



# **A Living Color: A Contemporary Exploration of Aizome in Japan**

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# Abstract

The tale of *aizome*, traditional Japanese indigo dyeing, is intricately woven with ancient traditions of the past and modern consumer preferences of the present day. As one of the oldest dyes to be used by humankind, its existence in the modern day reflects the enduring legacy of an age-old craft as well as its adaptability through recent resurgence in a world increasingly inclined towards sustainability and authenticity. The goal of this project was to gain a deeper understanding of *aizome* through numerous interviews with artisans and art students. With this knowledge, we then identified opportunities to increase connections within the indigo dyeing community.



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All blues, no clues,

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# Executive Summary

Indigo dye is one of the oldest dyes to be used by mankind. Across various regions, different methods for extraction, processing, and dyeing of indigo were developed. Traditional Japanese indigo dyeing, also known as *aizome*, reached the height of its popularity in the Edo period. Since the creation of synthetic indigo in the late 18th century, the production of natural indigo has sharply fallen. However, numerous smaller-scale artisans continue to carry the practice forward in the modern day.

Our project sponsor, Jennifer Teeter, practices the craft in her freetime and has been continually working to create a connected community of indigo dyers. As a result, she has requested that our team continue the further development of the indigo dyeing community.

## Project Goals & Objectives

For the purposes of further increasing connectivity and development of indigo dyeing within Japan, we identified the following project goals & objectives:

1. Understand the Social, Economic, & Political Impact of Traditional Indigo Craft
2. Explore Reasons for Decreased Involvement
3. Preserve Traditional Indigo Dyeing Techniques
4. Map the Indigo Craft in Kyoto
5. Identify Indigo Craft Viability

## Progression of Methodology

In order to not only learn about the traditional craft itself, but also to understand the stories of the people involved, we interviewed art students, artisans, farmers, and storekeepers involved in the craft. Additionally, we visited museums which were entirely dedicated to the indigo dyeing craft, and participated in workshops where we had the opportunity to attempt dyeing ourselves.

We also aimed to identify opportunities to create a more connected indigo community. For example, through the creation of an interactive map of locations related to indigo, developing a website and social media presence, and extensive photographic records as detailed below.

## Final Deliverables

1. Map of Indigo Dyeing Scene
  - a. To increase connectivity and awareness of other artisans with each other, we created an interactive map of spaces involved in indigo, including farms, dye houses, and shops. Each location is color coded to indicate what category they fall into. In addition to their

addresses, each also includes a brief description as well as any website link information for businesses.

## 2. Website

- a. We created a website to provide a platform to share the knowledge we have gained regarding indigo dyeing as well as the stories from the various artisans we have interviewed. It includes a homepage with introductory information, an “About Page” which details the project and team, a “Stories” page documenting the interviews, a “Map” page with the map embedded and interactable, and a “Gallery” page showcasing the photos taken throughout the project. The login information will be passed on to the sponsor and subsequent research teams to ensure the website is kept up to date.

## 3. Social Media (Instagram)

- a. We created an Instagram page and continually posted about our experiences and journey interviewing indigo dye artisans to provide a user-friendly experience. This page will act as a node in the growing social network of the indigo dyeing community. With this account we were able to make connections with other aizome artisans and curators. The login information will be passed on to the sponsor and subsequent research teams to ensure the website is kept up to date.

## Key Takeaways

- Moral & Ethical Questions:
  - Inherent to our project are questions relating to what exactly it means to truly understand and preserve a traditional craft. Each *aizome* artisan practices their craft in a unique way and has different outlooks on the future of the art form. While it may be easy to see a traditional craft as something in stasis in the past, the reality is that *aizome* is a continually evolving craft. Some artisans resist this change, strictly adhering to tradition. Others constantly innovate to improve the craft.
- Differing Values:
  - It is imperative to acknowledge that there is cultural dissonance related to capitalist values versus those of many of the artisans we met. Monetary profit was evidently not at the forefront of their priorities. While they acknowledged the importance of capital, they emphasized a desire to practice the craft over all else.
- Language Barrier:
  - Due to our lack of Japanese language proficiency, there was an inevitable loss of nuance when interviewing those who did not speak English. Despite this, the passion and enthusiasm was so strong as to be plainly evident to us.
- Disconnected Nature of the *Aizome* Community:



- Throughout the duration of our project, it became evident that the indigo dyeing community is not necessarily connected. The dispersed nature of the community results in difficulties contacting those who may practice the craft recreationally or who do not advertise themselves. Indeed, hobbyist dyers were the most challenging source to discover. Nonetheless, it is imperative to include these individuals in the story of *aizome*, thus this is a challenge to contend with and be aware of.
- Openness of the Indigo Dyeing Community:
  - While there is some degree of openness, especially between indigo artisans and artisans of other mediums, there is a guardedness that exists amongst indigo artisans. Even when expressing interest in connecting with other indigo artisans, they remained hesitant to discuss their work with each other.
- Tradition in a modernizing world:
  - Many *aizome* artisans continually innovate their methods in an attempt to reduce labor costs and compete in a capitalist society which values monetary profit. However, this presents a conflict as there is an inevitable loss of tradition with continual innovation. Further, some artisans may feel pressured to innovate despite wanting to remain true to their traditional roots, or even resent those who place an emphasis on change. So while those who innovate risk the loss of tradition, those who adhere to tradition risk financial solvency.
- Keeping *Aizome* Relevant:
  - As time moves on, the consumption of traditionally dyed kimonos and other traditional items has seen a significant decrease. Artisans have taken to collaborating with newer, more widely recognized brands, as well as dyeing more modern pieces of fashion. Some have even moved in a different direction, innovating the form indigo takes to create cosmetics or even foodstuffs.

A LIVING COLOR

# INTRODUCTION

CHAPTER ONE



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*Aizome artisan Yoneda Kyoko dyeing a scarf with indigo*

# 1.0 Introduction

The history of natural indigo dye is a tale inextricably interwoven with ancient traditions of the past and the ever evolving, modern trends of the present. As one of the world's oldest dyes, it reflects the enduring legacy of an age-old craft and its recent resurgence in a world increasingly inclined towards sustainability and authenticity (Growth Market Reports, 2022).

Within Japan, the indigo craft, or *aizome*, holds cultural significance, tracing back to ancient times when it was a luxury reserved for the upper class. Over the centuries, indigo farming and processing evolved, making it accessible to all social classes. Today, indigo-dyed textiles are used in various products, from clothing to home furnishings, showcasing its enduring popularity.

In Japan, the indigo craft is deeply intertwined with tradition and generational continuation. Artisans pass down their expertise, maintaining centuries-old techniques and technologies. Some amateurs practice the craft out of a sense of social value rather than commercial gain, while experts continue to produce natural indigo products with dedication.

As the craft of traditional indigo production competes against cheaper and more accessible synthetic dyes, it faces a critical threat of gradual decrease and potential extinction. The time-consuming and labor-intensive nature of cultivating, processing, and dyeing with natural indigo, combined with the economic advantages of synthetic alternatives, has led to a significant reduction in traditional indigo production. This decline not only endangers the survival of age-old techniques but also risks the loss of a valuable cultural heritage deeply rooted in Japan. Efforts to preserve and revitalize traditional indigo crafts become increasingly crucial in the face of this challenging competition, as they represent not only a unique dyeing process but also a tangible link to the rich history and cultural significance of indigo dyeing.

The goal of our project is to document, help preserve, and strengthen the indigo community around Kyoto. We hope to accomplish our goal by meeting the following objectives:

- 1. Understand the Social, Economic, & Political Impact of Traditional Indigo**
- 2. Explore Reasons for Decreased Involvement**
- 3. Preserve Traditional Indigo Dyeing Techniques**
- 4. Map the Indigo Craft in Kyoto**
- 5. Identify Indigo Craft Viability**

We will accomplish these goals by engaging with the indigo community in Kyoto and creating an interactive map and website. We aim to link individuals and businesses with each other and provide a platform for future projects to enhance the indigo community.

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# BACKGROUND

CHAPTER TWO



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*A prayer shrine on Kenta Watanabe's sukumo pile*

## 2.0 Background

### 2.1 History of Traditional Indigo Dye

#### 2.1.1 Indigo on the World Stage

Natural indigo dye has a long history as a globally valuable commodity, one so sought after it was termed “blue gold”. Evidence of indigo dye’s use dates as far back as 6000 BC, thus making indigo one of the oldest dyes used by mankind. The term “indigo” derives from the Greek word “ινδικόν” or “indikón”, that is, “coming from India”. Indigo is thought to have originated in India and spread across the Mediterranean and Europe via migrants and Phoenician traders with historical evidence of its existence found in Mesopotamia, Egypt, Greece, Rome, Britain, Peru, Iran and Africa (Lopes, 2021) (Mocquard et al., 2022).

There are over 300 species of indigo plant from three families: *Leguminosae*, *Crusiferae*, and *Polygonaceae*. Prior to the creation of synthetic indigo in 1897, blue textiles were all derived from some form of indigo plant, mainly those belonging to genera *Indigofera*, *Polygonum*, and *Isatis*. In India, *Indigofera tinctoria* species were utilized while in Europe, *Isatis tinctoria*, or dyer’s woad was used. Colonial North America mainly dealt with the native *Indigofera caroliniana* as well as *I. tinctoria* and *Indigofera suffruticosa*. In China and Japan, *Polygonum tinctorium*, or dyer’s knotweed, was cultivated. Across various regions, different methods for the extraction, processing, and dyeing of indigo were developed. The indigo plant, *Persicaria tinctoria*, which is commonly known as Japanese indigo or Chinese indigo, was introduced to Japan via silk trade. This plant is native to Eastern Europe and China and was introduced to Japan through India or the ancient cultures of China during the Asuka period (592-710 CE). The plant dye was originally exclusive to nobles but saw wider adoption during the Edo period (1600-1868 CE) (Yusuf et al., 2017) (Lopes, 2021).

During this time, indigo was traded in many regional markets and became a highly sought-after material. Before the thirteenth century, the production of indigo was carried out by a network of small-scale artisans scattered across Asia. They dried the dye into bricks, which made it easy to transport. These indigo bricks traveled through ancient trade routes and found their way into the hands of the Greeks, Romans, and eventually Europeans. Nevertheless, the imposition of taxes by local kingdoms as it traversed through its territories led to an exorbitant cost when it reached Europe (Balfour-Paul, 1999).

In the late 15th century, Vasco da Gama’s discovery of a sea route to China opened up direct importation of indigo. As a result, India witnessed the initiation of extensive indigo cultivation, and during the 1600s, substantial volumes of indigo were exported to Europe, collapsing the European

woad industry due to its inferior dye. This was accelerated by the Portuguese, Dutch, English, French, and Spanish creating bases and colonies to maximize trade. During this time, the Portuguese traded with Japan extensively and began to control the European indigo market (Schendel, 2008).

By the eighteenth century, the indigo industry shifted away from the East and toward the Americas as the British and French set up plantations run with slave labor. These plantations, particularly in the Caribbean and the southern colonies of North America, became major producers of indigo, dominating the market and further driving down prices. This globalization was a great commercial success for European powers, as it allowed them to dominate the indigo trade and reap significant profits as demand for the dye only grew moving into the 19th century (Balfour-Pual, 1999).

As demand for indigo steadily rose during the 18th century, interest in seeking a synthetic alternative also grew. Cultivation, processing, and dyeing using natural indigo was time-intensive, costly, and simply could not be mass produced at the scale required. As natural indigo struggled to keep pace with the ever rising demand, mounting pressure arose to find a cheaper, synthetic version. With the creation of synthetic indigo, natural production swiftly fell. At the record height of Indian indigo trade from 1895-1896, 9,366 tons of indigo valued at \$492,100,000 in today's USD was exported. Just 14 years later, this fell to 846 tons valued at \$2,510,000 with the price per ton dropping drastically from \$52,500 to \$2,900 ("The Rise and Fall of the Indigo Industry in India", 1912). Meanwhile, since the advent of synthetic indigo, production for the synthetic dye has increased from 1,000 tons per year to 70,000 tons per year from the 19th to the 21st century (Mocquard et al., 2022).

Chemically, synthetic and natural indigo are not different. Variance in coloration of naturally dyed indigo products results from impurities left in the dye. Synthetic indigo is a purer product and, as a result, is more concentrated and able to create darker coloration more readily than natural indigo. Moreover, natural indigo cultivation, extraction, processing, and dyeing are comparatively more time, resource, and labor intensive than synthetic, and can never achieve the same mass production profitability that synthetic indigo can (Lopes, 2021). Economically, chemically, and broadly as a presence on the global trading stage, natural indigo has fallen far behind its synthetic sister. However, there are still many artisans, consumers, scientists, and general citizens alike who share an interest in the natural dye. What is it that makes people, centuries after the advent of synthetic indigo, captivated by the natural dye? What is it that causes artisans to devote their lives to pursuing mastery over the indigo dye craft? What is it that makes indigo so incredibly distinctive? **What is indigo?**

## *Markets and Consumer Preferences, Economic Effects, Tourism*

Though natural indigo has suffered a marked decrease in demand moving into a continuously modernizing and commodified world, it has seen some small renewal in interest as a sustainable alternative. Since the 1990's a new phenomenon began in the fashion world: fast fashion. Retailers could produce trendy, poorly made, low cost garments on nearly a weekly schedule to keep up with the ever changing fashion world. These clothes were often made to be consumable and 60% end up in the landfill in the first year, causing almost 92 million pounds of textile waste to be produced annually and contributing to 10% of the world's CO2 emissions (Finn, 2021). However, this trend may not continue. Incoming generations have begun to shift this trend and move towards favoring sustainably produced, longer lasting, reliable options.

Indigo dye is one such sustainable option that has gained popularity in recent years. The dye is naturally biodegradable, and paired with the fact that most textiles dyed with indigo tend to be of higher quality, the indigo industry creates designs that are meant to last. In addition to being more environmentally friendly than synthetic dyes, consumers also appreciate the added value that indigo dye brings to their clothing. This has been confirmed by numerous modern studies committed to finding more efficient and sustainable dyeing methods and the growing global indigo industry (Growth Market Reports, 2022).

In addition, consumers have become more conscious of how their clothes are made after notable tragedies in the textile industry such as the Rana Plaza disaster in 2013 where a garment factory collapsed in Bangladesh, killing 1,134 people. This has led to a greater demand for ethically produced clothing, with consumers wanting "to know where their textiles come from and how they have been made," (Richard Smith, 2018). Small artisans are well-positioned to meet this demand as they often produce fewer items of higher quality and with more transparency compared to major retailers.

Tourists also flock to small Japanese artisans for indigo-dyeing experiences. These artisans offer hands-on workshops where tourists can learn about the traditional indigo dyeing process and even create their own unique indigo-dyed products. This trend reflects a growing desire among travelers to engage in authentic cultural experiences and support local artisans rather than simply purchasing mass-produced souvenirs.

However, the industry does face some hardships due to changes in modern Japanese wear and everyday products. Traditional garments such as kimonos are less typical compared to modern stylings, transitioning into being used infrequently as formal wear. Traditionally crafted doorway curtains or containers made from wrapping cloth that were once commonplace are more often used as art or novelty, replaced with more practical plastic bags and similarly utilitarian items. Similarly, traditional cultural gatherings including tea ceremonies and theater have been affected not only by a changing world, but by recent events such as the COVID-19 virus, resulting in reduced demand for kimono and kimono bands (Hergueta, 2022). These are all textiles that traditionally use indigo dyes. Despite this, indigo dyers are finding new garments to dye, such as jeans, which have garnered a cult following in the West.

The global and Japanese indigo industries fit into changing consumer preferences for sustainable and eco-friendly products. This shift in consumer mindset has provided a new market opportunity for indigo dyers to showcase their craftsmanship and promote the cultural significance of indigo dyeing.

## 2.2 Indigo Craft in Japan

### 2.2.1 History in Japan

#### *Opening of Borders*

The Meiji Restoration is the period in Japanese history around the 19th century wherein profound political and cultural changes occurred, including the end of Japan's near 300 years of isolationist policy. Following the opening of Japan's borders were the cultural and artistic exchanges that occurred as Japanese craft was introduced to the Western world and, in turn, Western techniques entered the Japanese consciousness ("The Art and Antiques of the Japanese Meiji Period", 2018).

In some regards, access to the broader world provided new freedoms for Japanese craftsmen as demand for their products abroad increased dramatically. Moreover, while previously craftsmen had been somewhat limited by creating commissioned pieces under the artistic patronage system, they were now producing pieces for the mass market, thus allowing for more artistic discretion ("The Art and Antiques of the Japanese Meiji Period", 2018).

However, with the exportation of Japanese craft also came the importation of Western ideas and products. Japanese craftsmen now had to contend with the fluctuations of the world market and some felt compelled to utilize the cheaper, non-traditional materials in order to compete with mass produced goods from abroad. This fueled a decline in some traditional crafts methods. Moreover, introduction of the Western concept of differentiation between art and craft resulted in divisional



hierarchy between the two which previously had not existed in Japan. Previously, a more encompassing term “芸術,” or “*geijutsu*,” included things of a technical, artistic nature. Following this, around 1873, art in a Western sense, such as paintings or sculptures, was described as “美術,” or “*bijutsu*,” while industrial craft was titled “工芸,” or “*kōgei*” (Morais, 2019).

Concurrent with the drastic cultural shifts Japan was experiencing as a result of the Meiji Restoration were the political changes Japan adopted which were greatly influenced and informed by Western models of government and military. This, along with continual cultural importation of Western methods of thought and religion invariably gave rise to a traditionalist, or in some ways nationalist, versus a modern, industrialized, and distinctly Western style. For instance, around 1920, the *Mingei* movement gained traction. The movement appealed to a revitalization and reinstatement of traditional folkcraft as a response to a perceived cultural crisis of Japanese identity in the face of increasing Westernization. The movement viewed capitalist, consumerist, hedonistic, and industrial influences as opposition (Paredes, 2018).

As with the *Mingei* movement and continually throughout Japanese history, the question of what is bespoke, traditional, authentic Japanese arises and is inextricably tied to traditional Japanese art and craft.

### *Cultural Significance of the Japanese Indigo Craft*

Stories and legends passed down through families indicate that the indigo has been used as early as the 2nd or 3rd centuries. One such story about the ancient Queen Himeko states that the Japanese monarch gifted gorgeous blue fabrics to the Chinese Wei emperor, indicating a storied history of the plant and its usage (Yoshioka, 2010). As implied by the Queen Himeko tale, the dyestuff was a luxury reserved for the upper class, only available to nobles and samurai moving into the 6th century and beyond. However, by the 17th century, a paradigm shift had occurred. As indigo farming and processing evolved and became more widespread in Japan, the plant and resulting dye became commonplace enough to be a staple product for all social classes (Prasad, 2018).

The rich blue color of indigo eventually became a common luxury in the 17th century and beyond. As such, its popularity resulted in its usage in a variety of regular items. Even today, indigo-dyed textiles are used in such products as tablecloths, cushion covers, wall decorations, split entrance curtains called *noren*, restaurant furnishings, and clothing of all kinds. The dye’s popularity stemmed from a variety of sources, such as its unique coloring, medicinal properties, and rare trait as a bug-repellant (Langlois, 2022). As such, the farming and processing of indigo became sought-after professions as a practical and artisanal craft.

The ‘industry’ of Japanese indigo was, in some part, deeply rooted in the generational

continuation of the craft. One such craftsperson, Sachio Yoshioka, states that her family has followed a tradition of dyeing textiles for over 200 years, and she strives to keep the tradition alive even today (Yoshioka, 2010). At all levels of the industry, bonds and tradition are of paramount importance. The initial farming, the processing, the dyeing, and the final result all hold an element of connection that weaves throughout the product. The artistry of the craft stands alongside the monetary, social, and cultural value of an indigo-dyed product.

As synthetic dyes came to Japan and blossomed into its own industry, the practice of producing natural indigo products declined. Currently, although natural indigo holds less value as a commodity, the artistry, tradition, and cultural values persists. Some people practice traditional crafts involving indigo, such as a traditional form of stencil dyeing called *katazome*, as ‘amateurs.’ These people are not considered masters of the craft by those deeply ingrained within the industry. Instead, these amateurs practice the craft, but do not typically sell their work as products. This is in part due to the belief that the culmination of their artistry is not a commodity. Rather, they see their work as something having social value, and will instead gift their *katazome* to friends or fellow amateurs to form a deeper connection and increase their community (Hergueta, 2022). In contrast, master artisans carry forward hundreds of years of tradition, technique, and technology. They continue to produce and sell natural indigo dye products. The simplicity and beauty of indigo-dyed cotton and fabrics are also popular in western countries and places such as the United States and Europe.

In the face of continual industrialization and modernization, traditional Japanese crafts, such as natural indigo dyeing, has declined. And yet, there are those who strive to keep the craft alive. Artisan Sachio Yoshioka is one such example. She described the craft of dyes as a “shallow stream” compared to the empty river of similar traditions elsewhere in the world, and despite its decline, some dyers and individuals still keep the tradition alive. She specifically references the long history of dyeing and the legacy of their ancestors as driving forces which inspire artisans to continue practicing and learning. Other artisans, such as the Nishijin weavers, see their craft as important and valuable, especially for themselves and for the legacy from which their crafts descend. Though they have little confidence in a revitalization of their crafts, they continue to practice it with dedication. This is merely a glimpse into the current perception of traditional indigo in Japan, and is something that will be further explored.

## 2.2.2 Indigo as a Tradition

### *Agricultural Techniques*

In Japan, the plant named *Polygonum tinctorium* is harvested for creating indigo dye. The *ai-shi* (indigo masters), influenced by the Buddhist calendar, wait for *Dai-an*, or days of ‘Great Safety,’ to begin their farming season. This usually falls at the very tail end of winter when the threat of frost is gone and spring starts peeking through the brush.

It is then that farmers will prepare the seedling beds for the start of the new indigo crop season. Soil is tilled and treated with pesticides and fertilizers before the beds are shaped into long rows approximately a meter across. Seeds are planted in these carefully prepared beds and covered by a blanket of sand, as well as a seedling sheet that will retain the moisture of the soil. This is to protect the precious sprouts from any late frost. The indigo beds are watered daily with care as the seeds take root. Farmers weed the beds regularly so the crop has room to grow. From here, the journey these plants take from seedling to dye has begun.



Figure 1: *A diorama of Edo period farmers harvesting indigo*

Around the middle of April, the seedlings are ready to be transplanted into the fields. Cow manure, balanced chemical fertilizer, and composted indigo stems are used to fertilize the fields as the indigo plants require heavy fertilization in order for them to have good yield. Lime, soil bacteria, and cutworm pesticide are tilled into the field, and once prepared, they are ready to receive the new seedlings. For the seedlings to be transplanted into the fields, they require a heavy watering so the soil

around their roots is loosened, facilitating the removal of the seedlings from their beds with the least amount of root damage. The sprouted seedlings are then pulled from the ground and made into bunches of five to six. The root ends of these bunches are then placed into a container where they will be submerged in water. This is a crucial step meant to ensure optimal transplantation. Once the roots have soaked, the bunches are planted into the tilled soil of the fields in such a way that only their leaves are exposed. Since *Polygonum tinctorium* is a nodded plant, where the flowers hang towards the ground, making sure it is fully covered at the base is crucial to ensure that it will take root deeply. The indigo plant grows for about five months after it is planted, then the leaves are harvested and fermented for approximately another three months. This entire process from seed to dye takes up to almost a year.

### *Crafting Techniques & Technologies*

Across Europe, India, Japan, and elsewhere, regional methods of extracting and processing natural indigo dye have been developed for centuries, but all have traditionally involved steps to hydrolyze and then oxidize the plant to create the desired indigo dye.

Traditional Japanese indigo dyeing is known as “藍染め,” or “*aizome*,” and uses only natural materials. There are five basic materials as follows: *sukumo* (composted tade (蓼) leaves of the indigo plant), fusuma (wheat bran), sake, hardwood ash, and lime. The chemical precursor to the indigo dye must go through a fermentation process, which is facilitated by the sake and fusuma. During this process, the hardwood ash and lime control the alkalinity. The materials are mixed in a vat, slightly heated, and then stored underground to control the temperature and ferment for approximately one week. This process determines the quality of the indigo dye, and ideally produces a foam called *ai-no-hana*. The textile is then soaked in the resulting liquid dye for 15 to 30 minutes. Excess liquid is squeezed out of the fabric and it is hung to dry and complete the oxidation process. After the initial soaking, the textile has a somewhat green coloration which will even into indigo as it dries. The textile may be repeatedly soaked and dried, even up to 40 times, to deepen the coloration (Lopes, 2021) (Bauer, 2023).



Figure 2: *A diorama of an Edo period dye house*

There are various techniques utilized in creating indigo dye textiles. *Danzome* is a technique involving dyeing the textile in stages to produce a gradation effect shown in Figure 1.

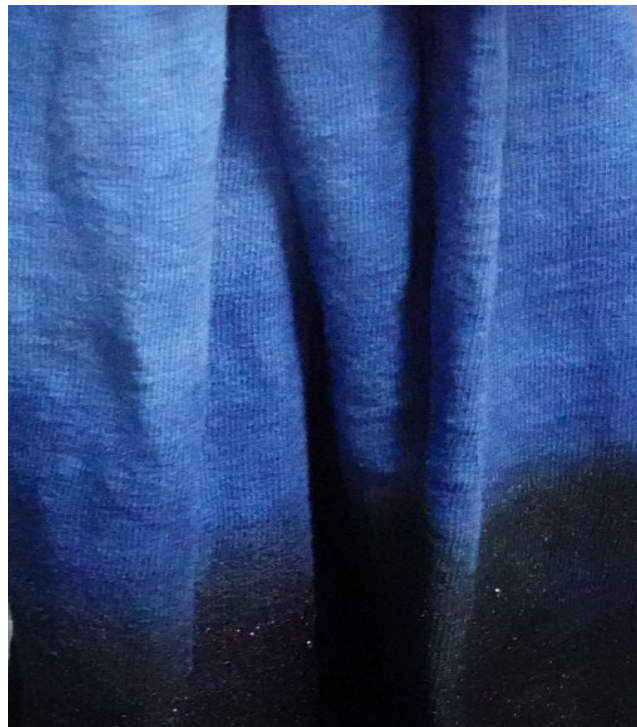


Figure 3: *Danzome*

*Shiborizome* is the most basic technique for traditional indigo dyeing and involves tying and/or folding the fabric, thus allowing some portions to remain white or less saturated. This creates a tie-dyed effect



as seen in Figure 2.



Figure 4: *Shiborizome*

*Murakumozome* is a variation on *shiborizome* wherein the fabric is gathered before dyeing but not tied, thus resulting in uneven shading the dye as demonstrated in Figure 3.



Figure 5: *Murakumozome*

*Itajimeshibori* is also a variation on *shiborizome* as *murakumozome* is. Wood is placed between the fabric to form shapes and the fabric is folded around it, thus allowing the artist to create a variety of shaped images in the cloth as shown in Figure 4.



Figure 6: *Itajimeshibori* used to dye Watanabe's logo above his store

*Bassen* involves first dyeing the fabric and then placing stencils on it. Chemicals used to lighten the stenciled areas are then applied to allow the artisan to create more complex imagery on the fabric as seen in Figure 5.



Figure 7: *Bassen* in the Kyoto Shibori Museum

*Roketsuzome* is the most difficult *aizome* dyeing technique and traditionally requires over 20 steps before completion. For this technique, wax is applied to the cotton fabric before dyeing to leave sections white.



Figure 8: *Roketsuzome*

(Japan National Tourism, 2020).

### 2.2.3 Synthetic Dyes in Japan

Evidence found using non-destructive dating shows that synthetic dyestuffs were introduced to Japan sometime in the early 1860's, specifically around 1864. This falls in line with the late Edo and early Meiji periods of Japan, which will prove an important fact when observing the meteoric rise of the use of synthetic dyes during that time period. A reference on the topic of Japanese wood block craft called *nishiki* even stated that by the 1880s, aniline dyes had all but replaced the old vegetable and mineral colorants. Modern scholars, especially in Japan, compare the traditional and synthetic colorings harshly, calling the synthetic dye colors garish by today's standards. Natural indigo was actually the first dye affected, because the first synthetic dye introduced to Japan was a purple dye around 1864 (Cesaratto *et al.*, 2018). Using other dyes, such as Prussian blue, people made the purple dyes retain a more bluish color, directly compared to indigo. It is important to note, then, that synthetic dyes did not immediately and swiftly replace all traditional dyes. Instead, the process was gradual, and even dye-specific as to how long the traditional version was 'replaced.' In fact, it can be said that none of the traditional dyes were replaced, as they are all still in use today. It is of even greater importance to understand why exactly these synthetic dyes began to see a rise, continued traditional dye uses notwithstanding. The core of the rise of synthetics can be summarized as such: synthetics were more cost-effective as they had stronger dyeing strength in smaller quantities, and they were much easier to use.

Proceeding from the beginning of the Meiji period and transitioning to the middle of the era, one finds a period where the synthetic dye industry in Japan truly exploded. Until the 1900's, Japan's synthetic dye imports came from a variety of foreign countries, such as France, England, and China. However, moving into the 20th century, Japan found itself nearly entirely dependant on Germany for



its imported dyestuffs. Thus, when World War I began in earnest, Japan found itself in the midst of a 'Dyestuff Famine.' Because of the rise of the use in synthetic dyes since their introduction, Japanese craftspeople and people within the dyestuff industry now found themselves lacking material. To many, this became a grand opportunity. Now with no international competition, Japan's domestic synthetic dye industry rose to prominence, with the first domestic dyestuff being produced in Mitsui Kozan in 1914. There are a variety of factors that additionally accelerated and influenced the rise of Japan's synthetic dye industry. Increasing demand for dyes, increasing demand specifically for synthetic dyes, a lack of domestic supply, and a bolstering of research and education in the nation are a few. The Japanese government itself saw the Dyestuff Famine and, with support from the powerful textile industry, changed policies to improve the state of Japan's domestic synthetic dye production (Hashino, 2007).

In the modern world, synthetic dyes possess a variety of advantages compared to traditional dyestuffs. With mass-produced commodities, extremely large quantities of dye are required, making the low supply of traditional dyes insufficient for mass production. Companies do not concern themselves with artistry and color variation, so those strengths of traditional dyes are moot. Mass-produced goods are far more cost-effective and simple to purchase, so the products produced by craftspeople using traditional methods end up forming a much smaller industry. In comparison to the idea of cultural preservation, synthetic dyes embody a single word: easy. Traditional indigo dye is an arduous industry. Each aspect is either difficult, time-consuming, laborious, or some combination of those. It is for those reasons that young people struggle to join or even entertain the idea of joining the craft. In contrast, synthetic dyes can be produced in massive quantities at a fraction of the time, labor, and knowledge required, and is even more cost-effective.

#### 2.2.4 Current Artisans, the State of them Economically

The global indigo market is witnessing remarkable growth, fueled by the increasing demand for indigo dyes in the textile industry (Growth Market Reports, 2022). However, despite the historical significance of indigo in Japan and efforts to sustain its economic viability, some indigo artisans are struggling to keep pace with the market's expansion.

Currently, the Japanese indigo industry produces about \$450 million USD a year, with the majority coming from small businesses. However, with the advent of synthetic dyes, sales have steadily declined. This has resulted in the industry being unable to compete on price and instead having to focus on the traditional qualities of the craft to remain economically viable..

In contrast to the local industry's challenges, the global indigo market is experiencing significant growth. The market size was valued at \$882.2 million USD in 2021, with growth projected

to nearly \$1,500 million by 2030, indicating a compound annual growth rate of 5.1% during the forecast period (Growth Market Reports, 2022). This growth is primarily driven by the textile industry's production of denim and research into medical uses.

Japan's natural indigo artisans face significant challenges in the midst of a thriving global indigo market. Despite the traditional craft's historical significance, noticeable decline in new people entering the craft as well as the multiple disadvantages compared to synthetic dyes hinder its ability to keep up with market demands. As such, the craft must evolve or be properly passed down as the world modernizes.

## 2.3 Cultural Preservation

### 2.3.1 The Purpose of Cultural Preservation

The previously mentioned Nishijin weavers participated in a study published in 2020, where the perceptions these artisans had about their craft and economic viability were investigated. These silk-weavers participate in a traditional craft that has deep familial ties as businesses and art. The study, including interviews with experienced artisans, found an interesting perception of traditional industries among the craftspeople. They were doubtful that their craft could 'recover' to become an integral part of the economy, and deemed the efforts that focused on history and culture to lack confidence in their craft's base economic viability. The efforts of the government and cultural activists were inevitably met with indifference or outright hostility from the artisans (Moon et al., 2020).

The techniques and technologies related to the indigo industry, especially ones rooted in tradition, are at risk of fading away. A lack of proper documentation and a decline in younger generations entering the industry means that preserving the craft is increasingly difficult. Young people are not attracted to the industry for a variety of reasons, such as the craft's difficulty. Traditional indigo farming, processing, and dyeing are each an arduous task, requiring vast amounts of time and effort to simply begin learning. If one dedicates themselves to learning the craft, it is possible to cultivate indigo plants and create indigo dye, albeit in small amounts (Greenberg, n.d). However, becoming a true indigo craftsman within Japan and entering the Japanese indigo industry requires even further dedication. Because family businesses are so prevalent, one would need to approach artisans willing to teach them the craft in the first place. Further, the resources and documentation are insufficient, so educating new generations of craftspeople becomes increasingly difficult if mentors even take on apprentices at all. Additionally, knowledge of the industry as a whole is lacking. It is possible for artisans to work with indigo to live and work mere kilometers from a fellow indigo artisan or retailer

without knowing of them (Hergueta, 2022). Finally, natural indigo is no longer a core economy within Japan. Compared to synthetic dyes, the aspects in which it is preferable, such as artisanry and cultural significance, more comfortably serve a smaller portion of the capitalistic economy. If there is little demand or desire for natural indigo dye, entering the industry is not an economically attractive notion in the first place.

The traditional indigo industry serves to diversify the economy of Japan, especially Kyoto. A diverse economy, where a more inclusive series of elements that can sustain livelihoods are incorporated in order to promote a healthy economic environment, is a crucial concept to consider when discussing these traditional crafts. As a creative and culturally relevant traditional craft, *aizome* neatly fits this description. Regardless of the economic viability of the products themselves, the craft can create a presence in places it is present, such as Kyoto, bringing in other forms of economic benefit. Tourism is one such example of the economic benefits the craft can introduce without itself being commodified. However, it would also be prudent to garner the ideas of artisans who do depend on their craft. The craft has the potential of being integral in a flourishing diverse economy in Kyoto, but its economic viability is not the only aspect to be accounted for. On the matter of the craft's decline in participation, it is important to consider how the craft can be preserved moving forward.

## 2.4 Overview

In exploring the world of traditional indigo, we find an important, culturally prevalent practice that has persisted for centuries, and still persists to this day. And yet, due to the development of synthetic dyes, reduced demand for artisanal indigo products, and decreasing interest in formally entering the craft, we find that same practice's current existence in jeopardy. Moving forward, we aim to investigate the craft further. For the people who work with natural indigo in the Kyoto area, what does the craft mean? Might they have insight into why new people do not pursue the craft? What do people not involved in the craft think of it? We hope to understand the craft through connecting with people involved in the indigo dyeing community.

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# METHODOLOGY

CHAPTER THREE



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*Indigo threads being dyed at Watanabe's studio*

## 3.0 Methodology

### 3.1 Purpose & Scope

The purpose of our research is to understand the historical prevalence, cultural value, and social significance of traditional indigo dyeing in Kyoto, Japan. Utilizing this information, we then aim to identify potential opportunities for the craft to remain viable. Towards this purpose, we have identified the following goals which our project aims to achieve:

1. Understand the Social, Economic, & Political Impact of Traditional Indigo Craft
2. Explore Reasons for Decreased Involvement
3. Preserve Traditional Indigo Dyeing Techniques
4. Map the Indigo Craft in Kyoto
5. Identify Indigo Craft Viability

Each of the above objectives delineated in further detail below.

The scope of our project includes communities within the Kyoto, Japan area currently affected by and involved in traditional indigo dyeing, as well as those which may be affected in the future. This includes but is not limited to: those participating in indigo cultivation, refinement, dyeing, selling, preservation, current art students, professional indigo artisans, and amateur/hobbyist indigo artisans. Among the aforementioned groups, we will mainly focus on those directly involved in indigo dyeing such as current artisans, whether professional or amateur.

## 3.2 Objectives

### 3.2.1 Objective 1: Understand the Social, Economic, & Political Impact of Traditional Indigo Craft

**We sought to gain a holistic understanding of social, economic, and political impact the traditional indigo dye craft has historically held as well as currently holds in the modern day.** This information acted as the cultural framework to contextualize our further research, interactions with locals in Kyoto, and the results of our project.

We gained an understanding of such complexities through researching documentation about how traditional crafts, such as indigo dyeing, have historically been viewed. We also conducted interviews with students attending local art universities and practicing artisans in Kyoto. This provided perspectives from those who may be interested in the arts in general, but not indigo in particular, as well as those who are deeply involved in indigo craft. See Appendix E for the list of locations we visited for interviews. Questions utilized for art student and indigo artisan questions may be viewed in Appendices E and A, respectively.

Gaining our information through a combination of research and interviews gives us a broader, fuller sense of the genuine impact indigo craft has. Research provides a distanced, academic perspective on the impact indigo craft has. Meanwhile, interviews allow for a closer, personal understanding of how locals relate to the craft.

### 3.2.2 Objective 2: Explore Reasons for Decreased Involvement

Traditional crafts, including the traditional indigo dye industry, have seen a decline in interest and involvement. **We sought to understand the degree to which this decline is occurring, the reasoning behind the reduction in interest, and how it is affecting the craft as a whole.** In doing so, we considered this issue both from the perspective of people directly involved in the indigo dye community as well as those outside of it. With this information, we worked to develop suggestions for potential areas for improving long-term viability and engagement of the craft.

Our primary method for gathering information was through interviews. We interviewed younger generations (aged approximately 20 to 40) including both the general population as well as art students and apprentices. For the purposes of interviewing members of the general public, we asked for voluntary participants in public areas. This presented certain challenges as detailed in “Problems, Challenges, and Limitations”. See Appendix E and Appendix C for the list of locations visited for interviews and interview questions, respectively.

Through these interviews, we gauged reasons for interest, or lack thereof, in engaging with traditional indigo dyeing. In interviewing the general public and art students, we aimed to ascertain the current levels of awareness of the craft as well as gain an understanding of popular attitudes towards the craft. How do those uninvolved in indigo dyeing perceive the work required to become an artisan and what is their level of interest in learning about the craft? Data resulting from such questions as well as those outlined in Appendices C and E informed our efforts for identifying opportunities to increase general interest in indigo dyeing.

In addition to interviews with members of the general populous and art students, we interviewed indigo artisans. Through interviewing artisans, we hoped to understand their perspective on the subject of decreased engagement in traditional indigo dyeing. Do artisans want to increase engagement, have they potentially implemented any strategies to increase engagement already, and do they have any ideas for future methods to utilize towards this end? We sought to understand indigo artisans' perspectives on these topics and others delineated in Appendix A. Artisans' perspectives provided a general context and direction to our later efforts to identify opportunities for improvement as well as serve to inform the feasibility of our suggestions. If an opportunity we identified to increase engagement in indigo dyeing is predicated on artisans' involvement, knowing how much effort they are potentially willing to contribute provided a sense of whether the solution is practical.

### 3.2.3 Objective 3: Preserve Traditional Indigo Techniques

**We aimed to assess and increase the current level of preservation of traditional indigo dyeing techniques.** This is because the art of indigo dyeing is culturally, historically, and socially important to Japanese craft and the continuation of valued traditions. Knowledge of the craft should not be entirely dependent on fluctuating levels of interest in the craft, rather it should be preserved so the art form remains accessible to all and so knowledge cultivated over centuries is not eventually lost.

To assess the current level of preservation, we visited current *aizome* studios to gauge how the artisans regard preservation of their craft. Have they implemented any documentation of their techniques and how did they initially become involved in indigo dyeing? We asked such questions in addition to others denoted in Appendix A and we visited studios outlined in Appendix E. We also participated in opportunities we have identified around Kyoto to engage in *aizome* learning workshops targeted at beginners and tourists listed in Appendix E. Further, we visited art museums and interviewed art preservationists to determine the level of documentation related to *aizome* techniques as outlined in Appendix B.

Next, we utilized the gathered information to identify opportunities for improving the level of preservation for *aizome* craft. In doing this, we took into account artisans' and preservationists'

preferences, and we created a maintenance plan so that if potential suggestions are executed, they remain updated.

Our methodology for gathering information allows for freedom to speak with those most closely involved and affected by the preservation of *aizome*, that being the artisans and the art preservationists. While it is important to consider the practicalities of potential solutions, it is also imperative to understand and consider both of their perspectives on the issue. Our method for gathering information allows for a holistic approach to this objective.

### 3.2.4 Objective 4: Map the Indigo Craft in Kyoto

**Currently, there is no central database for those involved in indigo dyeing in Kyoto, Japan. We sought to rectify this as providing a database would enhance accessibility to information regarding farms, artisans, and retailers involved in the craft.** This benefits artisans within the craft and provides a convenient means for students, tourists, and others interested in indigo dyeing to locate nearby participants in indigo dye. In addition, it may allow for greater collaboration within the industry as the map connects artisans with nearby counterparts that they might not have been aware of previously.

To collect enough information to create a holistic map of the indigo craft scene in Kyoto, dozens of visits and interviews must be conducted to learn as much as possible about the locale. Important data we gathered includes vital details such as the physical address, contact information, production scale, and other pertinent information depending on whether it is a farm, artisan, or retailer. A short individualized description of the facility was also noted, in addition to its potential historical significance. We also included indigo dyers which do not practice professionally, but who nonetheless contribute to the craft. Doing so presented certain challenges as further detailed in “Problems, Challenges, and Limitations”. Information included in the database may be viewed in Appendix E. This information was kept in a spreadsheet and eventually transferred to an interactive map which was published to a website. Through collaborating with our project sponsor, we created a maintenance plan to keep the information as accurate and relevant as possible. Prior to publication, we shared the collected information with the respective business or individual to ensure accurate representation of their craft. It was required for us to be given their explicit consent to share their information publicly before publishing the map.

This method allows us to best help those within the industry while also allowing for each individual or business to feel represented if they so choose. By having an individualized approach to each party such as an interview or visit, we were able to make sure all of the information we collected was accurate and best described their facilities. In order to avoid any conflicts and ethical issues, sending our information back for review allowed for edits to be made thus giving artisans, farmers, and



storekeepers an active say in how their data was reported. Finally, by ensuring we had their consent to release their information, we avoided conflict that might have arisen from a party wishing to remain private. Further details regarding ethical considerations may be viewed in “Ethical Considerations”.

### 3.2.5 Objective 5: Amplifying *Aizome* in Kyoto

With the resulting data collected from the methods detailed in Objectives 1 through 4, **we intend to identify opportunities for traditional indigo dyeing to remain viable. Based on our findings, this “viability” may take various forms including, but not limited to, aiming to increase involvement, profitability, and longevity of the craft.** The final form this “viability” takes will ultimately be shaped by opportunity and practicality. Results from Objective #1 will lay the contextual groundwork for our work while results from Objectives 2, 3, & 4 will provide data we will analyze to identify feasible opportunities for increasing viability.

Potential suggestions include setting up collaboration between indigo artisans and local art universities to provide an opportunity to learn about and try the craft. This could take the form of a pseudo-internship or inroads into apprenticeships. Another option might be to encourage more indigo-related events such as art exhibits to increase the general populace’s awareness of indigo dyeing as an activity they may want to pursue. As of now, we as a group have engaged with the indigo dyeing scene through commercial artisan shops, novelty shops that carry a limited selection of *aizome* products alongside the name of the artisan, as well as attended an exhibition by Riku Matsuzaki, a ‘*kyoai*’ artisan, in Hanazono. Our suggestions have largely been informed by such experiences, as well as data obtained through various interviews.



Figure 9: From left to right: Jennifer Teeter, Riku Matsuzaki, and Jillian Burns discussing indigo in Kyoto

### 3.3 Ethical Considerations

To address potential ethical issues in using human subjects to conduct interviews and/or surveys, we completed an IRB form and adhered to the agreements laid out therein. All interviews and recordings were done on a voluntary basis. Interviewees were made aware of their rights including but not limited to ending the interview at any time, requesting anonymity, and requesting a copy of any recordings made.

### 3.4 Problems, Challenges, and Limitations

Challenges that arose during the course of our research include the following:

1. **Understanding the intangible aspects of why an individual may choose to enter a rigorous field that may not be monetarily profitable.**
  - a. It is important to acknowledge that our project group members consist of individuals who have studied and developed in a Westernized country which broadly places an emphasis on promoting capitalism. This presents ideological dissonance as emphasizing profitability as a common motivator is likely to be at odds with the reasons why many individuals choose to pursue traditional crafts such as *aizome*.

- b. To minimize this challenge, we focused our outlook and understanding of value through research and interacting with artisans in Kyoto, Japan to genuinely understand their perspective.
- 2. Including individual and/or amateur indigo dyers in our research and analysis.**
- a. It is imperative to acknowledge those who are not necessarily professional indigo dyers, but who nonetheless practice the craft in an amateur and/or personal sense. Anecdotally, there is potentially a large but dispersed and relatively unconnected community of amateur indigo artisans who are essential to the modern day narrative of traditional indigo dyeing. While there is a demonstrated decline in professional involvement in traditional indigo dyeing, is this a pervasive trend, or perhaps is this interest simply more distributed among such amateur dyers? Moreover, since amateur indigo dyers play an essential role in carrying the practical knowledge of the traditional craft forward, can this be optimized or otherwise enhanced? Is diffusion of involvement in indigo dyeing simply an inevitable, but ultimately beneficial product of a continually industrializing, modernizing world? Answers to these questions, while incredibly valuable to our research, present a challenge in understanding due to the inherently diffuse and disconnected nature of this amateur dyeing community.
  - b. To minimize the effects of this challenge, we endeavored to seek additional contacts when possible from existing, identified artisans and members involved in indigo dyeing. Moreover, we aim to keep our map discussed in Objective #4 open to further additions as, in the future, more individuals who are on the outskirts of the craft can be included and become more connected with the community.
- 3. Finding quantitative research related to our project.**
- a. Discovering sources for quantifying the level of current engagement in traditional crafts as well as how involvement has decreased over time presents a challenge for supporting anecdotally made assertions. A similar issue arose with finding data on profitability of the craft.
  - b. This issue was minimized through using more qualitative data to support our assertions as well as continual research into potential avenues to find qualitative data.
- 4. Language barrier.**
- a. Much of our research is predicated on interviews with locals in Kyoto, Japan; however, our project team members do not speak their native language. This presents a language barrier which may cause a loss of nuance and/ or meaning.
  - b. To minimize this issue, we took recordings of interviews when able, used the live electronic translator DeepL, and translated our pre-prepared interview questions with

the help of individuals fluent in Japanese. In addition, we also sought help from Professor Teeter and one of her students, Tiger.

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# ANALYSIS & FINDINGS

CHAPTER FOUR



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*A shibori textile at the Kyoto Shibori Museum*

## 4.0 Analysis and Findings

### 4.1 Interview Summation

To gain an in-depth understanding of indigo dyeing within and around Kyoto, we conducted interviews with artisans, students, farmers, and others in accordance with our methodology as detailed in Section 3.0. The following is a summation and analysis of our findings from those interviews. For the purposes of this paper, “indigo dyeing practitioners” includes individuals and/or groups that are continually indigo dyeing, whether in a professional capacity or not and whether they are considered artisans, apprentices, hobbyists, or something in between. Due to the inherently diverse nature of indigo dye practitioners’ beliefs, we will avoid making broad generalizations where inappropriate to do so, and our suggestions section will aim to consider the totality of opinions. A summarizing table of indigo dyeing practitioners we interviewed can be seen below in Table 1.

**Table 1**

<b>Seika University Art Students*</b> <i>Various majors</i>	
<b>Quotes</b>	<p>“I feel good when I’m drawing and creating something new and then it may make someone happy. I think that is the most important”</p> <p>“Dreams are important, but I thought I couldn’t live without money”</p>
<b>Overview</b>	<p>After interviewing seven students at Kyoto Seika University we learned that interest in indigo dyeing was high but generally they were not aware of the art form, nor have they engaged in the indigo community in any form. However, the students did share their motivations for pursuing a career in the arts. Each interviewee unanimously expressed that the paramount aspect for them was creating art that brought joy to others. Regrettably, a few students opted for more conventionally lucrative majors because they believed that earning a sustainable income with their preferred degree would prove too challenging.</p>
<b>Riku Matsuzaki*</b> <i>Aizome artisan</i>	
<b>Quotes</b>	<p>“I don’t get frustrated by indigo because nature can’t be controlled. That’s what makes it fun.”</p> <p>“Tradition alone is not enough, we must create works of art to leave a lasting legacy in</p>

	history”
<b>Overview</b>	<p>Riku Matsuzaki is a master indigo dyer who is trying to revive the lost “Kyoto Indigo” from the Taisho era. Using texts from more than 300 years ago, he aims to create the most natural and true form of “Kyoto Indigo” on the market. Matsuzaki is hopeful about the outlook of indigo and hopes for more people to reconnect with the basics of fermentation with water, wood ash, and homegrown indigo.</p> <p>Matsuzaki focused on the natural and sustainable benefits of indigo and spoke extensively on preserving the traditional methods, especially that of ‘Kyoto indigo.’ He is hopeful about the future for indigo dyeing by describing himself as “crazy” due to him deciding to pursue a career with few financial guarantees.</p>
<b>Kenta Watanabe</b> <i>Aizome artisan</i>	
<b>Quotes</b>	<p>“I believed in it, indigo dyeing is so nice I needed to pass it on to the next generation”</p> <p>“I make this indigo, I make this color, I made it! I made it! It’s very human and fulfilling.”</p>
<b>Overview</b>	<p>Kenta Watanabe is a master indigo dyer who runs a successful sixth-sector industry studio. With his small team he continuously innovates on the indigo dyeing process from selective breeding of indigo plants to creating a novel method to dry indigo leaves after harvest. Watanabe pursued a career in <i>Aizome</i> after becoming struck by its beauty and hopes to spread indigo to more people.</p> <p>Watanabe explained that innovating and finding new, more efficient ways of dyeing with indigo would allow for the practice to spread. He demonstrated some of these innovations, such as a drying wheel that would expedite the drying process of the indigo leaves, as well as his future plans to modify a corn combine harvester to harvest, shred, and separate the leaves from the stems. He also expressed that he sees growth within the indigo industry and is teaching his children the practice.</p>
<b>Dante Betsch</b> <i>Aizome apprentice</i>	
<b>Overview</b>	<p>Dante Betsch is from New Mexico and decided to undertake a two year apprenticeship under Watanabe. He has been learning about Aizome and hopes to eventually bring his knowledge of the historic craft back to the United States.</p>
<b>Masataka Izawa</b>	

<i>Owner of indigo brands</i>	
<b>Quotes</b>	<p>“When I tell people that I make skin and hair care products with indigo, many people are surprised since many people don’t think of it like that. If I have a farm and factory in Tokushima, I can make jobs and jobs are what encourage people to move. I can provide a local need for workers.”</p> <p>“It [indigo] makes a more simple, natural lifestyle and I think that way is very natural and feels more comfortable. We are not going back, we are going forward.”</p>
<b>Overview</b>	<p>Masataka Izawa is a photographer and indigo culture developer who owns various brands all with the aim to spread indigo use and involvement. Using research, he creates sustainable products relating to food, art, and cosmetics.</p> <p>He concerns himself with the lost balance between innovation and nature, and hopes for a reintegration of nature into modern society to restore that balance. His products place a focus on using natural ingredients, while still innovating to find new ways to spread a variety of products. One concern he expressed was another imbalance, that of indigo dyers and farmers. He sees many indigo dyers in the modern scene, but relatively few farmers.</p>
<b>Jennifer Teeter</b> <i>Aizome hobbyist</i>	
<b>Quotes</b>	<p>“I feel very liberated doing indigo dyeing as I don’t identify as an artist and I get worried that I’m not doing things right... And I actually do it and it’s a release of all that perfectionism that has been hammered into my mind.”</p> <p>“For me, it’s really valuable to have it as part of my life.”</p>
<b>Overview</b>	<p>Jennifer Teeter is a lecturer at Seika University and engages in various mediums of art such as music, dance, and indigo art. She has experienced the magic of indigo through tending to her own vat and would love to spread awareness about indigo and help artisans connect with each other.</p>
<b>Kayoko Yoshikawa*</b> <i>Aizome artisan</i>	
<b>Quotes</b>	<p>“I can pass on the dreams and techniques of my father to the next generation. I can be the bridge between reality and my fathers grand dream. I don’t consider myself an indigo dyer, but rather a person who manages the workshop and allows people to come and use the indigo dyeing workshop.”</p>



	<p>“There’s not many people who dive into indigo. But there are some people in universities who work with clothing who become interested in indigo, but for them it’s more of a step towards their own goals.”</p>
<b>Overview</b>	<p>Kayoko Yoshikawa is a second generation indigo dyer based in Kameoka. She imports and grows her indigo to offer two different indigo dyeing techniques, one native to Okinawa and the other native to Kyoto. She hopes to build a community around indigo and foster widespread awareness of indigo.</p>
<p><b>Melanie Mano</b> <i>Aizome and shibori artisan</i></p>	
<b>Quotes</b>	<p>“I’m teaching them [her students] the connection they can have with nature, the connection they can have with plants, and how they can cultivate that and how that can become part of their lives.”</p>
<b>Overview</b>	<p>Melanie Mano, a skilled French indigo artisan, meticulously cultivates her own indigo plants, crafts sukumo, and <i>shibori</i> in her personal studio, which she operates independently. She loves sharing her craft and is aiming for her studio to be a communal space where everyone can enjoy the art of indigo dyeing with an emphasis on connecting with nature.</p> <p>Melanie Mano was initially drawn to begin indigo dyeing because she appreciated the closeness to nature that growing indigo provides. She loved that she was able to create her own intricate designed garments by herself and then share it with the world. Mano explained that her favorite moment with indigo was at a market where she was able to teach a young girl whose</p>
<p><b>Gergerly Péter Barna</b> <i>Indigo Researcher</i></p>	
<b>Overview</b>	<p>Gergerly Péter Barna is a Hungarian Design Researcher in Residence at KYOTO Design Lab, Kyoto Institute of Technology. His focus is on traditional Japanese architecture, but he also contributed to founding the organization Circular Kyoto, a social movement org. This org sometimes holds indigo dyeing workshops, and he himself has dyed with natural pigment since childhood. He is dedicated to understanding ‘dynamic heritage’ and preserving heritage.</p>
<p><b>Naoko Omae</b> <i>Aizome artisan</i></p>	

<b>Quotes</b>	<p>“Natural indigo is a living form and you have to build a relationship. Do not try to control, you have to listen, or you have to actually taste, feel, use your senses in order to get to know indigo. Do not think that you can understand indigo quickly. It takes time, vat after vat. You can build a relationship. It’s kind of like people. Friendship, marriage, having a child.”</p> <p>“Believing in yourself is the hardest, I think. Because I want to live my life as an artist. Artist means I want to create, I want to do craftsmanship. I love hand-work. So, I chose to become an artist because that’s what I love to do. So I am going to stick with it.”</p>
<b>Overview</b>	<p>Naoko Omae initially studied fine arts and textiles in San Francisco. While there, she continually was attracted to the deep blues of indigo dyes. Approximately 16 years ago, she learned from indigo dye master Hiroyuki Shindo who runs the Little Indigo Museum.</p> <p>Naoko’s indigo dyeing uses only all natural materials and she has a strong sense of connection with nature. When asked about what advice she would give to someone trying to begin indigo dyeing, she indicated that <i>aizome</i> is all about cultivating a relationship with the dye, rather than trying to control it.</p>
<p><b>Yoneda Kyoko*</b> <i>Aizome artisan</i></p>	
<b>Quotes</b>	<p>“She is from Matsuzaka city originally so she has been hearing about cotton and <i>ai</i> her whole life and she had never really looked into it. She had already been making clothing and since she had already been making clothing she thought she would try that as well. She has many different people but none knew much about it at the time. She has visited different workshops and talked to people who can tell her stories and she is buying some old <i>aizome</i> things and learning from that as well.” -Yoneda Kyoto Translated</p>
<b>Overview</b>	<p>Yoneda Kyoko is based in Kameyama, Mie in her studio Jikonka, where she makes tea and dyes with indigo. With a focus on tradition, her natural indigo dyed clothing takes the meaning of past practice, with the ideas of health and beauty intertwined.</p>

Note: Artisans with asterisks (\*) are quoted using english translations performed using Google Translate, DeepL, and/or a human translator and thus may not fully capture the original nuance and/or intent of statements made.

## 4.2 Students' Perspectives

We interviewed various Seika University students, many of whom were studying the arts. We wanted to identify how familiar they were with *aizome* and their thoughts on arts and crafts in general.

Most of the students, though aware of *aizome*, had not engaged with it. They didn't own naturally dyed indigo products nor had they ever participated in indigo dyeing workshops. However, they expressed that they would be interested in trying it. They simply didn't know such opportunities existed or where to seek them out.

In regard to their outlook on arts and crafts in general, most viewed art as positive. One of the students expressed that, “[He] think[s] art is a gift. Everyone has something in them to produce art. Back where [he is] from in Africa, drawing is considered something worthless people do. Despite this, [his] teacher saw [him] drawing portraits and encouraged [him] to study art abroad. [He's] currently trying to get [his] doctorate in drawing.” Many of the students shared similar sentiments towards art and said their motivation for pursuing degrees within the arts was to make others happy with what they create.

While the students saw the inherent value of art, they were also open about acknowledging difficulties that come with pursuing a career within the arts. . One student in particular who switched his major away from art said that, “Dreams are important, but [he] thought [he] couldn't live without money.” Despite this, many still chose to pursue degrees in arts whether because it was a dream of theirs or simply to make others happy.

## 4.3 Current State of the Indigo Dyeing Scene

There is no singular, definitive outlook on indigo dyeing that current practitioners all share. Some believe the future of indigo dyeing is bright and that continual innovations will allow the practice to remain not only accessible, but also profitable, such as Kenta Watanabe. Others believe that the practice is dwindling and that there is little profitability to be found, such as Yoneda Kyoko. Some place an emphasis on what they consider to be genuinely authentic, traditional dyeing, while others actively seek experimentation with new methods of dyeing. Many display varying degrees of willingness to share their knowledge of indigo dyeing with others.

Though there was much variety in our interview results, a commonality between many indigo artisans was the belief that *aizome* is an inherently living art. Rather than seeing the challenges using natural indigo dye presents as an obstacle to their success, they often described the indigo as something akin to a living human being and saw the variable nature of the medium as a positive quality. For instance, artisan Riku Matsuzaki described that “the color [of the indigo dye] is different every day

depending on how well the indigo is fermenting. (...) It is variable just like humans. [But, he] doesn't get frustrated because nature can't be controlled." (Matsuzaki). Rather than seeing indigo's variable nature as a frustration, many artisans regard it as simply inherent to the nature of indigo and fundamental to indigo's uniqueness.

Almost every artist had different motivations for practicing indigo dyeing. For instance, artisan Melanie Mano appreciated the closeness to nature that cultivating indigo and dyeing with it provides. Meanwhile, Riku Matsuzaki became interested in indigo dyeing due to its traditional history connected with where he is from and its potential for revitalization. Others were motivated by familial legacy to continue indigo dyeing practice, such as Kayoko Yoshikawa. In contrast, Jennifer Teeter, was initially attracted to begin indigo dyeing due to its intricate history with matters of social justice related to colonialism and labor. Each individual had differing motivations for becoming involved with indigo dyeing.

Most, though not all, indigo artisans thought that the future of *aizome* was positive. Artisans such as Kenta Watanabe see the future of indigo dyeing being carried forward through continual progress and technological innovation such as the one shown below in Figure 7 which have the potential to greatly increase production capabilities.



Figure 10: A large-scale wheel whose design was inspired by coffee bean rotary driers. This machine has the potential to reduce significant labor in drying and sifting through indigo leaves entirely manually.

In regard to spreading knowledge of indigo dyeing, almost all artisans we interviewed indicated that they would be willing to take on apprentices and teach others about indigo dyeing if people express a willingness and determination. Some currently had apprentices or had taken them on in the past. For instance, Dante Betsch is currently in the midst of his 2-3 year apprenticeship with artisan Kenta Watanabe. Not only this, but an artisan under the employ of Kenta Watanabe, Kato, is working on indigo dyeing starter kits which can act as a jumping point for those seeking to try indigo dyeing on their own time.

Though of course only a taster of indigo dyeing, nearly every artisan we interviewed also offers some kind of small indigo dyeing experience that members of the general public can participate in. Our project group participated in 3 different indigo dye workshops as shown below in Figures 8, 9, and 10.



Figure 11: Ziyad Ali (left) and Tanisha Mitra (right) participating in an indigo dyeing experience at Kenta Watanabe's workshop.



Figure 12: (From foreground to background) Francesco Di Mise, Jillian Burns, and Tanisha Mitra participating in an indigo dyeing experience with Kayoko Yoshikawa at her workshop.





Figure 13: (left to right) Ziyad Ali, Mayumi, and Francesco Di Mise participating in an indigo dyeing experience with Yoneda Kyoko.

Through these indigo dyeing experiences, we were able to experience how a member of the general public might be able to engage with indigo dyeing in a recreational way. All of the artisans continually gave information about indigo dyeing throughout the process, thus making it both a fun and educational experience. Some of the artisans also gave options for customizability through using *shibori* techniques that involved binding the fabric to prevent indigo dye from contacting certain sections, thus creating unique designs.

During the course of the interviews, many artisans mentioned they do not necessarily see indigo dyeing as a profitable pursuit; however, this was not a strong deterrent for them to continue practicing. This lack of emphasis on profit is in many ways contrary to the common capitalist framework; however, many artisans shared the sentiment. Their belief is beautifully and perhaps best expressed through artisan Naoko Omae's statement that, "Just to make a living as an artist is difficult. No matter what you decide. Painter or dyer or drawer or sculptor, potter, musician anything. It's not just an artist. Any job, I think, has some hardship. It's really difficult. Because everybody is different. How they start, how they walk, how they go on. Some artists may have gotten big help from their parents or sponsors or getting money to start their business or they're good at promoting themselves

and that's important. (...) Believing in yourself is the hardest, I think. Because I want to live my life as an artist. Being an artist means I want to create, I want to do craftsmanship. I love hand-work. So, I chose to become an artist because that's what I love to do. So I am going to stick with it. I tried other things to make a living like English teacher or waitress or some business, but I don't love that. I do that for the money. But I don't want to waste my life doing something I don't like and not being able to create. So, I chose the hard way because I want to do what I love to do”.

As previously stated, many indigo artisans have varied personal motivations for practicing the craft and many agree that indigo is not necessarily a profitable pursuit. However, many nonetheless see the future of *aizome* as positive and are continually working to share their knowledge with others. The “success” or otherwise of the indigo scene should not, and perhaps simply cannot, be measured by monetary profitability alone. In some sense, the “success” of the indigo scene may not be able to be measured at all. Afterall, what is “success” for a traditional craft that is millennia old?

## 4.4 Strengths & Weaknesses of the Indigo Dyeing Scene

Based on our interviews as delineated in Section 4.1, we have identified the following strengths and weaknesses of the current state of the indigo dyeing scene within and around Kyoto, Japan.

### 4.4.1 Strengths

Some of the strengths we identified of the current state of the indigo dyeing scene are delineated as follows:

1. **Cultural Significance:** As a craft that has been practiced for millenia, indigo dyeing in Japan holds deep cultural meaning. From its original practical uses to the reverence towards its beauty, indigo has preserved as a major cultural practice. Tokushima, for example, is well known for its indigo, being the largest producer of indigo and *sukumo* in Japan. Riku Matsuzaki, meanwhile, emphasizes the importance of Kyoto indigo which was an extremely prevalent part of his hometown's culture more than a century ago. Indigo has been a gift for emperors, a color of the nobility, and a color of the common folk in Japan's history, and continues to move forward in a modernizing world.
2. **Variety:** As previously stated, there is a high variance in how the artisans practice their craft. Though perhaps unobvious as a strength, this variance allows for numerous methods of marketing and practicing indigo. In some sense, it also allows for less saturation of the artisanal



indigo market as, though each is providing some sort of indigo dye-related product, each also is unique in some way.

3. **Age:** There is a general narrative that those practicing traditional crafts are of an elder generation that is slowly declining as time passes. While the majority of the artisans we interviewed were over the age of 30, others were younger in their mid to late 20's and exhibited high motivation to continue the practice of indigo dyeing. Having a combination of elder and younger artisans entering a field can provide new perspectives while keeping the practice of indigo dyeing grounded in traditions.
4. **Collaboration:** Many artisans expressed a willingness to collaborate with other artists or brands to combine their respective fields. For instance, some had collaborated with *shibori* artisans, shoe makers, and artisanal clothing manufacturers. In one such example, Kenta Watanabe collaborated with Allbirds, a sustainable footwear brand.
5. **Innovation:** Various artisans, farmers, and people involved with indigo have found innovation to be crucial in the continued prosperity of the craft. Kenta Watanabe is a leader in indigo cultivation innovation, developing such ideas as a dryer wheel to speed up and make the process of drying leaves more efficient, as well as the use of a modified combine harvester to instantly separate the leaves from the stems upon collection. Others, such as Izawa Mastaka, have developed innovations on the product side, creating greater variety; he creates cosmetics and soaps that use the indigo plant (especially the stems) to provide additional health benefits.
6. **Medical Use:** In the past, dyes were considered to have medicinal properties. Indigo dyed textiles especially were worn in order to provide health benefits. We now know that indigo dye has antimicrobial properties, in addition to being fire resistant and bug-repellent.
7. **Environmentally Friendly:** Every aspect of traditional indigo dyeing is all-natural. Kenta Watanabe, for example, does not even use pesticides or chemical fertilizers in his fields, using only spiders to repel pests and manure from a nearby pig farm. Creating *sukumo* is a natural fermentation process, and indigo vats use only *sukumo*, river water, wood ash, and another lye ingredient. This can include shell ash or mineral lime. Even when an indigo dye vat 'dies' and is dumped, there is no effect on the environment; it is sometimes even poured back onto the fields to promote growth.
8. **Sustainable:** Indigo dyeing only uses natural, renewable resources and causes no harm to the environment all the way from plant production to indigo vat. It also does not release any pollutants, even when disposed, and can be repurposed as a sort of natural fertilizer.

#### 4.4.2 Weaknesses

Some of the weaknesses we identified of the current state of the indigo dyeing scene are delineated as follows:

- 1. Connections & Contacts:** Many artisans were not connected with other indigo dye artists. Sometimes, they were aware of others, but either out of intimidation, hesitance, fear, nervousness, or embarrassment were unwilling to connect with fellow indigo artisans. And even further, many were willing to meet, but not work with other indigo artisans in order to preserve their own unique practices.
- 2. Publicity:** Many artisans have created blogs, social media accounts, or websites to promote their work. Even so, through interviewing students, we found that while many would, in theory, be open to trying out an indigo dyeing experience, none had done so. Many had not looked into it, nor did they have any notion of where exactly to search for such opportunities.
- 3. Financial Viability:** Though we did not ascertain particulars of the financial state of the indigo dyeing scene, many artisans expressed that there is little profit to be had in natural indigo dyeing. This may in part be explained by the prohibitive prices of indigo dyed garments due to the lack of economies of scale. It was noticed that larger studios were able to offer their products at lower prices.
- 4. Cost Prohibitive:** In general, there are high transition costs associated with beginning indigo dyeing. Many *sukumo* providers pre-decide who they will be selling their limited supply to, thus presenting a challenge to people potentially interested in beginning indigo dyeing. Those who want to
- 5. Labor and Time Intensive:** The process of harvesting and dyeing with indigo is a labor-intensive, multi-stage undertaking that doesn't have shortcuts. The entire process spans several labor intensive months from the initial planting to the first dyeing.
- 6. Supply:** Most farmers opt to not dedicate their fields to indigo cultivation; instead they choose to solely plant it during periods of rest for their fields when they temporarily shift away from more economically valuable crops. This lack of supply is exacerbated by the fact that there are many *Ai shi* (artisans) and not enough *sumeshi* (indigo farmers).

A LIVING COLOR

# RECOMMENDATIONS

CHAPTER FIVE



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*Riku Matsuzaki's dried indigo leaves*

## 5.0 Recommendations

Based on the strengths and weaknesses identified above, we have implemented the following. As this project is continued through future collaborations, these platforms will be maintained.

### 5.1 Website

We created a website to provide a platform to share the knowledge we have gained regarding indigo dyeing as well as the stories from the various artisans we have interviewed. This provides a user-friendly method of engaging with our project. Moreover, it also allows for future growth as the site is added on by future participants in this indigo dye research project. It includes a homepage with introductory information, an About Page which details the project and team, a Stories page documenting the interviews, a Map page with the map embedded and interactable, and a Gallery page showcasing the photos taken throughout the project

- a. The website can be found at: [www.japanaizome.wordpress.com](http://www.japanaizome.wordpress.com)

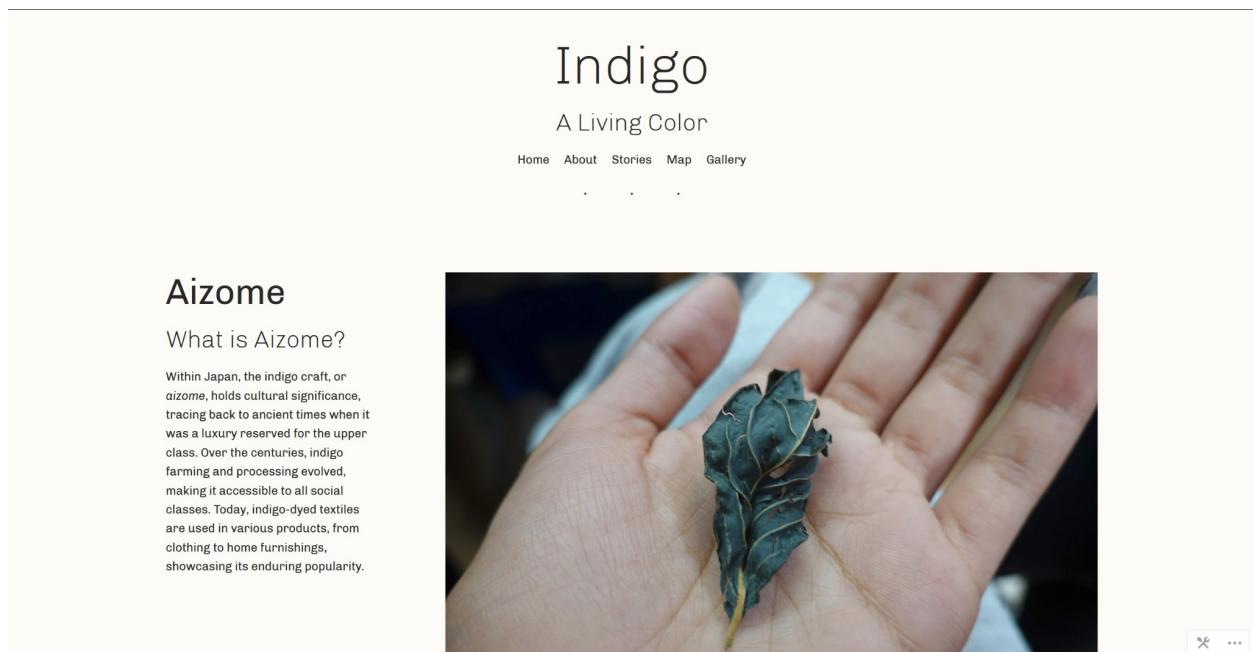


Figure 14: The homepage of the Japan *Aizome* website.

## 5.2 Map

To increase connectivity and awareness of other artisans with each other, we created an interactive map of spaces involved in indigo, including farms, dye houses, and shops. Access can be granted to future project groups.

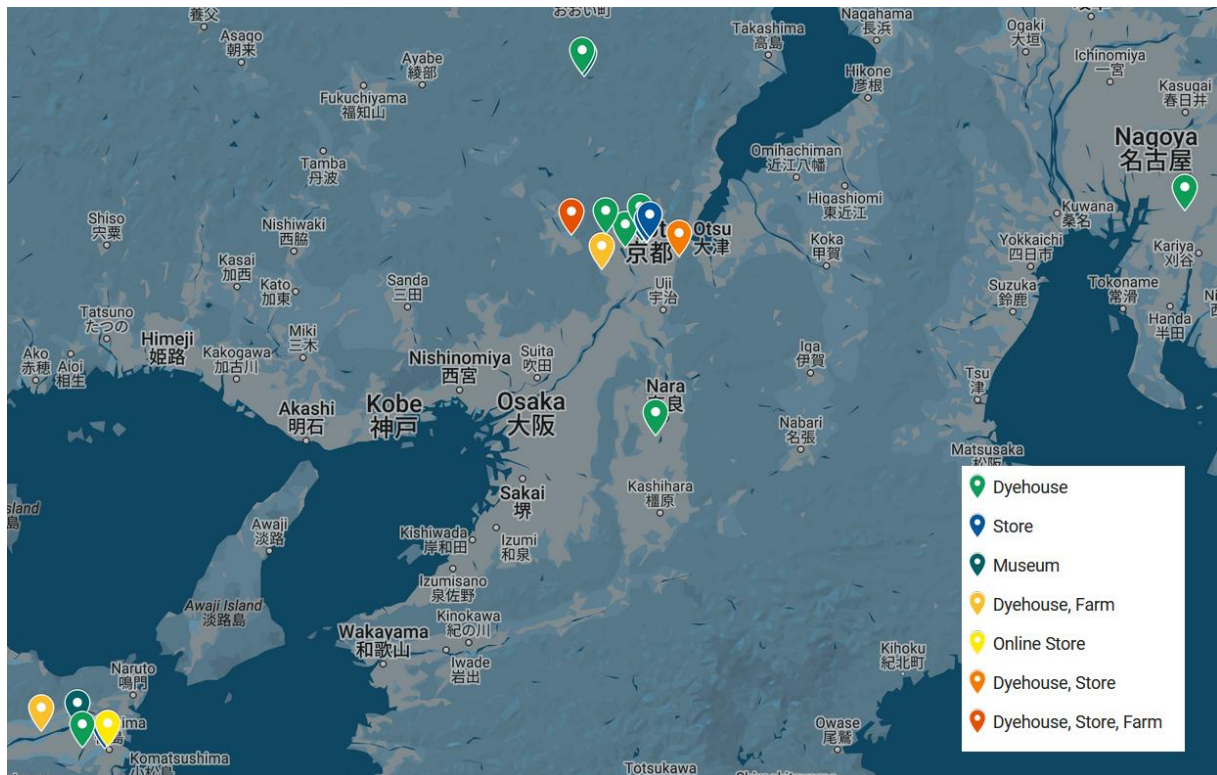


Figure 15: A color coded, interactive map of the indigo community near Kyoto

## 5.3 Social Media

We created an Instagram page and continually posted about our experiences and journey interviewing indigo dye artisans to provide a user-friendly experience. This page will act as a node in the growing social network of the indigo dyeing community. With this account we were able to make connections with other aizome artisans and curators. This account can also be passed on to future project groups.

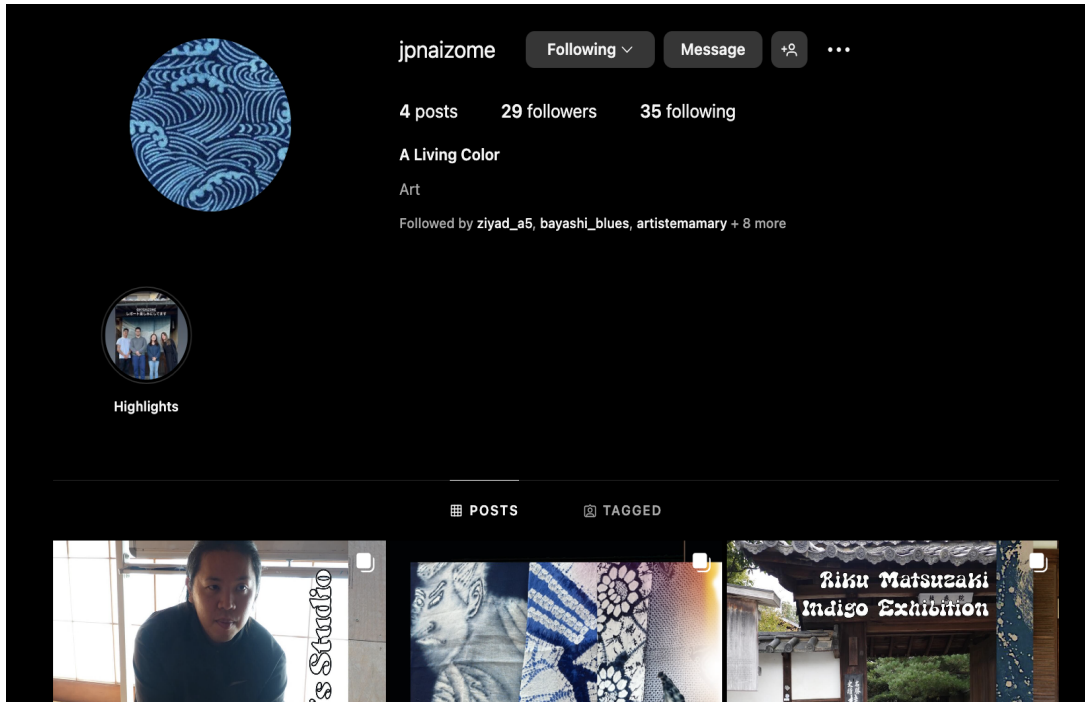


Figure 16: The Japan *Aizome* Instagram account

## 5.4 Limitations & Future Considerations

The following are some of the limitations our project had as well as some future considerations for others who may participate in similar indigo-dye related projects.

- 1. Selection Biases:** We were only able to interview individuals who we were aware of and who were then willing to speak with us. This definitionally resulted in us being unable to hear directly from those involved in indigo dyeing who were uninterested in speaking with outsiders. This may contribute to skewed perceptions. For instance, all indigo dye practitioners we spoke with were to some degree open to the idea of sharing their indigo dyeing knowledge and/or techniques with those dedicated enough to learn. However, there are many artisans who are not as open to making their ideas public whom we were unable to speak with, thus their opinions are not as represented in our findings.
- 2. Japanese Translation:** For some interviews, we were only able to use online translation resources rather than human interpreters, thus nuance was most likely lost. Moreover, as a future consideration, it would be beneficial to provide a Japanese translation of deliverables to interviewees and others.
- 3. Social Media Presence:** As a future consideration, it would be beneficial to continually grow our social media presence related to the indigo dyeing community. This would be beneficial on

numerous levels as it increases overall connectivity as well as spreads more knowledge about indigo dyeing.

4. **Website:** We utilized WordPress to create our website. This website should be maintained for the future to provide a dynamic platform. If needed, the materials within the website can be transferred to another platform for ease of use. Additionally, a custom domain may need to be purchased for permanence.
5. **Mapping:** Initially, we aimed to create a map using MapBox; however, it was incompatible with the free version of WordPress we intended to use. Finding a way to integrate MapBox would allow for a friendlier user interface as well as more aesthetic freedom.
6. **Further Contacts:** Though we met with a wide variety of people, contacting more would provide additional data and information. Farmers, as in those who only farm indigo plants and do not dye, should be sought after.
7. **Cultural Considerations:** There are many aspects of Japanese culture that should be respected in order to create close connections with contacts. For example, bringing gifts from home to present to people who accommodate one is an important aspect of Japanese culture.



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# CONCLUSION

CHAPTER SIX



A CONTEMPORARY EXPLORATION OF AIZOME IN JAPAN

*A textile being dyed at Kenta Watanabe's studio*



## 6.0 Conclusions

The overall goal of this project was to truly understand the current indigo community in and around the Kyoto area. Throughout our time in Japan, we have experienced, first-hand, the beauty of the art form, as well as gained a deeper understanding of the motivations that drive the countless artisans, apprentices, farmers, shopkeepers, and hobbyists to the craft. Some have stuck with *aizome* traditions while others continue to innovate at every step of the process, but all are rewarded with indigo's unparalleled properties and beauty.

There are numerous challenges inherent to understanding and preserving a historical and traditional craft such as *aizome*. We found on numerous occasions that monetary profitability was not a foremost concern for most artisans which runs contrary to the capitalist framework. How does one who has grown up in a capitalist society, where profit is directly correlated to success, reconcile this difference? Further, what does it mean to preserve a traditional craft? Numerous artisans are continually working to innovate, expand, and redefine what *aizome* means. Each story told, each journey every artisan has taken is an inextricable part of the narrative of *aizome*. So how is such a nuanced and ever-expanding narrative captured?

We are able to epitomize the traditional craft that counters our understanding of a capitalist society by listening and recording the winding journeys of various peoples regarding art and *aizome*. Several expressed the idea that there was little money to be made in indigo dyeing. In indigo farming, even less so. And yet, they persevere in order to keep the tradition alive out of dedication to the artistic, historical, and cultural significance.

It is also imperative to acknowledge the hundreds of hobbyists that embark on their own indigo journey. These dedicated individuals who delve into the intricate world of natural dyeing, contribute to a vibrant community that not only preserve the traditions of such an ancient craft, but also inspire newcomers and seasoned practitioners to discover the hidden magic of indigo dyeing.

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# APPENDICES



A LIVING COLOR: A CONTEMPORARY EXPLORATION  
OF AIZOME IN JAPAN

*Indigo dye vats at Kenta Watanabe's studio*

## 8.0 Appendices

### Appendix A: Indigo Dye Artisan Questions

1. How long have you been practicing indigo dyeing?
2. How did you initially learn about indigo dyeing? *Are the resources you used to enter the craft still available?*
  - a. What led you to become an artisan?
  - b. Have your reasons for being interested in indigo dyeing changed over the years? How so? *Essentially, what motivates you to practice the craft? Why indigo in particular over other types of dyeing?*
  - c. How has indigo craft changed over the years? *How do you think it will change in the future? How do you view this change (whether positively or negatively)?*
  - d. What makes indigo dyeing unique or special to you? *What makes it important to Japanese culture/history?*
  - e. Can you share any fond personal stories or anecdotes related to your experience as an indigo artisan?
  - f. Do you find indigo dyeing personally rewarding? *And why?*
3. Have you documented or preserved any of your *aizome* dyeing techniques?
  - a. If yes, how have you documented your techniques?
  - b. If not, why is this the case?
    - i. *If it is because of a lack of interest in documenting dyeing techniques, ask about why.*
  - c. *If we currently have ideas for how to go about increasing aizome dyeing technique preservation, we can run the ideas by the artisan and ask if they believe our proposed methods would be feasible. Potentially, we could also ascertain whether they would be willing to participate in our proposed solution should it require artisans' involvement.*
  - d. Are there any initiatives or projects aimed at promoting indigo dyeing that you are aware of?
4. Have you taken on an apprentice(s) for learning *aizome*?
  - a. If yes, what was your motivation for taking on an apprentice? What was the process for doing so, and how is the incoming artisan faring?



- b. If not, why? (*Determine if the lack of an apprentice is due to a scarcity of interest, indifference, or personal and/or practical reasons preventing taking one on.*)
  - c. *If appropriate, inquire about opportunities this artisan may know of for new artisans' engagement in learning aizome.*
- 5. How accessible do you think becoming an indigo artisan is to someone who has never tried the craft before?
- 6. Have you noticed any trends in the level of new artisans wanting to become indigo artisans?
  - a. If yes, why do you think those trends exist?
- 7. *If they personally sell their works*, what challenges or opportunities do you face in terms of marketing indigo-dye textiles products to a wider audience?
- 8. Our project group is interested in creating a website that will include information about various artisans and individuals involved in indigo dyeing. Would you be interested in being included in this website?
  - a. If so, would you be comfortable with your information such as your name, your workshop/studio's address, and some other contact information being displayed on a website?
  - b. Can you describe your operation in a few sentences?
  - c. What information would you like us to include on the website?

## Appendix B: Art Preservationist & Museum Curator Questions

1. How are methods & techniques related to traditional Japanese crafts currently, commonly preserved?
  - a. *Ascertain what methods the preservationist feels are most effective for preservation of craft knowledge.*
  - b. Have you seen any general trends in the level of interest in learning about traditional crafts?
2. What do you feel is the current level of preservation of *aizome* dyeing techniques?
  - a. *If they feel there is a low level of preservation: Do you have any suggestions for how to improve the level of preservation? Or conversely, if we have ideas for improvements to make, we can run them by the preservationist to see if they believe*

*it is feasible. Moreover, we can see whether the preservationist would potentially be willing to participate in our proposed solutions if it is reasonable.*

- b. If they feel there is a high level of preservation, ascertain why they feel this way. Additionally, does the level of preservation depend on the continued interest of younger generations in the craft?*
  - c. If it seems that they have an interest in indigo dyeing: what makes indigo dyeing special to you? What makes indigo dyeing important to Japanese heritage? What makes indigo dyeing distinct from other dyeing methods?*
3. Would you be comfortable with information about the museum being displayed on a website?
    - a. If they have any exhibits or items related to indigo dye, ask them to describe the exhibits in a few sentences.*
    - b. After discussing what information we plan to include (ie address, general overview information, images if allowed) Is there any additional information you would like us to include on the website?*

### Appendix C: Indigo Farmer Questions

1. How did you initially become involved in indigo farming? *What motivated you to pursue it as a profession? What makes indigo special to you?*
  - a. If they grow other plants besides indigo, how does the experience of cultivating indigo compare to growing other crops? Is it easier or more difficult? Is it more or less rewarding?*
2. Are there any traditional or indigenous farming practices you incorporate into your indigo cultivation?
  - a. If they use traditional techniques, do you face any challenges due to using more traditional farming techniques?*
3. Have you noticed any changes or trends in the demand for natural indigo dyes in recent years? If so, what do you attribute these changes to? *How do you view these trends? In a positive or negative light?*
4. Do you know where your product goes and what it is used for?
  - a. Do you collaborate with local artisans?*
5. Do you believe indigo farming plays a role in preserving Japanese traditions?

- a. *If yes, what role does it play in preserving Japanese heritage?*
- 6. Are there any initiatives or projects aimed at promoting indigo farming that you are aware of?
- 7. How do you see the future of indigo farming in Japan?
- 8. Can you share any fond personal stories or anecdotes related to your experience as an indigo farmer?
- 9. Would you be comfortable with information about your farm being displayed on a website? Information can include name, address, contact information, farm size, ect.
  - a. *If yes, can you describe your farm in a few sentences?*
  - b. What other information would you like us to include on the website?

#### Appendix D: Art Student/Fashion Designer Questions

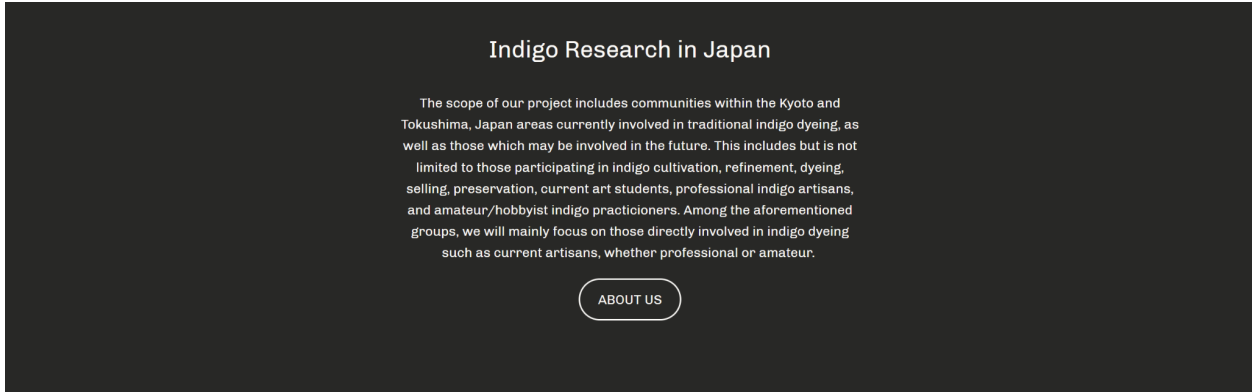
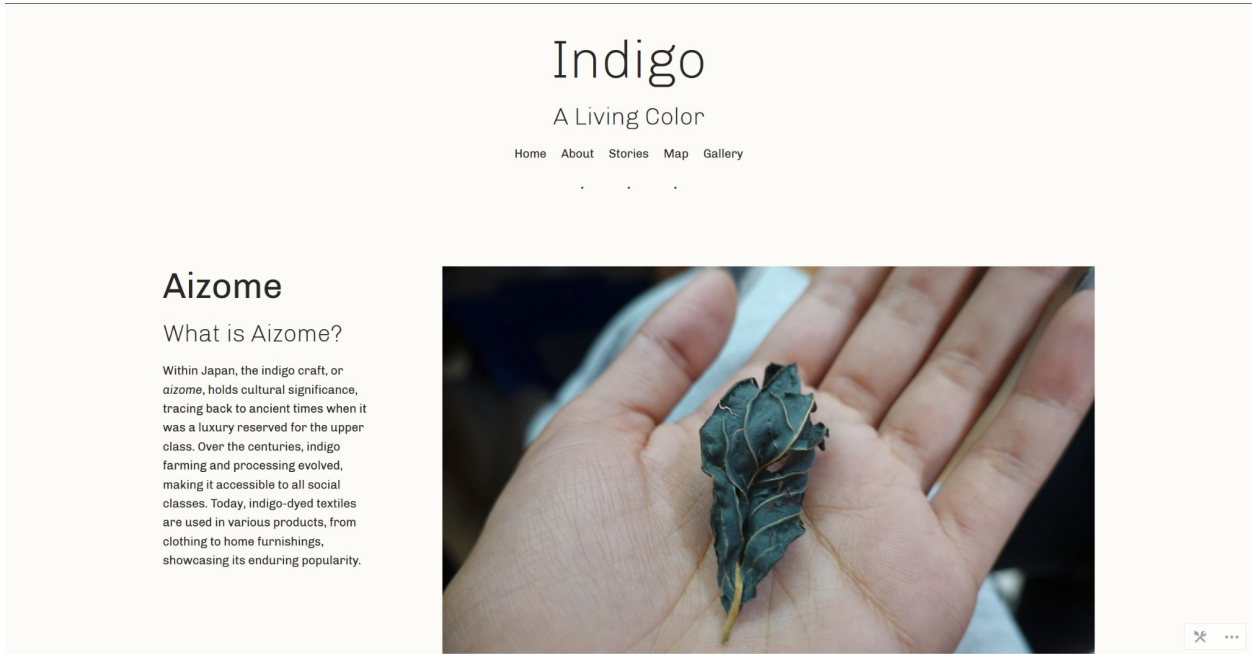
1. What initially drew you to pursue art (and/or design)?
2. *For art students:* What medium(s) do you generally prefer to use? Are you open to trying new mediums? How often do you try out new mediums?
3. How easy or difficult do you believe it is to enter the art field as a profession?
4. Are you familiar with traditional indigo dyeing?
  - a. *If yes, what do you associate it with?*
  - b. Have you ever tried indigo dyeing yourself?
  - c. How much time do you believe it takes to learn indigo dyeing?
    - i. *If they believe “learning the craft” means “mastering the craft” ask if they would ever try it as a more casual hobby.*
  - d. How accessible do you believe learning indigo dyeing is?
5. Are you aware of any opportunities near you to learn about indigo dyeing?
  - a. *If yes, have you participated in any of those opportunities? If they then answer no, why have you not participated in those?*
  - b. *If not, would they be interested in participating in opportunities if they became available?*

#### Appendix E: List of Locations Visited for Interviews

	Place	Address
1	Kyoto Shibori Museum	Japan, 〒604-8261 Kyoto, Nakagyo Ward, Shikiamicho, 135-5
2	Riku Matsuzaki	544-26 Oharano Minamikasugacho, Nishikyo Ward, Kyoto, 610-1153, Japan
3	Watanabe's	314番地10 Sebe, Kamiita, Itano District, Tokushima 771-1350, Japan
4	Blue Knot	1-chōme-5-1 Higashishinmachi, Tokushima, 770-0912, Japan
5	Iki Luca	1 Chome-61 Terashimahonchonishi, Tokushima, 770-0831
6	House of Aizumi History Museum	Maezunishi-172 Tokumei, Aizumi, Itano District, Tokushima 771-1212, Japan
7	45R Kyoto	61番地 Masuyacho, Nakagyo Ward, Kyoto, 604-8111, Japan
8	Kyoto Hozuai Koubou	Sannotsubo-50 Hozucho, Kameoka, Kyoto 621-0005, Japan
9	One World 54	Miyamachokita, Nantan, Kyoto 601-0712
10	Kyoto Seika University	137 Iwakura Kinocho, Sakyo Ward, Kyoto, 606-0016
11	Jennifer Teeter	Kodokitaochinobe, Kyotanabe, Kyoto 610-0332
12	Myoshin-ji Keishun-in	11 Hanazonoteranonakacho, Ukyo Ward, Kyoto, 616-8036
13	Ainisomatte	Harada, Misaki, Kume District, Okayama 709-3717
14	Kyoto Institute of Technology	Matsugasaki Hashikamicho, Sakyo Ward, Kyoto, 606-0951

15	Jinkonka	250-1 Sekichokozaki, Kameyama, Mie 519-1107
16	Kyoto Denim	79-3 Koinaricho, Shimogyo Ward, Kyoto, 600-8208
17	The Little Indigo Museum	Kamimaki-41 Miyamachokita, Nantan, Kyoto 601-0712, Japan

Appendix F: Website Screenshots



## Stories

A compilation of our experiences interacting with indigo artisans, apprentices, hobbyists, and more. Here are the stories of the people who keep indigo alive.



## Map

Our goal is interconnectivity. From museums to indigo workshops to stores that specialize in indigo products, we have set out to map these locations to create a living network of Japanese indigo.



## Image gallery

Color is not the only beautiful thing about indigo. This image gallery records our experiences and tells the story of indigo as it can be seen today.



## INDIGO

A Living Color



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INDIGO

[Home](#) [About](#) [Stories](#) [Map](#) [Gallery](#)

## About us

We are students from Worcester Polytechnic Institute completing our Interactive Qualifying Project alongside Jennifer Teeter from Seika University in Kyoto. Our goal, broadly, is the understanding and connection of Japanese indigo and the people involved with it. From farmers to artisans to hobbyists, we aim to learn, compile, and spread the information they share. In order to fulfill these objectives, we are implementing tools to more closely connect those who interact with indigo in Japan, some of which include this very website and an Instagram page.

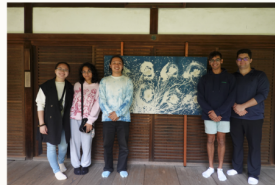


# Stories

Here, you can find images, excerpts, and information regarding people involved with Japanese indigo. We performed various interviews and meetings with artisans, hobbyists, and people taking Japanese indigo to entirely unexplored places.

## Riku Matsuzaki – Exhibition

Our team, visiting an exhibition by Riku Matsuzaki (third from left) at the Myoshinji Temple in Kyoto.



One of the first locations we visited was not a location specifically related to indigo, but the Myoshinji Temple in the western corner of Kyoto city. Our sponsor made us aware of an exhibition being held there by indigo artisan Riku Matsuzaki, so we ventured to the temple for our first true indigo experience. While there, we were able to meet Riku-san and speak with him a bit, though the interaction was a bit scattered since we had to use Google Translate to communicate. However, despite the language barrier, we learned much about Riku-san himself, his process, and his motivation for creating indigo-dyed products. We were able to see and even touch articles and artwork he has created with all-natural, traditional indigo dyeing. The images above showcase the table he set up which displayed some clothing articles he had for sale, as well as samples of both sukumo and dried indigo leaves.

## Riku Matsuzaki's Workshop



Riku Matsuzaki in his



dyeing workshop, where he uses Kyoto indigo to create traditionally dyed clothes and textiles.



After meeting Riku-san at Myoshinji Temple, we were determined to speak with him more. Along with our sponsor, Jennifer Teeter, we traveled to his workshop in Kyoto's Nishikyo ward to meet in a more personal setting. Thanks to our sponsor, who interpreted for us, we were able to learn in even more detail about Riku-san's inspiration, motivation, passion, and process. He explained that Kyoto indigo was once its own plant and practice, rather than a homogenous 'Japanese blue.' He is determined to revitalize traditional Kyoto aizome as its own, unique practice through extreme effort and determination. As shown in the images, he not only showed us detailed diagrams of the entire indigo-making process, but he also showed us old books and poems that detailed information from the Edo period, demonstrating the unique Kyoto indigo practice which died merely a century ago. Once he explained everything, he took us on a brief tour of his workshop, showing the indigo vats and tools he uses to create marvelous works. He also explained that he is growing his own indigo plants, specifically the Kyoto species, and is one of the few artisans with the capability to maintain indigo vats with his own sukumo.

### Watanbezu

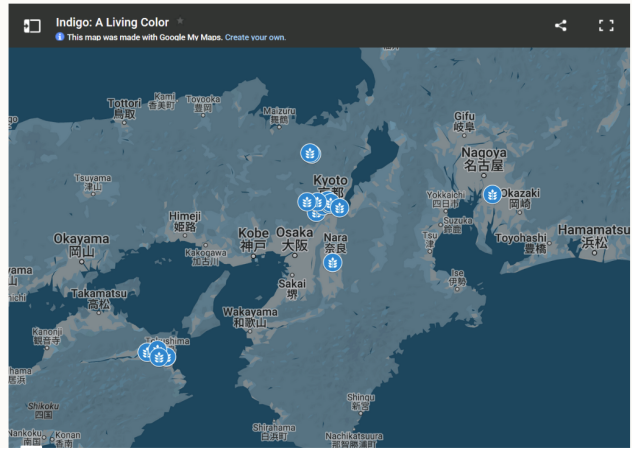


Our team and sponsor visited Watanabezu, or Watanabe's, the indigo workshop and farm of Kenta Watanabe (center



# Map

This interactive map showcases various locations related to Japanese indigo, focusing mostly for now on the Kyoto area. Clicking on a location marker will pull up information related to the store, workshop, etc., as well as the location's specific address and contact information.



# Gallery

## Aizumicho Historical Museum



## Riku Matsuzaki



A display of Riku Matsuzaki's work at the Myoshinji Temple during an exhibition. Pictured are also examples of dried indigo leaves and sukumo.



## Watanabezu – Kenta Watanabe's Workshop



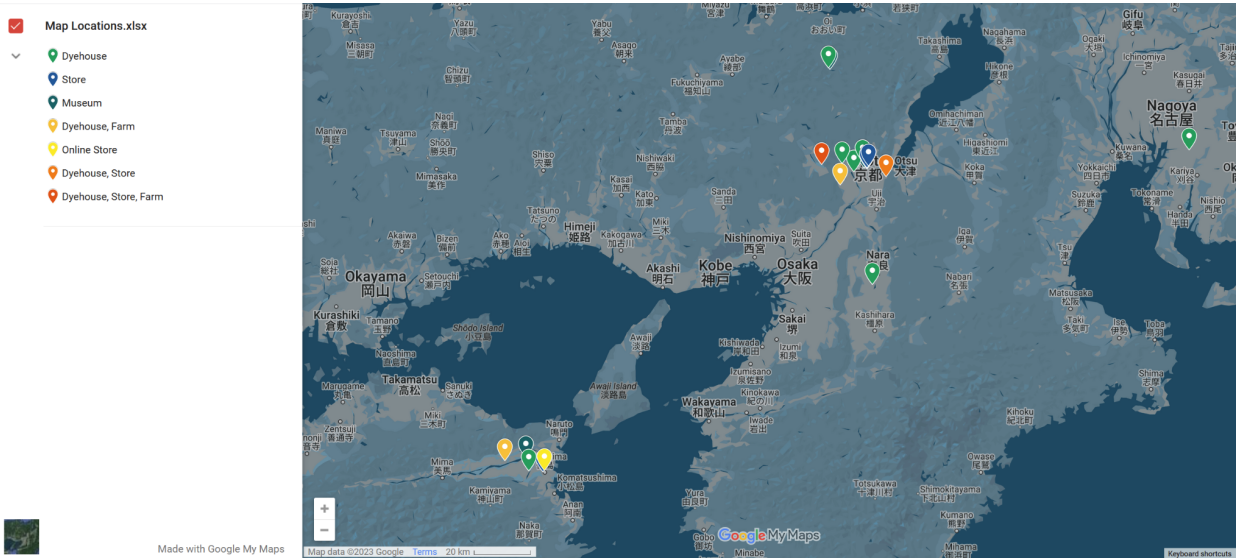
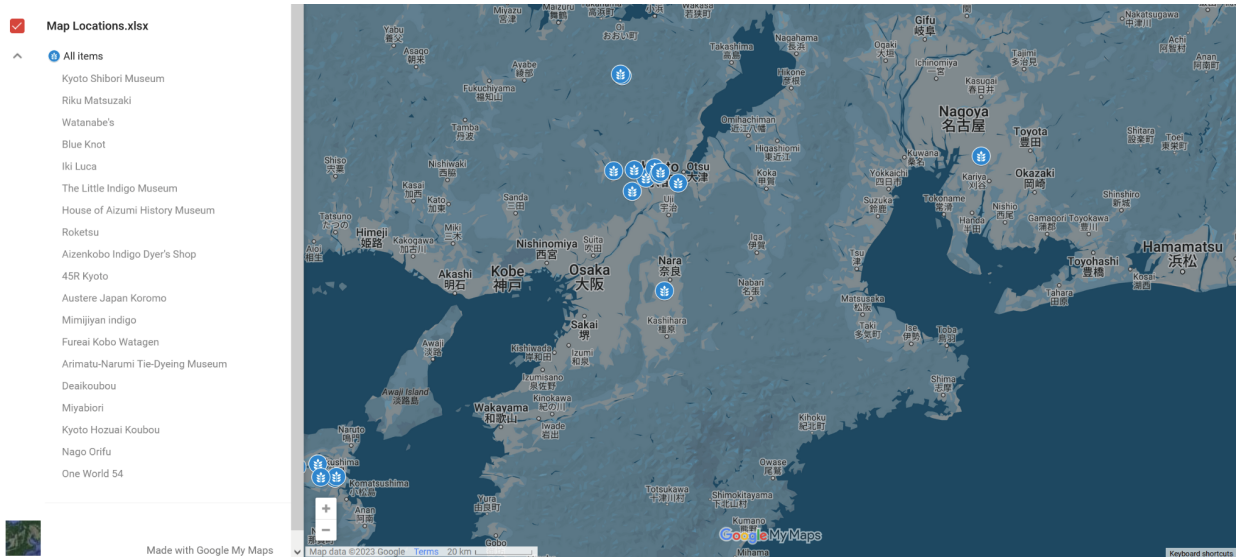
Shirts that our team dyed in the Watanabezu indigo vats. We used shibori binding techniques in order to achieve various unique patterns and shapes.



Kyoto Shibori Museum



# Appendix G: Map Screenshots





**Riku Matsuzaki**

Place  
Riku Matsuzaki

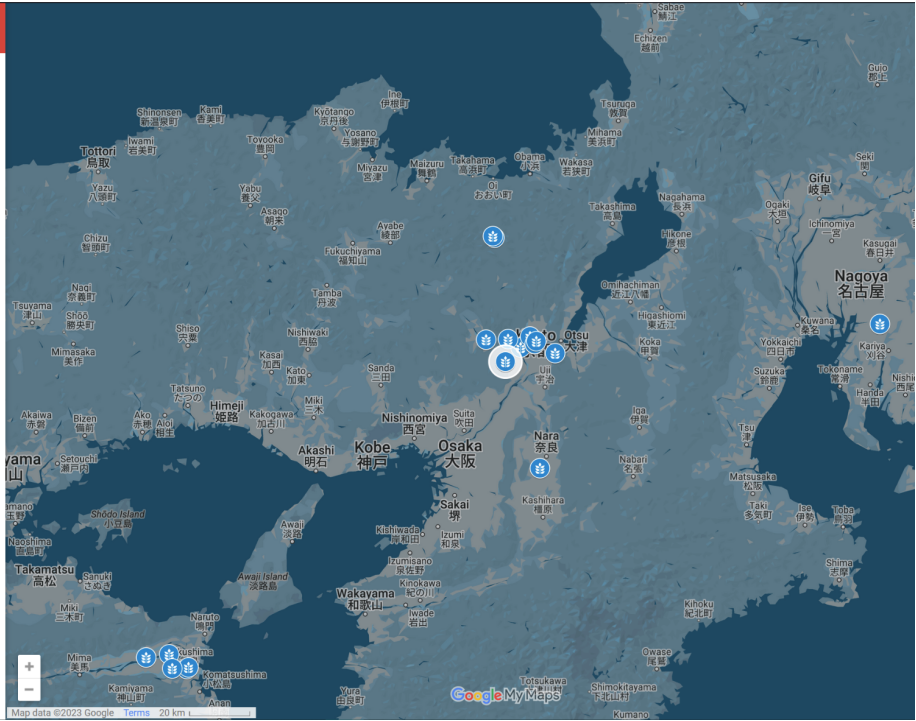
Address  
544-26 Oharano Minamikasugacho, Nishikyo Ward, Kyoto, 610-1153, Japan

Contact Info  
080-1463-1186

Website  
<https://matsuzakiriku.com/en/>

Facilities  
Dyehouse, Farm

Description  
Riku Matsuzaki is a master indigo dyer who is trying to revive the lost "Kyoto indigo" from the Taisho era. At his farm and indigo dyehouse he focuses on using only natural products to create unique products and art.



**Watanabe's**

Place  
Watanabe's

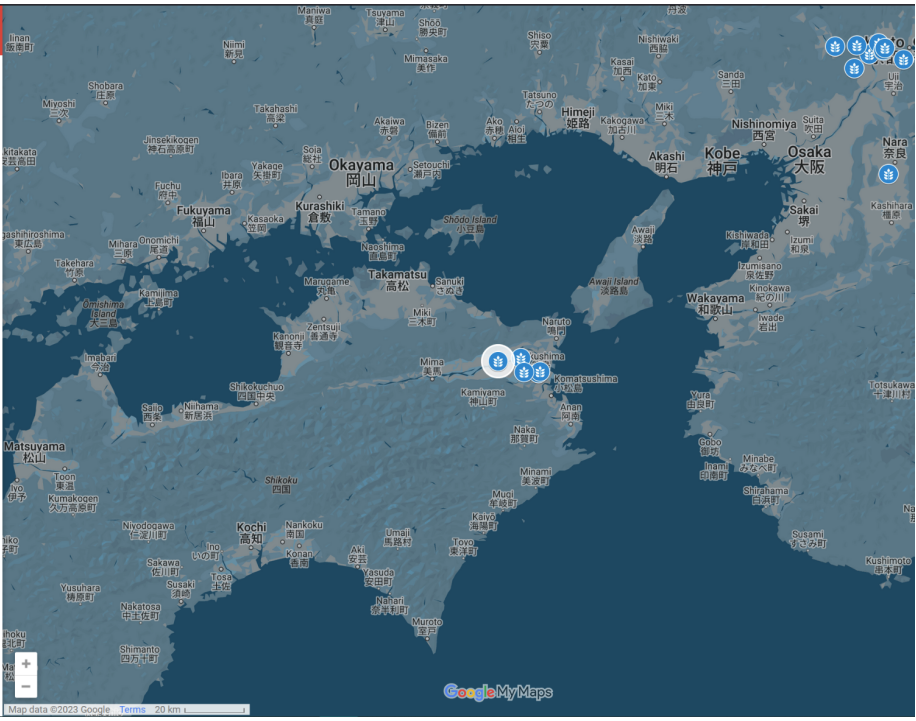
Address  
314番地10 Sebe, Kamiita, Itano District, Tokushima 771-1350, Japan

Contact Info  
81 80-1835-1731

Website  
<https://www.watanabezu.com/>

Facilities  
Dyehouse, Farm

Description  
Watanabe's, a pioneering sixth-sector industry studio, is lead by the visionary Kenta Watanabe. Together with his team, they are dedicated to revolutionizing the indigo industry through an integrated approach encompassing farming, fermentation, and dyeing.



## Appendix H: Database

Place	Address	Contact Info	Website	Facilities	Description
Kyoto Shibori Museum	Japan, 〒604-8261 Kyoto, Nakagyo Ward, Shikiamicho, 135-5	075-221-4252	<a href="https://en.shibori.jp/">https://en.shibori.jp/</a>	Museum, Store	The Kyoto Shibori Museum specializes in the art of Shiori which is said to be the oldest dyeing technique in Japan. The museum displays various masterpieces made with Shiori as well as the many unique tools associated with the practice.
Riku Matsuzaki	544-26 Oharano Minamikasugacho, Nishikyo Ward, Kyoto, 610-1153, Japan	080-1463-1186	<a href="https://matsuzakiriku.com/en/">https://matsuzakiriku.com/en/</a>	Dyehouse, Farm	Riku Matsuzaki is a master indigo dyer who is trying to revive the lost "Kyoto Indigo" from the Taisho era. At his farm and indigo dyehouse he focuses on using only natural products to create unique products and art.
Watanabe's	314番地 10 Sebe, Kamiita, Itano District, Tokushima 771-1350, Japan	81 80-1835-1731	<a href="https://www.watanabezu.com/">https://www.watanabezu.com/</a>	Dyehouse, Farm	Watanabe's, a pioneering sixth-sector industry studio, is lead by the visionary Kenta Watanabe. Together with his team, they are dedicated to revolutionizing the indigo industry through an integrated approach encompassing farming, fermentation, and dyeing.
Blue Knot	1-chôme-5-1 Higashishinmachi, Tokushima, 770-0912, Japan	81 03-6823-0780	<a href="https://www.blue-knot.co.jp/">https://www.blue-knot.co.jp/</a>	Store	Blue Knot Inc. focuses on developing indigo culture through beauty, food, art, and regional revitalization. The owner, Masataka Izawa, uses research to create sustainable indigo cosmetics to rejuvenate traditional manufacturing in Japan.
Iki Luca	1 Chome-61 Terashimahonchonishi, Tokushima, 770-0831	81 90 2390 8886	<a href="https://ikiluca.com/">https://ikiluca.com/</a>	Online Store	Iki Luca is committed to producing sustainable garments that are comfortable, stylish, and dependable. She has been introducing Kurume Kasuri, a traditional textile from her hometown, to the world.
The Little Indigo Museum	Kamimaki-41 Miyamachokita, Nantan, Kyoto 601-0712, Japan	81 771-77-0746	<a href="http://shindo-shindigo.com/">http://shindo-shindigo.com/</a>	Museum	Established in 2005 by Hiroyuki Shindo, our museum showcases a diverse collection of rare indigo dyes worldwide alongside a traditional Japanese indigo dye workshop.
House of Aizumi History Museum	Maezunishi-172 Tokumei, Aizumi, Itano District, Tokushima 771-1212, Japan	81 88-692-6317	<a href="https://ainoyakata.jp/">https://ainoyakata.jp/</a>	Museum	In 1989, the 11th head of the Okumura family, Takeo Okumura, donated 13 buildings and documents to Aizumi Town, establishing a museum showcasing the history of indigo, its cultivation tools, an Edo-period merchant mansion, and paper dolls illustrating the indigo growing and dyeing process.
Roketsu	73 Nishikyogoku Umazukacho, Ukyo Ward, Kyoto, 615-0885	81 75-313-1871	<a href="https://www.roketsu.com/en/home-en/">https://www.roketsu.com/en/home-en/</a>	Dyehouse	Roketsu allows visitors to experience the art of dyeing firsthand at their Studio, led by over 50 years of kimono dyeing expertise. Guests are allowed to dye their own products with intricate designs using wax.
Aizenkobo Indigo Dyer's Shop	〒602-8449 Kyoto, Kamigyo Ward, 中筋通大宮西入横大宮町215	81-75-441-0355	<a href="http://www.aizenkobo.jp/">http://www.aizenkobo.jp/</a>	Dyehouse, Store	Aizenkobo, spanning three generations, specializes in traditional Japanese indigo crafts, featuring exclusive "eggplant" blue tones and a diverse range of showcased items like clothing and tapestries. One of his outfits was worn by Rami Said Malek in the James Bond movie, No Time to Die.
45R Kyoto	61番地 Masuyacho, Nakagyo Ward, Kyoto, 604-8111, Japan	81 75-252-0045	<a href="https://www.45r.jp/jp/">https://www.45r.jp/jp/</a>	Store	A high end retailer, creating durable and sustainable clothing. Some of their collections feature indigo dyed clothing.
Austere Japan Koromo	Japan, 〒604-8083 Kyoto, Nakagyo Ward, Nakanochō, 12番地1	075-495-2542	<a href="http://koromo-kyoto.com/">http://koromo-kyoto.com/</a>	Store	A clothing store who makes special indigo collections and uses a variety of dyeing techniques unique to Japan.
Mimijiyān indigo	Japan, 〒604-0907 Kyoto, Nakagyo Ward, 河原町竹屋町上大文字239	81 75-254-8856	<a href="http://mimijyan.com/">http://mimijyan.com/</a>	Store	Since around 1980, Mimijyan has focused on reviving traditional Japanese hues like indigo dyeing using local natural materials
Fureai Kobo Watagen	244 Kitakoriyama-cho, Yamatokoriyama-shi, Nara 639-1160	0743-52-2328	<a href="http://www3.kcn.ne.jp/~watagen/">http://www3.kcn.ne.jp/~watagen/</a>	Dyehouse	Fureai Kobo Watagen is a workshop in Yamatokoriyama that revived genuine indigo dyeing, offering dyed products utilizing real indigo dyeing and vegetable dyeing, along with interactive classes, showcasing the ancient Japanese methods
Arimatu-Narumi Tie-Dyeing Museum	Japan, 〒458-0924 Aichi, Nagoya, Midori Ward, Arimatsu, 3008 絛会館 1階	052-621-0111	<a href="https://shibori-kaikan.com/en">https://shibori-kaikan.com/en</a>	Dyehouse	A Tie-Dyeing museum that focuses on Shibori. The museum also offers demonstrations and experiences.
Deaikoubou	24-1 Ojoincho, Saga Nisonin Monzen, Ukyo Ward, Kyoto City, Kyoto Prefecture 616-8426	075-468-1681	<a href="https://kyoto-aizome-en.com/shop/">https://kyoto-aizome-en.com/shop/</a>	Store, Dyehouse	An indigo dyehouse and store that specializes in dyeing kimonos.
Miyabiori	9-9 Koyamanakajimacho, Yamashina Ward, Kyoto, 607-8108, Japan	075-594-0770	<a href="https://www.miyabiori.jp/index.html">https://www.miyabiori.jp/index.html</a>	Dyehouse, Store	A large indigo studio, lead by Hon Aizome Masaori Kobo, creates their own sukumo to dye unique clothing.
Kyoto Hozuai Koubou	Sannotsubo-50 Hozucho, Kameoka, Kyoto 621-0005, Japan	81 771-23-2303	<a href="http://www.hozuai.com/">http://www.hozuai.com/</a>	Dyehouse, Store, Farm	Established in 2015, Kyoto Hozuai Kobo Co., Ltd. aims to develop, research, and sell indigo products, successfully reviving Kyoto's water indigo in Kameokahozu, Kyoto, focusing on cultivating "Kyoho Ai" and fostering local agriculture and industry through indigo dyeing experiences and sales.
Nago Orifu	Iuchi-189-2 Kokufucho Wada, Tokushima, 779-3121, Japan	088-642-1228	<a href="https://awa-shijira.net/">https://awa-shijira.net/</a>	Dyehouse	A dyehouse that specializes in the craft of Awashijiraori which involves weaving their indigo dyed threads in unique ways.
One World 54	Miyamachokita, Nantan, Kyoto 601-0712	IG: ow_indigo	N/A	Dyehouse	Lead by Naoko Omae, One World 54 creates unique clothes dyed with indigo in Miyamachokita.