

PRESERVING TRADITION: SUSTAINABLE PRACTICES IN KALAMKARI ART WITH NATURAL DYES

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Abstract

The paper's main argument is that traditional crafts can be an effective tool for creating sustainable practices. Indian textiles have gained unique recognition in the extensive canon of global textile art history and have represented Indian culture on the world art stage. Traditional crafts are frequently referred to as historically, eco-conscious practices that focus on turning raw materials into finished goods primarily by hand using essential tools and tapping on regional customs and knowledge. Srikalahasti's Kalamkari is one such Indian craft. This exemplifies the organic art philosophy. Kalamkari, a renowned form of handicraft, is used in dye-painted block prints and variations, and they notably dominated the world markets. The paper focuses on the relevance of traditional crafts, with particular attention on Kalamkari Art as a powerful medium in the field of sustainable art practices. Indian textiles have garnered an exceptional appreciation in the vast repertoire of world textile art history and have represented Indian culture on a global art & platform. Traditional crafts have often been described as historically eco-sensible, which dealt with the conversion of materials into products, using primarily hand skills with simple tools and employing the local traditional wisdom. Kalamkari of Srikalahasti is one such Indian craft which embodies the spirit of organic art practices. A celebrated piece of workmanship, Kalamkari, is practised in the form of block prints as well as dye-painted versions and clearly dominated the world craft market during the 17th and 18th centuries. The name of the craft, "kalam/qualam," which in Urdu translates to "pen" and "kari," or "craft," captures its essence. The craft, known as "pintadoes" by the Portuguese and "chintz" by the English, has been practised in a number of southern Indian regions. This art is seen in its dye-painted form at Srikalahasti, a small pilgrimage town in the south Indian state of Andhra Pradesh. In the area around the temple in Srikalahasti, kalamkari flourished and was primarily used to create clothing for the shrine. These works of art, which mostly portray the humour of Hindu mythology, have been employed as temple backdrops or as props in the telling of mythological Hindu epics. This craft is distinctive because to the use of natural dyes, local tools, and soulful line rendering. The craft has had difficulty keeping up with the shifting market needs, but it is steadily adapting to the dynamic market orientation. The article makes an effort to reflect the true character of the craft throughout its development and emphasise the value of traditional knowledge as a potent medium in the area of sustainable artistic practices.

Keywords: Kalamkari, Sustainable Art Practices, Chintz, Indian textiles, Srikalahasti, Natural Dyes.

INTRODUCTION:

India has long been recognised as the country whose traditional arts and crafts best reflect its vibrant cultural heritage. The 36 states and union territories

that make up the nation each have unique cultural and traditional characteristics, which are reflected in the many types of art produced there. Every region of India has its unique folk art, or style and pattern of

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visual representation. India's folk and tribal arts are extremely ethnic and straightforward yet colourful and lively enough to convey much about the nation's rich heritage. (Shalini Singh 2018)

Tradition enhances society's cultural heritage and is regarded as a primary source of wealth. Indigenous and traditional art forms have significantly shaped Indian cultural practices that have drawn attention worldwide. One such craft that captivated a broad audience with its vivid colour and depth of detail was Kalamkari. Kalamkari was known as "chintz" by the English and "pintadoes" by the Portuguese. It was practised in both printed and painted styles. The word "kalam," which in Urdu means "pen," and "Kari," which means "craft," capture the spirit of this art, but the Qutub-Shahi dynasty renamed it "kalamkari" from the local name, "vraata pani 4," which means "work" and "vraata," which means writing. (Malini Divakala 2014)

The entire process of making kalamkari art is done by hand without using machines or chemicals using natural or vegetable dyes and metallic salts known as mordents to embed the colour in the cotton fibres. The other essential elements of this craft include an exact resist process, intricate and careful dyeing, sketching and painting of the design, and, occasionally, even the incorporation of gold or silver tinsel into it (Chandra S. 2015).

In addition to India, Kalamkari is thought to have existed in Persia three thousand years ago. The Moghuls and then the Europeans supported the art form, which peaked in India between the 16th and 19th centuries. The painted temple narratives with their illustrative depictions of the Gods and Goddesses in all their splendour had lost favour by the end of the 19th century, indicating a dire necessity to turn towards the profitable maintenance of the craft tradition. While tradition served as a tool for forming identity, new perspectives are crucial in advancing ideas for a meaningful relationship between modern and historical sources throughout times of transition.

The ancient textile printing technique known as kalamkari has its origins in the state of Andhra Pradesh. A type of hand-painted or block-printed cotton textile known as kalamkari or qalamkari is made in some regions of India. The word, which means sketching with a pen, is derived from the Persian words kalam (pen) and Kari (craftsmanship). The Mughals and the Golconda Sultanat supported the evolution of the workmanship produced in Machilipatnam, Andhra Pradesh. The craft of kalamkari involves utilizing a bamboo pen and natural dyes to create drawings and paintings.

RESEARCH OBJECTIVES:

The Research will be carried out on the following points:

1. To explore the history and tradition of Kalamkari Art.
2. To explore and study the tradition of using natural dyes and sustainable practices.
3. To examine the sustainable practices and tradition are preserved even in the present scenario.
4. Issues faced by Kalamkari Artisans and threats to Kalamkari Art.

RESEARCH METHODOLOGY:

The study's methodology is exploratory. There is a dearth of literature on the development and history of Kalamkari, as well as information on the current state of affairs. In order to capture the everlasting beauty of the traditional painting Kalamkari, the experimental method was used. Most of the information is gathered from Primary and Secondary sources, including government publications, journals, articles, and news stories.

HISTORICAL BACKGROUND OF KALAMKARI ART:

The practice of painting on cloth is quite old, and Harappa has yielded examples of dyed cloth. Indian madder-dyed cloth with typical patterns has been discovered in tombs at Fustat or Old Cairo in Egypt, indicating that the product was exported. Arabia received imports of Indian textiles. Since ancient times, Africa and Persia have heavily influenced the spice trade. India has long been recognized as the country whose traditional arts and crafts best reflect its vibrant cultural heritage. Every region of India has its unique folk art, or style and pattern of visual representation. The folk and tribal arts of India are highly ethnic, straightforward, and colorful while still being vivid enough to convey a lot about the nation's rich heritage (Sharma E. 2015). Folk art communicates cultural identity along with expression of common community values and aesthetics. The Madhubani paintings of Bihar, Patachitra paintings from Odisha, Phad Paintings of Rajasthan, Kalamkari of Andhra Pradesh, Pichhvai Paintings of Rajasthan, Warli Paintings of Maharashtra, Nirmal paintings of Andhra Pradesh, Aipan of Uttarakhand, Pithoro paintings of Gujarat, Gond and Mandana Paintings of Madhya Pradesh, and Kalighat paintings of Calcutta are some of the most famous folk paintings of India. (Ekta Sharma, 2015, Pg. No:300 to 306)

These art forms are unique and have been passed down through generations. They depict various themes such as Hindu gods and mythology, animals, birds, dance, harvest, and more. It is important to preserve these art forms and pass them on to the next

generation. There is a more than three-thousand-year history to the textile industry in India. Indian silks and brocades are well-known among the wealthy worldwide, but in the 18th and 19th centuries, the simple Kalamkari design on cotton had a profound effect and revolutionized the country's textile industry. Although dye painting cloth is regarded as an ancient tradition in India, it is unclear when it all started. However, some evidence suggests that it dates back to the 16th century.

In the Kingdom of Vijaynagar in south India, kalamkari became well-known as a kind of temple art. As a complement to the inside murals of temples, it sprung up around Hindu temples. The predominant themes at the period were religious. Minstrels travelled around singing and sharing the gospel while painting legendary creatures on cloth. It belonged to a well-known cult and, due to its extensive rural base, came to be seen as an embodiment of India's popular culture. (Maddala Sravani, Chiruvuori Ravi Varma, 2020, Pg No1099)

'From contemporary trade records, it appears that the principal cotton painting centres in the 16th and 17th century were Burhanpur in Khandesh, Sironj in Rajputana (now M.P.), Agra, Petaboli and Palakollu on the Golconda seaboard, and certain towns like Kalahasti in the hinterland of Madras.' At the same time, the art of textile painting and printing also existed in western India in the states of Gujarat and Rajasthan.

Trade in Kalamkari goods has flourished along the south-eastern coast, which Europeans frequently call the Coromandel Coast. This technique has been practised in Masulipatnam (now Machilipatnam), the commercial centre of the Nizam-ruled Golconda state in Andhra Pradesh. The craft was highly regarded throughout its various stages of development as a traditional tapestry shaped by folk beliefs. It later evolved into a secular craft during Muslim control and was further established as a prosperous item under the British, garnering acclaim on the global trade market.

The art form split into two styles—the printed and the painted styles—and was patronised by the Mughals in the provinces of Coromandel and Golconda. Golconda, which had Persian influences, catered to Mughal tastes and became known as a traditional centre for Kalamkari in its printed form, while Srikalahasti, which Hindu kings supported, developed a distinctive style of painting elaborate temple cloths that reflected the glory of Hindu mythology. The distinctive nature of the craft being practiced here draws attention to the figurative motif tradition that was a significant part of Srikalahasti's development as a

critical hub for figurative kalamkari in the second half of the 19th century and has persisted into the present.

The name of the craft, "kalam / qualam," which in Urdu translates to "pen" and "kari," or "craft," captures its essence. The skill has been practised in various locations in southern India, and it has been referred to as "pintadoes" by the Portuguese and "chintz" by the English. This narrative artwork was created in the natural dye-painted style and is found in Srikalahasti, a small pilgrimage town in the southern Indian state of Andhra Pradesh. At Srikalahasti, kalamkari flourished in the temple's vicinity and mostly predominated as temple cloths draped on walls to create a colourfully adorned narrative backdrop. These scroll narrative art fabrics have been used as temple backdrops or as visual aids for the narration of Hindu myths, and they are primarily used to characterise the effervescence of that mythology. (Jyoti Phogat, 2022, Pg No:3)

In Greece, hand-painted clothing from Masulipatnam was also well-liked. According to ancient evidence, resist dye materials have been in use since the eighth century. Travellers like Francois Bernier have described the colourful fabrics of the Golconda. Between 1600 and 1800 A.D., India was a significant exporter of textiles to all of the developed world. Early in the 17th century, Masulipatnam served as a key hub for the art of Kalamkari or Golconda cotton paintings, which originated in Madras and Golconda. Many people in this centre chose to engage in this field, in contrast to Kalahasti, where artists and craftspeople belonged to the Baloja caste. The Pulicat centre, founded by the Dutch, served as the primary hub for trade with the west in Masulipatnam.

(Soma Ghosh, 2018, Pg No:7).

OVERVIEW OF TRADITIONAL KALAMKARI ART, USE OF NATURAL INGREDIENTS - DYEING PROCESS IN KALAMKARI ART:

Bleaching, resist-dyeing, and hand printing are all steps in the tedious, difficult, and gradual process of Kalamkari painting. In contrast to other painting techniques, Kalamkari's work undergoes a great deal of treatment both before and after the painting is finished on cotton cloth. It calls for multiple washings, the use of wax, milk, milk bleaching using goat or buffalo milk, and other similar processes. The final product's appearance and sheen are determined by how the fabric is handled and the calibre of the mordant used. Every step, from soaking the fabric to drawing the outlines to washing and drying the fabric, is completed with extreme caution and in strict accordance with the instructions.



Figure 1-Kalamkari Painting Process

Courtesy: <https://www.dsourc.in/>

Cowdung, seeds, plants, and crushed flowers are all used to achieve various effects. Every application must be followed by washing the current project. Each cloth can therefore go through up to 20 washings before being finished. The water used and the availability of local minerals to be employed as mordants are just two of the many variables that affect the finish's quality. The reason Kalamkari was centred in these two areas has a lot to do with this.



Figure 2-Kalamkari Painting Process

Courtesy: <https://www.linkedin.com/>

The final results are attained after seventeen laborious steps. The method utilised by both schools of Kalamkari painting is essentially the same, with the exception of how laborious and time-consuming the Srikalahasti style is. It is entirely completed with a "kalam," or brush-like pen, as opposed to the Masulipatnam artist, who makes full use of block printing for both the outlines and the colouring. The refinement and aesthetic appeal of the Kalamkari work is another distinguishing feature. Although the hues employed in the original Kalamkari art are vibrant, the overall effect is subdued. The cloth doesn't appear garish, and with each wash, the colours get more vibrant and the motifs contrast the background better. (Sharad Chandra, 2015).

People are now avoiding using hazardous substances all around the world. Therefore, the kalamkari is just the correct kind of work. With this, one can stay away from chemicals while still enjoying vibrant clothes. The bark, blossom, and root of the plant are used to make natural colours by the Kalamkari artisans. Finding out where these colours come from is fantastic; red comes from the madder root, yellow comes from various flowers, pomegranate seeds, or even mango wood, and black comes from things like the myrobalam fruit and others. However, as time has

gone on, changes in living and working patterns have also brought forth new trends in work style.

Younger artists are less likely to like working with materials like buffalo milk, cow dung, or fermented jaggery. They find the conventional kalamkari techniques, which start with bleaching, pouncing, or mordanting, to be incredibly slow, tiresome, time-consuming, difficult, and demanding. They have largely abandoned the lengthy, original process with all of its numerous precisions and precautions for bleaching, soaking, and drying the cloth, as well as for making colours and mordants. Instead, they favour quicker, more straightforward, less difficult procedures. Despite the chemical replacement's slower speed and lack of natural dye's shine, some of them are giving up natural colours in favour of it, particularly indigo.

The cotton fabric is given its distinctive sheen by being soaked for an hour in a solution of myrabalam (resin) and cow milk. Then, using a 'kalam' dipped in a solution of fermented jaggery and water, the outlines and justifications are written on it. The entire process of creating Kalamkari art adheres to a rigidly serialised, precise process. The dyes are applied to the fabric one at a time after it has been mordanted. An essential component of Kalamkari's work is mordanting. The enhanced status that Kalamkari productions enjoy over other painted materials is mainly attributable to Indian mastery of this procedure.



Figure 3-Kalamkari Pen (Kalam)

Courtesy: <https://hdkv.de/>

Today, alizarin is employed in the place of organic material. Wax resist is no longer applied with the 'kalam'. No longer used is the darker-toned indigo dye; instead, a synthetic one is. Different coloured kalamkari cottons are produced to accent the pattern or serve as a background. Red, blue, yellow, green, and black. The colouring method is intriguing. Small iron pieces are steeped in a solution of coconut water, starch, and jaggery and allowed to ferment for a few days to create the colour black. Using charcoal pencils made from tamarind twigs, outlines are sketched. A broad tip is used for filling the mordant, and a pointed tip is utilised for outlining.

Chinese block printing began in the year 100 AD for use on silk. Blocks often come in constructed of teak wood with etched motifs on it. The 'kalam' or brush pen can also be manufactured.¹⁰ Retracing the development of Kalamkari from a traditional textile art to a modern one made from a strong bamboo pole that had a thick goat hair felt on the end. Yellow dye is produced using dried Myrobalan flower blossoms. At the British India Madras Presidency, block printing was frequently practised. By the second part of the 20th century, the practice was in decline. During this time, there was a revival. In the 1950s, businesspeople utilized synthetic dye and blocks. The Kalakshetra's Kalamkari unit, The Madras Craft Research and Education Centre, opened its doors in 1978, where vegetable dyes were used for printing.

All family members participate in making a Kalamkari product in Kalahasti. Tamarind twigs are burned to make the pen; pointed ones are used for outlines and broad ones are utilised for filling in the mordant. Making bamboo sticks, a little bit of wool is looped around the desired tip in creating a Kalamkari product at Kalahasti, all the family members are involved in the work. Burning tamarind twigs make the pen, sharp ones are used for outlines, and broad ones.

for filling mordant. Bamboo sticks are made with the chosen tip, a small piece of wool is wound and kept in place with a thread. Myrobalan for dyeing is made from the unripe fruit soaked overnight in water and ground the following morning. For the red and yellow dye, the substance is from the following plants: Pobakka, Suruduchakka and Chevalikodi (local Telugu names). For blue dye, since indigo is not used anymore, a chemical blue is used, mixed in water in a clay pot.

There has been innovation in Kalamkari from Kalahasti with the passage of time. Black backgrounds have been introduced, the Raslila theme on circular cloths, themes from Buddhist stories, Ajanta motifs and figures among others. and held in position by a thread. Making myrobalan for dyeing involves soaking unripe fruit the following day in the ground and water overnight. The material for the red and yellow colouring is derived from the plants known locally by their Telugu names Pobakka, Suruduchakka, and Chevalikodi. For In place of indigo, which is no longer used as a blue dye, a chemical blue is combined with water in a clay pot. (S Ghosh, 2018, Pg No.10)

CASE STUDIES OF SUSTAINABLE KALAMKARI ARTISANS:

The late master dyer and printer Mukkantiwarudu Rao is among the block printers, as are the brothers Gangadhar and Narsaia, who have been making woodblock prints since the 1980s. In

Hyderabad during the 1970s, Gangadhar apprenticed under his uncle Narasingha Rao and later taught his younger brother how to make blocks. The Kondra at the moment The Kondra brothers are currently regarded as the region of Bandar's most adept block builders. Not just in the Telugu-speaking regions of India, but also in other parts of the country, they have found a market and a willing audience for the wood blocks they produce. Despite this acknowledgment, there is still little scholarship on their work. In the Bandar region, brothers are regarded as the most accomplished block makers.



Figure 4-Kalamkari Traditional Wooden Blocks
 Courtesy: <https://www.gettyimages.in/>

The Devanga group, who are primarily weavers and devotees of devi Durga—Hinduism's supreme mother goddess—includes Mukkanti garu. His father, Nageswara Rao, was essential in establishing the dyeing and printing business there. He was from a weaver family in Polavaram. Rao studied hand block printing and dyeing techniques from Vinnakota Venkataswamy Naidu in the 1970s. Naidu's successors decided not to carry on this area of work after his death. Rao acquired the majority of Naidu's woodblock collection and moved them to his recently built dyeing facility in Polavaram. In the 1980s, Rao created large-scale hangings featuring Hindu and Buddhist deities by printing and painting with natural colors on cotton. Mukkanti garu, in contrast to his father, was only interested in printing. Prior to the 1982 Festival of India in Britain, the Ministry of Culture, Government of India, chose Mukkanti garu's dyeing shop for a month-long workshop. Mukkanti garu stated that Mehrab (a central arch motif) and Konia Chakra (a central circular motif and borders) textiles, which were displayed in the Festival of India, were the specialty of their studio. They received national and worldwide recognition from the event, which contributed to the continuation of natural dyeing in Mukkanti garu's workshop. He eventually resigned his job to help his father at Polavaram after realizing his growing passion in dyeing and printing. Durga M., Mukkanti garu's wife, spins cotton threads in their home's covered patio.⁸⁶ Her ties to spinning and weaving serve as a reminder of their ancestors' profession. Beginning his career as a car driver, Muhammad Salim Pasha accepted the challenge, assiduously studied the dyeing

process, and went on to become one of India's most well-known indigo dyers. He taught his daughters and sons how to dye, and now that Pasha and his family are settled in Hyderabad, they all engage in natural dyeing. Bhikshamayya Chary is a "artisan" who creates a wide variety of crafts, such as blocks, looms, and machines. (Sengupta Rajarshi, 2019, Page No:21)

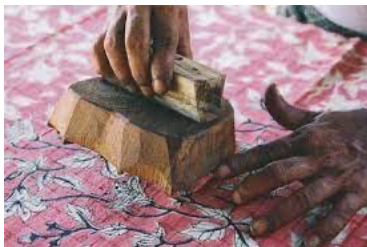


Figure 5-Kalamkari Traditional Printing

Courtesy: <https://www.craftmark.org/>

ENVIRONMENTAL AND HEALTH BENEFITS OF NATURAL DYES:

Owing to the worldwide restriction on the use of synthetic dyes, natural dyes are currently in the spotlight. Around the middle of the 19th century, the natural dye industry was on the verge of extinction; yet, it is still performed in a few isolated areas in a few chosen states today. According to statistics, there are currently only about 6,500 artisans working in this field (mainly villagers and indigenous people), down from as many as 3 lakhs in the middle of the 19th century. Due to the arrival of synthetic dyes, the majority of artisans have abandoned this traditional activity due to a lack of sufficient employment and unprofitable financial returns. As a result of inadequate recordkeeping, the craftsmen's once-practiced expertise is lost. Synthetic dyeing is characterized by significant environmental contamination and significant health risks to workers who handle hazardous materials. Consumers are turning more and more to "natural products" as a result of growing environmental awareness. As a result, there is a growing need for study on the natural dye business.



Figure 6-Kalamkari Natural Dyes

Courtesy: <https://laasyaart.com/Natural>

Eco-colors made of natural dyes were created as an alternative to the market's most dangerous synthetic Holi colors. Six colors were created based on consumer feedback, and the technology was validated and made available for purchase. Two businesses were granted licenses, and they are able to supply

about 6 tons this year. This product is in high demand since it is more affordable than similar products. It is anticipated to expand and partially replace the market for artificial Holi colors. As the synthetic paints used on these idols are polluting the environment and destroying the aquatic life, another technology was created to manufacture eco-paints for painting idols that are immersed after festivals. A total of 56 colours were created utilizing natural gums and dye extracts. Children in schools and artisans have access to technology.



Figure 7-Kalamkari Traditional Painting

Courtesy: <https://toothpicnations.co.uk/>

Textiles with Kalamkari prints are made at Pedana, Andhra Pradesh. Due to the usage of few colors and poor color fastness, their textiles are no longer in high demand. The results are poor even though they employ synthetic topping color. The initiative has been approached by the Vegetable Hand Block Kalamkari Printers Association from Pedana, who are looking for assistance to solve the issues. To teach the craftspeople how to dye with natural dyes, a training session was held. On their request, a few printing-friendly quick yellow colors were created. All the artists at Pedana will receive assistance from the Government of AP's Department of Crafts to receive training in printing and dyeing with genuine natural dyes. (Dr. A. Padma Raju, 2014, Pg No: 6)

CHALLENGES FACED BY KALAMKARI ARTISANS:

It has been observed that more women are working in the field of kalamkari art. It is discovered that the majority of the artisan families' members either work or are artists to support their families. Money lenders were the preferred source of loans for many of the artists. It is necessary to educate the artisans more about the banks. All the artists have access to electricity, restrooms, and drinking water in their dwellings. However, just 98% of the artisans have it when it comes to TV. 52 percent of respondents said they own a refrigerator. Furthermore, only 4% of the respondents own a washing machine. The help extended by the government was in the form of developing the skills of the artisans. Most of the manufacturers said that the government didn't extend any help in the form of subsidies for raw material,

waiving of personal loan or business loan. The only help that was extended was to conduct a workshop to tune the artisan. The type and difficulty of the task they undertake determine how much money they make each month. Given that they do most of the painting and printing, women are typically paid less than men. While the men are given challenging occupations. However, the craftsmen's average monthly salary is between Rs. 10,000 and 30,000. The majority of artisans asserted that their earnings are insufficient to support their families. Since the craftsmen's income is insufficient and they are indebted, many of them are experiencing financial difficulties. (G. Ramyasri, 2019, Pg No.89)



Figure 8-Kalamkari painting women at work

Courtesy: <https://www.gettyimages.in/>

CONCLUSION:

When a buyer enjoys a product, he may be willing to pay a price that is far more than the item's usual price, as is the case with kalamkari. The most important factor is his preference for the goods. channel representatives, like middlemen, A merchant or distributor tries to take advantage of such opportunities and generate substantial profit virtually entirely at the expense of the Kalamkari products can be classed based on their price, export to the home market, and ease of maintenance, storage convenience, usefulness, or aesthetic appeal modernism, value, or a traditional bent. Moreover, bringing together like-minded institutions is essential to give the strategic guidance and action plans needed for development. Procedures and standards in the areas of design, market, technology, innovation, and quality of life are necessary to ensure that product designs, technology, and marketing are fully integrated into the process of upgrading and repositioning the craft. However, the disorganized nature of the sector has hurt it, as have additional obstacles such a weak institutional foundation, a lack of market intelligence, a lack of education, insufficient capital, and poor exposure to new technology. The distinctive Indian art of Kalamkari, however, has enormous growth potential in the changing environment due to its fundamental strength in the abundance and affordability of labor, as well as the fact that it is a traditional vocation with thousands currently doing it.

It's critical to promote sustainable artisan communities to protect cultural heritage, strengthen local economies, and encourage eco-friendly behavior.

- Create and support programs for vocational training to assist artisans in developing their talents. Create apprenticeship programs that link craft master's with the next generation.
- Develop educational programs to increase understanding of the cultural and financial importance of artisanal crafts. assist artists in getting access to inexpensive, eco-friendly materials.
- Provide grants or subsidies for tools and equipment that increase productivity and have a smaller negative environmental impact.
- Create e-commerce platforms and local and worldwide markets for artisan products.
- To improve visibility, publicize artisan fairs, exhibitions, and festivals. Encourage marketing and branding initiatives to set artisan products apart on the market.
- Create guidelines and rewards for sustainable practices in artisan communities, such as waste management, energy conservation, and ethical material procurement.
- Encourage the use of renewable energy in craft-making facilities.
- Encourage the use of recycled and upcycled materials in artisanal production.

Above mentioned policy recommendations can help Sustainable Artisan Communities

References

1. Maddala Sravani, Chiruvuori Ravi Varma, (2020) The Ancient Art of Kalamkari: Problems and Prospects with Special Reference to Pedana, Andhra Pradesh, International Journal of Science and Research (IJSR)
2. Chitrolekha Journal on Art & Design, <https://chitrolekha.com/kalamkari/>
3. <https://textilevaluechain.in/>
4. Singh, S. (2018). Study of Hand Painted Kalamkari to Design New Motifs. *International Journal of Computer Application*, 8(2), 25-40.
5. <https://indianfolkart.org/>
6. <https://www.jagranjosh.com/>
7. <https://lotusarise.com/folk-paintings-of-india-upsc>
8. Chandra, S. (2015). Kalamkari, the art of painting with natural dyes. *Chitrolekha International Magazine on Art and Design*, 5(2), 82-88.
9. Phogat, J., Raja, M. C., & Palem, G. A Visual and Historical Study of the Scroll Narrative-Kalamkari Art in Andhra Pradesh.

10. Divakala, M., & Muthian, V. (2017). Temple cloth to textile craft: The progression of Kalamkari (Vraatapani) of Srikalahasti. *Craft Research*, 8(1), 79-99.
11. Ghosh, S. (2018). Retracing Kalamkari's journey: from classic to contemporary textile art. *Chitrolekha Journal on Art & Design*, 2(2).
12. Gupta, M. S., & Rambabu, M. BEAUTIFUL TIMELESS ART: STUDY ON PATTI VARNA OF ANDHRA PRADESH REGION (SPECIAL FOCUS ON FREEHAND DRAWING, MOTIF AND NATURAL DYES).
13. Dr. A. Padma Raju, (2014). A Value Chain in Natural dyes. Indian Council of Agricultural Research.
14. G. Ramyasri, (2019). A Study on Standard of Living Kalamkari Artisans. *International Journal of Management*
15. Sengupta Rajarshi, (2019). MAKING KALAMKARI TEXTILES: ARTISANS AND AGENCY IN COROMANDEL, INDIA