

E-BOOK OF EXTENDED ABSTRACT

THE 14TH INTERNATIONAL INVENTION, INNOVATION & DESIGN COMPETITION 2025



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INVENTION, INNOVATION &
DESIGN COMPETITION 2025

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THE SUSTAINABLE SPLASH: BATIK'S REBIRTH THROUGH ARTISTIC EXPRESSION

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ABSTRACT

This fashion collection Melentor Buloh Betong reinterprets batik as a medium of sustainable design and artistic narration which incorporates cultural conservation, artistic reinvention, and environmental sustainability through the contemporary reinterpretation of batik, an age-old wax-resist textile art. There is a growing creative enthusiasm about batik as a heritage symbol among artists, designers, and eco-conscious communities that seek to blend tradition with sustainable practices. Each piece of the collection is a commitment to slow fashion that worships the bespoke, the flawed, the deliberate, and the mindful rather than the culture of disposability that pervades global fashion. The collection strives to erode the boundaries of batik artistry by honoring its legacy using natural dyes, recycled wax, and experimental or advanced surface design techniques. Through the exploration of materials, methods, and the involvement of the community, this research demonstrates how batik's 'sustainable splash' conceptualizes a paradigm shift in the reclamation of indigenous knowledge towards an ethically expressive and environmentally accountable future for textile arts. The Sustainable Splash encourages the audience to appreciate fashion as more than just wearable art, but as an intersection of temporality and timelessness, blending imagination with ethics, and identity with invention.

Keywords: *batik, splash, wax, sustainability*

1. INTRODUCTION

The intersection of the fashion industry and environmental sustainability is redefining the industry, not just as an ongoing problem of constraint, but as an opportunity to embrace heritage culture through creative forms of sustainable innovation. Batik, the Indonesian textile art, has recently risen to prominence embodying this change. What once remained locked in ceremonial dress or ethnic identifier, batik is now being liberated by modern designers into a sustainable medium of expression. Its handcrafted, slow manufacturing processes offer an alternative to fast fashion, which seeks synergies with nature instead of art destruction (De Oliveira et. al, 2022). Emerging fashion collections feature new patterns with eco-friendly materials, which revitalize this ancestral art, preserving its rich cultural heritage and honouring its depth.



Figure 1 Melentor Buloh Betong Collection

This collection portrays batik not only as a heritage textile but as The Sustainable Splash which reframes it into activism and artistry on environmental issues. The collection examines the fashion industry's ability to tell stories of sustainability through innovative design by utilizing natural dyeing processes, recycling fabric, and symbolic patterning. In recent years, there has been a growing trend among designers to approach traditional textiles, like batik, as dynamic frameworks that actively portray narratives of identity, resistance, and environmental advocacy (Phang et. al, 2022). With the increased scrutiny given to the ethics of fashion in recent years, the revival of batik is pragmatic because it embraces ecological design while preserving culture (Fanina & Suaedi 2020). This collection encourages viewers to reflect on clothing not just as a fashionable accessory, but also to examine it as a testament to their devotion to nature.

2. METHODOLOGY



Figure 2 Process of splash wax technique

One of the core sustainability practices implemented in this collection was the use of recycled wax throughout the batik production process. Traditionally, wax plays an important role in batik-making by constructing intricate resist patterns and is almost always thrown away afterward. In this project, wax waste was minimized through a closed-loop system where used wax was collected after each dyeing cycle, filtered to remove impurities, and re-melted (Widayanto et. al, 2024). This method allowed the same wax to be used across multiple garments, which greatly reduced material consumption and waste while maintaining the quality of the resist patterns. The entire process was carefully monitored to confirm that the recycled wax remained effective in both splash applications.

For beeswax candles, the collection replaced traditional paraffin wax with a mixture of soy wax and locally procured beeswax to be more eco-friendly. These materials meet the project's objective because they are renewable, biodegradable, and less toxic when burned or harmful to the environment. The flow properties and setting times of traditional wax were maintained, so the soy-beeswax blend did not compromise the artistic standards of the collection. This change not only allowed the use of natural materials, but also improved the work environment for many artisans by reducing synthetic fumes from boiling and applying the wax (Labbé et. al, 2023).

The collection's public showcases and workshops were great opportunities to promote sustainable craft techniques. As part of the education offered at these events, instructors documented and demonstrated their techniques for recycling wax, which enhanced their environmental awareness and inspired designers and artists to integrate wax reclamation into their practices. The narrative of The Sustainable Splash was crafted around reusing wax, so the collection showcased how contemporary textile practices grounded in techniques of the past can adapt to modern environmental responsibility while honoring cultural heritage.

3. FINDINGS

The research found that modern design techniques can blend sustainability and cultural narratives which bring traditional batik back to life. As opposed to being limited to ceremonial purposes, batik was transformed into a form of environmental advocacy and art, fitting the ethical and slow fashion movements. Perhaps the most noteworthy discovery was incorporating a closed-loop system for wax reuse in the batik production. The recycled wax used in batik continued to perform its resist function after multiple dye cycles, greatly reducing waste and consumable resources while preserving artistic expression. This approach illustrated the possibility of traditional crafts adapting to contemporary ecological ideals. The collection bolstered the argument that sustainability within fashion extends beyond materials and methods to also include the ethos, stories, and cultural elements that each design encapsulates. The Sustainable Splash concept showcased how fashion serves not only personal expression but also collective expression regarding ethics, identity, and environmental stewardship.

4. CONCLUSION

The Sustainable Splash innovatively showcases how traditional Malaysian batik craftsmanship can be restored through sustainable design and artistic intervention. The collection is a testament to the growing fashion industry's concern for mindful creation and cultural responsibility by incorporating heritage techniques with eco-friendly materials, natural dyes, and wax recycling (Šabarić, 2024). Each garment is an example of batik's intricate craft, honouring the visual dialogue between the past and present, and melding historical narrative with adaptive innovation for a world grappling with environmental and ethical dilemmas. The local artisans and regionally sourced materials highlight the value of community participation in the safeguarding and dynamic evolution of cultural identity.

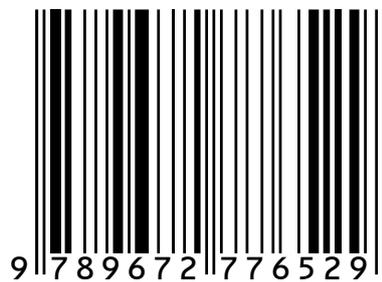
This collection showcases that sustainability in fashion goes beyond materials and techniques to include the narrative being told, the values being upheld, and the people being connected. Each step taken in the process-led design, collaborative production, and even the verifiable sustainable actions taken for the environment make the Sustainable Splash a fashion solution to cultural preservation-turned foresight innovation. It motivates designers, consumers, and craft communities alike to reevaluate the apparel we don and the values we profess, drawing attention to the fact that, with careful nurturing and intention, tradition can inspire a more purposeful future.

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