce different results on each sheet of fabric, although the technique used is always the same. The print results are often unexpected and quite surprising. It is interesting and challenges eco-print craftsmen to keep experimenting to produce quality and standardized products. After the eco-print training, MSME women in Sukolilo produced batik clothes, headscarves, jute combination bags, and tablecloths. The products from this eco-print need a network to be able to reach potential markets both locally and globally.

Keywords: Eco-print, Environmentally Friendly, Economic Potential, MSME Handycraft.

INTRODUCTION

Pandemics are signs of environmental destruction. The United Nations, WHO (World Health Organization), and WWF (World Fund) have agreed that the COVID-19 pandemic was caused by natural and man-made damage (Millah, 2020). Deforestation, wildlife trade, and other environmental damages are major causes of the emergence of new wildlife-borne diseases. The pandemic is creating new perceptions about health protocols and, most importantly, saving and conserving the environment.

Eco-print is a technique of giving motifs and colors to fabrics sourced from plant motifs and colors. It means that this technique utilizes the ecological wealth of plants. With natural plant raw materials, every eco-print craftsman will try to maintain plants which are the raw materials for the motifs and colors needed for their products. Thus, this method is very close to efforts to care for plants and preservation of nature.

Meanwhile, Indonesia is currently in the transition stage from pandemic to endemic. Ways to normalize activity are fairly wide open. A normal pre-pandemic and a post-pandemic situation is certainly different. After the pandemic, the usual conditions for economic operators are becoming challenging, and business activities conducted online (Power, 2020). This transition period is the right time for small and medium-sized businesses to start developing their businesses to become more competitive in an increasingly globalized business environment. One of the efforts to

maintain the business is through diversification of the resulting produced. The resulting product must be innovative and valuable. This state of affairs is due to the fact that today's consumers prefer everything that is personal and the value they can demonstrate to the products used. In addition, there is a growing public awareness of ecological sustainability. Consumers now prefer products that are recycled and have no impact on the environment. Eco print training is the perfect way to protect the environment while producing innovative products.

Eco-printing is a printing technique on fabric with natural dyes and manually pasting it with a leaf motif. This eco print is very convenient as it produces environmentally friendly products. We do not pollute the environment with textile factory waste. To keep the environment clean and sustainable. In addition, manufactured products protect craftsmen and consumers from health problems caused by artificial colors, as the chemicals in them can threaten respiratory illnesses up to poisoning.

The use of new technologies will impact previously defined production cost structures. It also influences the price-fixing of goods used in the manufactured product. Eco-print technical training followed by production cost calculation, product cost determination, and marketing activity support. This support is to enable these manufacturers to set prices according to the products they produce and their intended target market. This training and mentoring are expected to expand the market segmentation of MSME actors. As we enter the post-pandemic era and prepare to enter a highly competitive new normal, MSMEs need new strategies to develop their businesses to compete with other MSMEs. The problems faced by MSMEs are (a) business expansion due to product diversification through product innovation using new eco-print printing technology, the resulting products have different values, and (b) The existence of new techniques creates a new component of the cost of production (c) the existence of new techniques used in production or changes in the existing cost of goods sold calculations. (d) Product marketing for new products requires innovation in both packaging and product promotion.

This activity takes place online and offline. Online activities are carried out during discussions with MSMEs regarding what training is needed and monitoring of the resulting products. While offline activities are training on eco print techniques application and assistance in calculating production costs, calculating the cost of goods sold, and preparing marketing for the products produced. The service activities are carried out in 4 stages, namely (a) identification of partner needs and problems based on the results of communication in the group, (b) training on the application of eco-print techniques, (c) monitoring of eco-print resulting products, (d) assistance in calculating production costs; calculation of the cost of goods sold, (e) assistance in marketing preparation for new products that have been produced.

METHOD

Through the life skills program, one of the community service programs is here to help solve problems that occur in the community (Hufad et al., 2017). Eco-print training becomes a potential in empowering women (Maryuningsih et al., 2021), especially housewives so that they can increase family income.

This eco-print training activity started on Saturday, 21st May 2022 at Mrs. Eri's residence at Jalan Klampis Anon XI No. 12 Wisma Mukti Blok GG 99 from 08:00 - 15:00 WIB. The activity was attended by 15 participants and Mrs. Mas Sukma, who is a trainer for eco print activities. This activity was performed in the following phases:

- Brief explanation of eco-printing technology by eco-printing and quick pickling technology.
- Explanation of materials required for eco-printing
- Eco-print product production practices consist of:
 - Make mordant solution
 - Soak a white fabric with mordant solution then dry
 - Soak a cover cloth in the dye solution
 - Wash the fabric with lime solution

- Place the leaf and flower patterns on a white fabric and cover it with the cover cloth soaked in dye.
- Cover the fabric with plastic wrap and massage the leaves for a better pattern.
- Roll and tie the fabric and steam for 3 hours.
- Let the fabric dry and remove the leaves.

This training activity resulted in 30 sheets of eco-printed fabric, ready to create various crafts

RESULT AND DISCUSSION

In this activity, there are three primary colors that are tried (yellow, brown, and purple). Motifs came from various leaves and flowers around the garden. The motifs are made according to the works of mothers, so there is no same fabric motif. Not all plants can be used for eco-printing activities. Only non-edible plants or leaves can be used as fabric motifs:



Figure 1. Training Results

As a result of this activity, mothers have learned how to make eco-print fabrics with the fast-mordant method. This community service activity is not only useful in providing skills to women (housewives) to create business opportunities and earn income, on the other hand, this activity is useful for growing environmental awareness. Through the life skills program, one of the community service programs is here to help solve problems that occur in the community. Eco-print training becomes a potential in empowering women, especially housewives so that they can increase family income. This activity is one of the efforts of higher education to support and achieve the national green program SDGs in 2030.

Economic development places creativity and knowledge as the main assets in driving the economy, which is called the creative economy, where this concept becomes the main model of economic development (Suparmi & Putri, 2022). In addition, community service activities that empower natural resources can be a spirit and idea for environmentally friendly economic development so that it can be classified as a green creative economy agenda.

Mrs. Lilik tries to make a veil with a sappan base color like the figure 2.



Figure 2. Eco-print hood with sapping base color

In addition, Mrs. Selvi is also creative by making jute bags combined with eco print fabrics. The following are the results of Mrs. Selvi's work:



Figure 3. Jute Combination Bag with Eco-print

Besides Mrs. Selvi, there is Mrs. Dani who has studied eco-print with various other techniques and is able to produce eco-print fabrics for blouses or outers, veils and bags. These are Mrs. Dani's product





Figure 4. Fabrics for Eco-print Blouse and Outer

CONCLUSION

Efforts to enhance life skills and knowledge are an important part of women's empowerment agenda. Based on the training activities carried out on May 21, 2022, it can be concluded that (1) eco-print training activities are one form of effort to increase innovation on handicraft products produced by Handicraft SMSEs (2) making eco-prints using plants in the yard can sharpening the creativity of mothers (3) making eco-prints can help mothers to maximize the economic potential of the environment around their homes (4) making eco-prints or called eco-bar (doing eco-print together) in addition to being a place to work, it is also a place to stay in touch and share experiences with mothers (5) this eco-bar activity is also a place to strengthen the harmony of the social environment of the community. In the implementation of this eco print-making activity (eco-bar), several things must be improved and considered so that the variety of results provided can be more varied and the process faster, namely (1) before the eco-bar, mothers should have prepared white cloth that has been soaked in a mordant solution; (2) each women brings her leaf or type of flower which in practice can share leaves and flowers; (3) mothers should also bring different natural dyes so that the type of fabric produced can be more varied; (4) closer collaboration is very much needed so that the results achieved can be maximized.

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