
Leaves to Lifestyle: Raising Awareness of Responsible Production Through Eco-Print Training in Yosowilangun, Gresik

Author

Nur Laily^{1*}, Yahya, Yahya², Ahmad Baihaqy³, Nur Fatimatuz Zuhroh⁴, Vinza Hedi Satria⁵

Correspondence

^{1,2,3,4,5}Sekolah Tinggi Ilmu Ekonomi Indonesia Surabaya

[*nurlaily@stiesia.ac.id](mailto:nurlaily@stiesia.ac.id)

Abstract:

The dimension of Responsible Consumption and Production encompasses the conscientious manufacturing process of a product, with a focus on minimizing waste and residues that may pose environmental risks. Strategically situated within an industrial region, Gresik plays a pivotal role in advancing Sustainable Development Goal 12. This research endeavors to achieve a dual objective. Firstly, it aims to raise awareness about the significance of responsible production in Yosowilangun, Gresik, one of the busiest villages in the area. Additionally, the research seeks to economically empower women residing in this village. The Eco-Print fabrication employed in this study goes beyond utilizing random waste materials; instead, it leverages the recycling of dried leaves waste, a readily available resource in Gresik. Acknowledging certain limitations, such as the scale of prototype production and the ongoing nature of the study due to the gradual nature of awareness-raising efforts, this research introduces a novel aspect by uniquely applying recycled leaf waste in textile production. This approach opens a new avenue for sustainable manufacturing and women's empowerment in developing regions. The product resulting from this research is not only environmentally friendly but also holds the potential to improve the socio-economic well-being of women in Yosowilangun Village.

Keywords: SDGs, Women Empowerment, Responsible Consumption, Community Service, Socio-Economic.

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Introduction

Gresik is one of the regencies in East Java, often referred to as an industrial city. This designation is not without reason. According to data from 2016 to 2019, the industrial sector in the Gresik regency emerged as one of its primary economic pillars (Ristanti et al., 2022). As an industrial city, Gresik became the home of various big companies on a national scale. The massive industrial presence also came with its own drawbacks. With the massive industries being active around Gresik, the amount of pollution produced became a concerning matter. With the current condition, it can have fatal consequences if not accompanied by an awareness of the importance of environmental sustainability. (Franco & Newey, 2020; Kasayanond et al., 2019; Schroder et al., 2020).

Environmental conservation, in fact, does not have a detrimental impact on the industry. Past studies has shown that environmental preservation can coexist with business activities through sustainable finance (Ziolo et al., 2021). Other studies shown that Green

economic activities also demonstrate an increase in GDP in countries along the Belt and Road Initiative (BRI) route (Zhang et al., 2021) The research shown that through revolutionizing the production phase to become environmental friendly, didn't necessarily mean decrease on GDP . Although with positive result from previous explained studies, some studies have opposite result. Some studies do indicate that environmental conservation efforts can pose obstacles to economic activities (Khan et al., 2019). The research show how environmental conservation tend to slow the business process of a company. Similar with previous research, the research that has been conducted by Mishra et al, 2023 indicates that environmental conservation efforts do indeed pose obstacles to a company's supply chain processes, but the impact can still be considered minimal. Therefore, the overarching question is whether short-term convenience equates to long-term sustainability?

Researcher Erin et al, 2022 indicates that large corporations are not yet fully aware of the importance of upholding a sustainable future. By sampling large companies in Nigeria, the research provides insights into the limited efforts to promote a sustainable future. In line with previous research, in Indonesia itself, there are still many companies that have not contributed to the efforts to preserve a sustainable future (Gunawan et al., 2020). While rules and regulations regarding to environment conservation are exists, there are still less efforts to uphold it, which lead to disobedience of company to preserve a sustainable future.

The cultivation of awareness regarding the importance of environmental sustainability must be carried out, but it cannot be enforced. Without an understanding of the meaning of environmental sustainability, the SDG Goal 12: Responsible Consumption and Production will remain a mere slogan exploited for personal interests (Gasper et al., 2019). The cultivation of awareness regarding the importance of environmental sustainability must begin from the grassroots level, not just within companies but also within the homes where the employees of those companies reside.

Yosowilangun Village covers an area of 1,256.36 square kilometers and is inhabited by a population of 13,288 individuals. Located at the heart of Gresik City, the village boasts the highest population and the densest settlement compared to other villages in Gresik. This condition proves advantageous as the local economy flourishes in tandem with urban development. However, upon closer examination, it becomes evident that Yosowilangun Village lacks a distinctive flagship product that can be leveraged for competitiveness. While the community enjoys relative prosperity due to its commercial location, there is yet to be identified a local wisdom or speciality that can be harnessed for economic advantage.

Eco-Print is a process that involves transferring natural shapes derived from materials such as plants, roots, or stems onto specially prepared fabric to ensure effective absorption and achieve optimal outcomes, preserving the original forms. (Miswaty et al., 2022). Innovation in Eco-Print batik training can serve as an initiative to introduce a green business process to households. Eco-Print batik training is often enthusiastically received by homemakers (Mardiana et al., 2020; Mubarat et al., 2021) due to the simple step of making

Eco-Print. While most of Eco-print use leaves waste. Some Eco-print can involve various types of objects, including items commonly found in household environments such as fruit waste, flower waste and other. (Nyoman & Dewi, 2021; Rosida et al., 2021).

Research Methodology

Approach and Design

In response to the issues mentioned earlier, a research method is formulated. The current study will implement a training program on Eco-Print creation, with the aim of introducing and enhancing awareness about the significance of responsible production. The studies will be divided into three phase: Location Survey, Eco-Print Training and Evaluation of Training. Further details of the training program are outlined in figure 1.

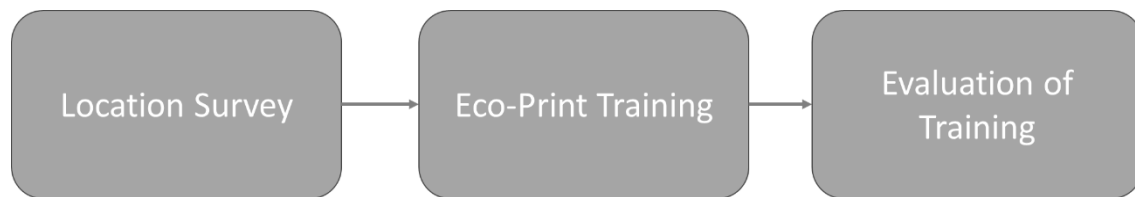


Figure 1. Research Methodology

The process begins with a comprehensive location survey, which includes assessing potential venues for hosting the training sessions and evaluating the overall condition of the village. This phase not only involves a physical examination of the chosen location but also includes preliminary interactions with the target participants of the study. These initial meetings are crucial in understanding the participants' expectations and ensuring alignment with the program's objectives.

Following the survey phase, and after reaching a mutual agreement between the research team and the participants regarding the Eco-Print Training program, the training sessions are formally initiated. These sessions are designed to go beyond the practical aspect of creating Eco-print textiles. Participants will also receive detailed insights into the importance of sustainable production practices, highlighting the broader benefits of environmentally responsible approaches in textile production.

The final stage involves a thorough evaluation of the training program, combined with discussions to determine the subsequent steps. This phase focuses on reviewing the outcomes of the Eco-Print training by analyzing feedback and assessing its effectiveness. Additionally, this stage provides an opportunity to explore future plans, ensuring that the program's objectives are met and that participants are prepared for any follow-up initiatives.

Research Location

This study was conducted at Yosowilangun Village. This meeting brought together several prominent figures, including the Village Head, members of the Village Administration, and the Head of the Family Welfare Movement (PKK).

Results and Discussion

The study undertaken adopts the format of a community service initiative, firmly rooted in the foundational principles of the Tri Dharma Perguruan Tinggi—the three core pillars of higher education, encompassing education, research, and community service. The results achieved through this program can be detailed as follows: Figure 2 provides a visual representation of the preliminary meeting conducted with key stakeholders from Yosowilangun Village. This meeting brought together several prominent figures, including the Village Head, members of the Village Administration, and the Head of the Family Welfare Movement (PKK). Their active participation in this discussion serves as a testament to the village's sincere commitment and enthusiasm for the proposed study. Such engagement underscores the importance of involving local leaders and representatives in community-based initiatives to ensure alignment with the village's priorities and objectives.



Figure 2. Documentation of Preliminary Meeting with Stakeholder of Yosowilangun Village, Gresik (Picutre were blurred due to privacy concern)

During the meeting, the stakeholders deliberated on several critical aspects of the program and reached a consensus on key matters. Firstly, the participants for the study were identified as the members of the PKK from Yosowilangun Village, Gresik. This group was chosen due to their significant roles as homemakers and caregivers within their households, making them pivotal agents in promoting the objectives of the initiative. By focusing on this demographic, the program aims to leverage their influence in fostering positive changes

within their families and the broader community. In alignment with the choice of participants, it was agreed that the training sessions would be held at the PKK Office, a convenient and familiar venue located next to the Village Head's office. This location was selected to ensure ease of access for participants while maintaining a conducive environment for learning and collaboration.

Beyond determining the participants and venue, the meeting also facilitated discussions on the operational aspects of the training program. Both parties engaged in detailed planning to establish the schedule, duration, and methodologies to be employed during the training. These discussions emphasized the importance of tailoring the program to suit the participants' availability and learning needs, ensuring maximum engagement and effectiveness. By fostering open dialogue and achieving consensus on these foundational elements, the preliminary meeting laid the groundwork for the successful implementation of the study, reflecting a collaborative effort between the research team and the village stakeholders. This shared commitment is expected to contribute significantly to the program's outcomes and its overall impact on the community.

The training conducted will span a full day. It will commence with an introduction to the waste materials that can be employed in the creation of Eco-Print, and a presentation highlighting the economic value of the final Eco-Print products.



Figure 3. Documentation of Introducing Waste Materials

At the outset of the program, comprehensive information pertaining to the significance of responsible production was provided. Additionally, instructions were given on the appropriate disposal of waste generated during production, as well as methods for

recycling such waste. Following the introductory session, Figure 3 shows how participants were actively engaged in a practical, hands-on exercise involving the creation of Eco-Print items. They were organized into pairs and provided with the requisite tools and materials to craft their Eco-Print designs.

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Each participant was granted autonomy to arrange their Eco-Print pattern according to their preference. Upon completion of the arrangement, the Eco-Print was layered with another piece of blank Eco-Print fabric, covered with a plastic sheet, and subsequently folded. This process was employed to yield two Eco-Print items instead of just one, ensuring that each participant would be able to acquire one fabric piece, given that the activities were conducted in pairs.

Once the Eco-Print had been folded into smaller sections, it underwent a boiling procedure lasting up to 30 minutes. This boiling process was implemented to ensure that the coloration from the leaves adhered to the fabric's surface even after the leaves had been removed. Following the conclusion of the heating phase, the Eco-Print was carefully removed from the boiler. Subsequently, the Eco-Print was unwrapped to unveil its contents and then displayed within the premises of the Family Welfare Movement's Office as an exhibition showcasing the fruits of the participants' labor from the training. Selected examples of the Eco-Print items crafted by the participants are depicted in picture 4.



Figure 4. Showcase of Eco-print Product

The initial phase of the study has been successfully completed, marking a significant milestone in the implementation of the Eco-Print training program. The training has concluded with notable success, evidenced by the enthusiastic engagement and positive responses from participants. This phase has not only fostered skill development but also paved the way for further community empowerment and program advancement. Following the completion of the training, a thorough evaluation of the activities was conducted to assess the program's impact and identify areas for improvement. The findings from this evaluation are detailed as follows:

A) Skill Proficiency and Competence in Eco-Print Fabric Creation

The active participation of the Family Welfare Movement (PKK) members and the high-quality output of the produced fabrics highlight the participants' advanced competencies in Eco-Print techniques. The evaluation confirms that participants have successfully mastered the core skills required for designing and creating Eco-Print patterns, demonstrating a strong grasp of the technical processes involved. Consequently, it was collectively agreed by the PKK members that additional instruction on pattern arrangement and fabric creation is unnecessary at this stage. This consensus reflects both the efficacy of the training program and the participants' ability to independently apply the skills they have acquired.

B) Need for Ongoing Support and a Knowledge-Sharing Platform

While participants have shown remarkable aptitude, it was acknowledged that some aspects of Eco-Print production might require further clarification or discussion as they continue to practice independently. To address this need, the participants expressed the importance of having a dedicated forum to facilitate ongoing inquiries and knowledge exchange. In response, a social media group was established as an online mentoring platform. This digital forum allows participants to seek guidance, share insights, and resolve challenges at their convenience. Accessible anytime and from anywhere, this platform ensures continuity of support, fostering a collaborative learning environment even after the official conclusion of the community service activities.

C) Future Directions: Coloring and Marketing Eco-Print Fabrics

Building upon the achievements of the initial phase, the next stage of the study will focus on advancing the Eco-Print initiative through two critical components: fabric coloring and market development. Participants will engage in discussions and training sessions to explore effective methods for adding vibrant, durable colors to Eco-Print fabrics. Additionally, the subsequent research phase will emphasize marketing strategies to promote these handcrafted products to a wider audience. This includes exploring branding techniques, identifying target markets, and developing distribution channels to position the Eco-Print fabrics as unique, sustainable products with commercial potential. The goal is to equip participants with the necessary skills and knowledge to transform their creations into marketable goods, thereby enhancing their economic impact and sustainability.

In summary, the successful execution of the first phase and the proactive steps taken for ongoing support and future development illustrate the program's commitment to empowering participants and fostering long-term community benefits. The foundation laid by this initial phase sets the stage for deeper exploration and expanded opportunities in the subsequent phases of the study.

Conclusion

The conclusion drawn from the conducted activities highlights the substantial participation of Family Welfare Movement members in the counseling provided. It is indisputable that the promotion of responsible production and consumption is an imperative task for ensuring a sustainable future. However, this task need not be perceived as a burden; it is feasible to raise awareness about responsible production and consumption in an enjoyable manner. In doing so, we can also pique people's interest in preserving environmental sustainability. The use of recyclable materials, such as dried leaves, for resale purposes not only contributes to environmental sustainability but also empowers the members of the Family Welfare Movement by providing them with an additional source of income.

In the light of women empowerment. The willingness and ability of these members of the Family Welfare Movement in Yosowilangun, who are mothers, represent a highly positive aspect that deserves strong support. The desire of these mothers to grow and become productive can challenge the outdated paradigm of homemakers who are solely responsible for cooking and housekeeping.

The study conducted has provided valuable insights and suggestions that may contribute significantly to future research efforts. These recommendations not only serve as a guide for subsequent investigations within the current project but also offer directions for future researchers who were not involved in the present study

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