

H'mong Ancient Methods of Indigo Dyeing and Beeswax Batik in Cat CAT Village, Hoang Lien Commune, SAPA Town, Lao Cai Province, Vietnam

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Abstract: *Indigo dyeing and beeswax batik are the two traditional crafts that have long been associated with the H'Mong people in Sa Pa in general, Cat Cat village in particular and still preserved until the presentday. Through many stages of making indigo dye combined with sophisticated techniques and the ingenuity, meticulousness of the artisans in each motif and pattern, unique beeswax batik and indigo dyeing products have been created bringing the cultural identity of the H'mong people. These handicraft products have become a highlight to attract tourists to learn and discover local cultural values and they are meaningful souvenirs for visitors after each trip. In recent years, the development of the community-based tourism model in Cat Cat village has brought many benefits to the local community. Meanwhile, it has also contributed to creating opportunities for the development and restoration of H'mong traditional crafts.*

Keywords: indigo dyeing, beeswax batik, H'Mong, Cat Cat, Sa Pa

1. Introduction

Cat Cat village in San Sa Ho commune (known as Hoang Lien commune nowadays) was formed from the late 19th to early 20th century, known as "the most beautiful village in the Northwest", located at the foot of majestic Hoang Lien Son mountain range, 2km away from Sa Pa town. This place is inhabited by the H'Mong people also known as the Black Mong (because the village has 100% of the black H'mong living and is designated as the ethnic group wearing black indigo dyed outfits - a highlight to distinguish the Black Mong people from other Mong ethnic groups living in Sa Pa) with more than 600 people belonging to 80 households. Previously, the economic life of H'Mong people was mainly based on agriculture and forestry activities. Currently, in addition to traditional agriculture and handicrafts, the H'Mong people also participate in tourist service activities such as souvenir sales, tour guides, passenger transport, performing arts, food and homestay services,... in the village.

The community-based tourism model in Cat Cat village not only brings economic benefits to the local community but also contributes to the restoration and development of traditional crafts such as brocade weaving, silver carving, producing agricultural tools, indigo dyeing and beeswax batik ... Every year, Cat Cat village attracts a large number of tourists to visit and experience the daily life of H'Mong people. Visitors have the opportunities to learn and practice the techniques of weaving, dyeing indigo, and doing beeswax batik in traditional ways.

It can be said that indigo dyeing and beeswax batik are the two traditional crafts that play very important role in the

cultural and religious life of the H'Mong. Meanwhile, they are also unique products that attract tourists in the journey to discover Sa Pa. In this article, we will explain in detail about indigo dyeing and beeswax batik of H'mong people in Cat Cat village as well as their contribution to the social and economic life of the people here.

2. Material and methods

2.1 Field trip

We had a field trip in Cat Cat village, Hoang Lien commune, Sa Pa town, Lao Cai province in June 2020.

2.2. Interview

In order to implement this article, we contacted to work directly with:

- Leaders of Hoang Lien commune to research about the situation of economic, cultural and social development of Cat Cat village in recent years; policies to support the development of economic and cultural life for ethnic minorities here.
- Leaders of Cat Cat Tourism Company and people responsible for preserving and developing traditional crafts, including indigo dyeing and beeswax batik of the Mong ethnic people.

In addition, we also conducted interviews with households engaged in indigo dyeing and beeswax batik as well as some shop owners of brocade products to learn about the advantages and challenges in the process of making, preserving and developing these traditional professions.

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2.3. Other resources:

We consulted the following documents:

- Report on tourism development planning of Lao Cai province during the 2015 – 2020 period, vision to 2030 of the People's Committee of Lao Cai province.
- Report on the implementation of socio-economic tasks of San Sa Ho commune in 2019.
- Books written about H'Mong culture of Ethnic Culture Publishing House.
- Thesis documents and websites related to brocade weaving, indigo dyeing and beeswax batik.

3. Results and Discussion

3.1. An overview of indigo

Indigo is the common name for a large genus of about 700 species of indigo, of which two species *Indigoferatinctoria* and *Indigoferasuffruticosa* are used to produce indigo dyes. From thousands of years ago, Asians have used indigo to dye their clothing and India was the first country to produce indigo.

In Vietnam, typically the Northern mountainous region has many indigo varieties belonging to different families. Each ethnic group, each region is accustomed to planting and using difference types of indigo that suitable for their traditional aesthetic. Most of the ethnic groups here use indigo to dye their fabric. Indigo is considered as a symbol and identity of the mountainous highlands. Among them, the H'Mong indigo dyeing technique is the most prominent and popular in Vietnam (Fig.1).

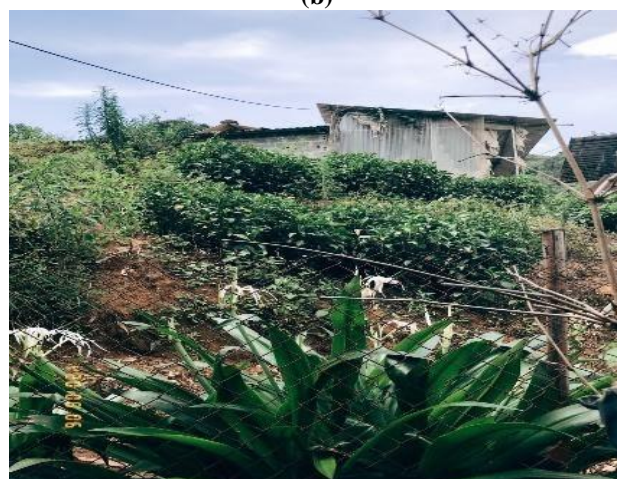
In Cat Cat village in particular and Sa Pa in general, indigo is commonly grown as a tree variety, easy to grow, not picky about soil, so it is planted in home gardens, upland fields or along roads. There are two ways of growing indigo: sowing seeds or cuttings, planting roots. The Dao usually cultivate indigo by sowing seeds and harvest after 4 to 5 months. However, Mong people choose to plant branches because the tree will grow quickly, giving big leaves and stems. If you use the old tree stump (cut and harvested) to continue planting, the new tree will not grow as good as the old one. Indigo is usually planted in about a year to harvest and the time of cutting indigo coincides with the rice season in May.



(a)



(b)



(c)

Figure 1: The indigo is commonly grown in Cat Cat village, Sa Pa

(a): Indigo plant; (b): Indigo in home garden; (c) Indigo in upland field

3.2. H'mong traditional methods of indigo dyeing and beeswax batik in Cat Cat village, Hoang Lien commune, Sa Pa town

3.2.1. Indigo dyeing

3.2.1.1. Materials and tools for indigo dyeing

Creating a quality indigo dyeing product requires many elaborate and strenuous stages. The selection of indigo dyeing materials and tools has always been the most important stage. The materials commonly used by the Mong include: linen fabric, dried indigo, white rice wine, firewood ash, filtering tools and storage tools such as jars, sieves,...Based on these ingredients and experience of H'mong people through many generations, they have created a unique method of indigo dyeing for their products (Table 1).

Table 1: Materials and tools for indigo dyeing

Procedure	Materials and tools
Making dried indigo	<ul style="list-style-type: none"> • Indigo plants • Plastic or wooden barrels for soaking indigo plants and storing indigo • Water • Lime • Filtering tools
	• Firewood ash (mixed cardamom) with

Fabric dyeing	membrane filter
	• White rice wine
	• Jars or plastic containers of indigo solution
	• Water
	• Fabric

Source: Summarized survey [1]

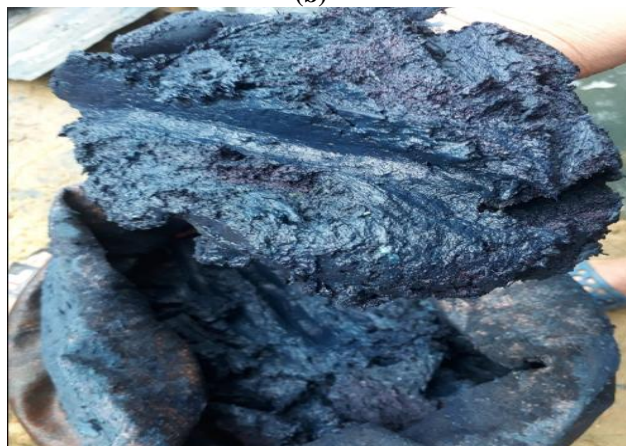
3.2.1.2. The process of making dried indigo



(a)



(b)



(c)

Figure 2: The process of making dried indigo in Cat Cat village, Sa Pa

(a): Barrels soaked indigo; (b): The soaked water and lime are beaten to oxidize the mixture; (c) Indigo paste

After harvesting, H'mong people in Cat Cat cut the indigo plants into 2 or 3 pieces and then put in plastic or wooden barrels to soak with water. The sap of the indigo tree dissolves into water and floats on the surface after 4 or 5 days. The next step is to discard rotten leaves and stems, decant the water and keep the solution containing the sap. Then, they continue to add lime at a certain percentage, stir well and incubate for another 2 to 3 days until they see clear water floating, drain off the water and leave the indigo paste at the bottom of the barrels. Pour the indigo paste into the basket or a bag to let the water run out, it will become a paste-like mixture sludge, referred to as dried indigo. Dried indigo can be used to make indigo dyed solution immediately or put in a container with lid to store for a year. Noticing the variations in color of the dried indigo is also important to make the nice indigo dyed composite later (Fig.2).

3.2.1.3. Indigo dyeing process

There is a complicated process of making indigo dyed solution from dried indigo. The mixture consists of indigo, firewood ash with cardamom, white rice wine and water to match the amount of fabric to be dyed. According to the Indigo shop owner in Cat Catvillage that we interviewed (she directly does indigo dyeing and also sells indigo products to tourists), to create a 100 literof indigo dye tank, we need about 4 kg of dried indigo, 200 ml of white rice wine, 5 kg of firewood ash mixed with cardamom and water. The dyeing process consists of many different steps and also requires precision:

- Firstly, boil the ash mixed with cardamom powder (smooth and white firewood ash), then filter several times until the ash water becomes slightly yellow (not white) to get alkaline water (Fig. 3a).
- Secondly, take a certain amount of dried indigo with a little white rice wine and squeeze the mixture with your hand to make a puree in order to letdried indigo not to be clumped (Fig. 3b).
- Finally, put the squeezed indigo mixture into a barrel, vat or jar containing alkaline water, stir from the bottom to the surface until there is foam up.Continue stirring 3 times a day at regular intervals. The best weather for making indigo dyeing is when it is sunny but not too hot (Fig. 3c).

One notable advice for the process of indigo dyeing is to use hands instead of gloves to help you feel the fineness of the dried indigoand the viscosity of the composite by yourself. A successful indigo dyed mixture and ready to be used for dyeing fabricsis when the indigo composite has a murky-yellowish-green shadewhile it reflecting in sunlight. When the indigo dyed fabric is exposed to the air, the blue hues of the indigo dye form during oxidization. The shade of the indigo dyed composite depends on the amount of driedindigo soaked. Keeping an indigo vat alive that can last many years is tricky because it not only requires high skills and experience but also depends on other aspects such as weather, fabric types and the quality of the materials. Some of the Mong people have continually nurtured the indigo vats for more than 20 years.



(a)



(b)



(c)

Figure 3: Indigo dyeing process in Cat Cat village, Sa Pa
(a): Firewood ash mixed with cardamom; (b): Indigo dyed solution tank; (c) Fabric was dipped in barrel of indigo dyed solution

Fabrics used for indigo dyeing is usually natural fabrics such as linen spun from flax or cotton. Some types of industrial fabrics are also suitable for indigo dyeing. However, they should be boiled over and over again before dyeing so that the glue in the fabrics is gone to make the fabrics absorb the

color well. First of all, the fabric must be washed before being used to remove all the dirt on it, then dry and iron flat. If you want to create your own patterns on the fabric, you can use several techniques such as tying, rolling, stitching and folding white fabric or beeswax batik before dyeing. The tied-up portions of fabric remain white while the exposed areas turn blue in the indigo vat. Then, soak the fabric in water before dyeing to help it absorb the color well on both sides. Next, put the wet fabric in the vat of indigo dyed composite and soak for 15 to 20 minutes without squeezing, and dry it on a twig on top of the indigo vat so that the left over indigo composite from the fabric will drop onto the vat to reuse. The fabric has then been turned to indigo blue and if you want the color of the fabric to be darker, dip it in several times. Finally, dry the dyed fabric in the sun. According to the experience of H'Mong people, it is recommended to soak and dye the fabric in the morning and dry in the afternoon. This fabric dyeing process can be done in 3 to 4 days if the weather is favorable. If it is raining heavily or the humidity is high, it can take months to complete the process of dying black indigo fabric.

Indigo color on the fabric might be faded depends on your way of using and keeping the products. However, The H'Mong also know to avoid color fading by using chili leaves to create indigo color-retaining agent. By using this traditional method, the H'Mong have dyed many unique and durable pieces of indigo fabric, even when the fabric is torn, the color has not yet faded. Indigo dyed fabric is very cool and clean, it can be washed without using soap.



Figure 4: Some products of Indigo shop in Cat Cat village, Sa Pa

There are some special practical and spiritual lessons that the Mong have learnt from their experience through many years of doing indigo dyeing. In fact, indigo dyeing depends on weather condition, the experience of creating indigo dyed solution or choosing suitable fabrics and materials,... However, there is another important aspect that the Mong also consider when doing indigo dyeing is spiritual belief. For example, they have to consider the nice calendar day to start the process and the place to put the indigo vat. Moreover, the Mong also need to always be mindful of undesirable situations such as pregnant women to not come closely to the indigo barrel; or if anyone put their hands in it (except the one who makes it), the indigo vat will be ruined immediately. They also avoid bowing down deeply

into the indigo barrel when dyeing fabrics because human light will damage the indigo dyed composite.

It can be seen that the indigo dyeing technique of the Mong in Cat Cat village has many unique and outstanding features. Each ethnic group living in Sa Pa, such as the Black Mong, the Red Dao, the Tay, ... will have different secret techniques and methods of indigo dyeing to create unique products that reflect their ethnic culture.

Table 2: Differences in indigo dyed materials and textile techniques of ethnic groups in Sa Pa, Lao Cai province

Ethnic group	Indigo dyed materials	Textile techniques
H'Mong	Linen	Beeswax batik, embroidery
Red Dao	Cotton	Weaving, embroidery, beeswax batik and block printing
Tay	Cotton	No pattern

Source: Summarized survey [1],[2],[3]

In addition, in each territory with different natural conditions and customs, there will be different ways of creating indigo dyed composite. For example, in Japan - a country where indigo is considered as a representative color with the name "Japan Blue" has a completely different method in this stage. They make indigo powder. Japanese indigo is also harvested in the summer, but the leaves are harvested separately and dried. During autumn and winter, these leaves are left in the *nedoko* room for decomposition for a few months. Indigo workers would pour water in and turn the giant pile of indigo leaves once a week so that the leaves were evenly incubated. When the weather gets cold, they cover the leaves with straw to ensure uninterrupted fermentation process. By spring, the indigo will concentrate in the *sukumo* form (indigo powder) and ready to be mixed into a dye [4]. In India, Pakistan and some ethnic groups in Africa, they make indigo cakes. In Vietnam, the Mong people in Sa Pa create dried indigo to dye their clothes. It is this difference that makes the diversity, unique and distinct for traditional handicraft products bringing indigenous culture and knowledge. Whether the dried indigo making method or the indigo dyeing process differs from country or locality, the natural indigo dyeing profession is still a clean, environmentally friendly dyeing technique that needs to be preserved and developed.

3.2.2. Beeswax batik

The pattern on H'Mong dress includes geometric patterns such as mountains, jagged shapes, squares, spiral shapes or different sized circles, zigzag and parallel lines,... and animal-shaped patterns, etc. [2]. They are created by using different textile techniques: embroidery, beading,... but the most unique technique is creating patterns by beeswax batik. Batik is a resist process to create decorative patterns on fabrics before dyeing to prevent dye from penetrating the fabric. A special point is that the patterns of other ethnic groups such as the Red Dao and the Tay are often printed by using woodblock with beeswax, while for the Mong, the patterns are drawn directly on the fabric by the artisans so that all the products will not be completely the same.

According to our interview, the H'mong people in Cat Cat have the set of 4 pen-like instruments, purchased from

artisans in Mu Cang Chai district (Yen Bai). The pen holder is made of wood, and the bronze nibs are designed with different shapes and sizes to help them create different types of pattern. Small nib is used for thin lines, while big nibs are used to draw thicker, straight or frill lines; another type of nib is used to draw circles or spiral patterns. Firstly, the fabrics have to be washed and soaked carefully to remove all the dirt. Once they have prepared the fabric and beeswax, they begin to step into the drawing process. The beeswax is heated on a pot to melt, then the craftsman dips the pen onto the pot to take the wax and draw on the fabric. The wax will dry immediately after applying on the fabric and become the resist to prevent the dye from penetrating on the patterns. Beeswax batik pieces of fabric that are still in process should not be dried in hot places because the beeswax will melt easily, and all the patterns will be gone. After finishing drawing process and the whole piece of fabric is dry, the fabric is then boiled to remove all the resists. Beeswax that meets high temperatures will be melted and reveals white lines on the fabric, becoming white patterns on the dyed background. This whole process of beeswax batik can be repeated as many times as the number of colors desired. This is a method of hand-drawing to create decorative patterns for the fabric pieces before being made into complete products such as: dresses, shirts, towels, bags, ... Drawing a full-patterned dress usually takes a week, a month or even a few months to finish, while a small cloth takes about 2 to 3 days. That is why hand-drawn batik yields considerably finer and more unique patterns than stamped batik. It also proves that H'mong people are extremely creative, skillful and patient in creating unique and meticulous products with great cultural values (Fig. 5).



(a)



(b)



(c)

Figure 5: The beeswax batik cloth in Cat Cat village, Sa Pa (a): Beeswax batik instruments; (b): The beeswax batik cloth before being dyed indigo; (c) The beeswax batik cloth after being dyed indigo

The pattern on the Mong people’s clothes not only increases the aesthetic value of the outfit, demonstrates the cultural characteristics of the Mong but also shows the ethnic lifestyle and the level of labor in making traditional crafts. In addition, it also contains a process of cultural exchange and is the basis for recognizing and distinguishing easily between the Mong and other ethnic groups.

3.3. The role of indigo dyeing and beeswax batik in the cultural and economic life of the Mong people in Cat Cat village

3.3.1. Impacts on the Mong people’s life and culture

Due to their isolated life and difficult trade, the Mong often have to make their own costumes. Their casual attire is made from indigo dyed linen with beeswax batik. These costumes are cool, durable and functional that help prevent insects, mosquitoes,... when working at home, on the fields or in the forest.

Indigo dyeing and beeswax batik are important steps in the finishing process of making H’Mong traditional costumes. All the daughters in the village have been taught to do indigo dyeing and beeswax batik by their mother since very young age. Therefore, when the Mong women reach adulthood, they become proficient in doing all the processes. Indigo dyed clothes are precious presents to give in important holidays or events and the dowry of the women when they get married [1].

The color of the indigo dyed fabric and the patterns on the outfits have become a measure for the value of Mong women in the community. It can be said that the life of a Mong woman is closely linked to making traditional crafts. Therefore, indigo dyeing and beeswax batik are the special traditional cultural features of the Mong people in Cat Cat village.

3.3.2. Impacts on tourism economics

Currently, under the impact of socio-economic development trends and especially the strong development of tourism activities, there are major influences on the direction of traditional crafts in Cat Cat village. Indigo dyeing and beeswax batik is no longer confined to each family. It has become an income generating profession for people, especially during their leisure time. Households and workers are paid by Cat Cat Tourism Company.

Table 3: Categories about tourism and residents’ income related to indigo dyeing and beeswax batik in Cat Cat village, Sa Pa

No	Categories	Unit	Quantity
1	The average number of tourists visit the village per day	Passengers	300
2	Ticket price	Adults	Thousand VND/ticket 90
		Children	50
3	The number of Mong tour guides in Cat Cat village	Person	5
4	The amount of money and number of households implementing the conservation of indigo dyeing and beeswax batik is paid monthly by Cat Cat Tourism Company for tourist services.	Household	10
		Million VND/month/ household	5
5	The amount of money and number of employees are artisans, skilled craftsmen participating in performing weaving, indigo dyeing, and beeswax batik at the demonstration places organized and paid by Cat Cat Tourism Company.	Person	7
		Million VND/month/ person	4-5
6	The number of households engaged in weaving, indigo dyeing and beeswax batik in Cat Cat village.	Household	54

Source: Interview with the Deputy Director of Cat Cat Tourism Company [5], [6]

The development of tourism in recent years has had a great impact on the formation of tourism products from indigo dyeing and beeswax batik. In addition to traditional costumes, the Mong also produce everyday items such as towels, bags, wallets, etc. as souvenirs to sell to tourists. The diversification of products for community tourism development has contributed to creating more job opportunities and improving residents’ living condition and quality in Cat Cat village.

Table 4: Some indigo dyeing and beeswax batik products for in-store sales in Cat Cat village

No	Products	Product characteristics	Price (Thousand VND)
1	Clothes	Indigo dyed linen with beeswax batik for decorative patterns on bodice, neckline and sleeves.	1.500 – 3.000
2	Teddy bear	Indigo dyed linen pieces stitched together, cotton stuffed inside	300
3	Bag	Indigo dyed linen with patterns, have different sizes and types: large/small bags, phone bags, wallets ...	30 - 250
4	Scaff	Indigo dyed linen pieces with different tones on which there are traditional or modern patterns created by the artisans.	200
5	Handbook	Indigo dyed cover on which	150 - 190

		prints/patterns are stamped/drawn	
6	Passport case	Indigo dyed linen case with different embroidery/drawn patterns.	130

Source: Summarized survey

On the other hand, turning indigo dyeing and beeswax batik into tourism products for sightseeing tours not only creates more job opportunities, but also has a great significance impact in preserving and developing traditional handicrafts.

Moreover, with the trend of sustainable development, natural factors are important. Products made from natural materials, handicrafts, and handmade goods are supported widely by the customers and contributing to the preservation and promotion of traditional crafts, including indigo dyeing and beeswax batik. Currently, with the benefits of tourism activities, indigo dyeing and beeswax batik in Cat Cat village are developing in two directions:



(a)



(b)



(c)

Figure 6: The artisans doing beeswax batik and the beeswax batik products in Cat Cat village, Sa Pa

(a): Artisans doing beeswax batik in the performance place of Cat Cat tourism company; (b): Indigo dyed fabric with beeswax batik patterns; (c) Indigo dyed souvenirs using the tying, knotting, stitching, and folding techniques

The first thing is to maintain the traditional values of the profession to develop into tourism products with the participation of artisans and skilled craftsmen in the village.

Secondly, the craftsmen should be more innovative and creative in preparing materials as well as the making process, creating designs and patterns,... to serve tourism. It means to produce souvenirs to serve the tourists' shopping needs.

Overall, indigo dyeing and beeswax batik in Cat Cat village play a very important role in the economic, cultural and spiritual life of the Mong people. The development of these traditional handicrafts has contributed to creating more job opportunities for local people and improving their household incomes. Meanwhile, it is also a resource for local community-based tourism development.

3.4. Difficulties and challenges in developing H'Mong profession of indigo dyeing and beeswax batik in Cat Cat village

In addition to the development prospects, the profession of indigo dyeing and beeswax batik currently faces many difficulties and challenges, specifically:

Firstly, the crafting processes are manual so the labor efficiency is low. Creating patterns by doing beeswax batik requires precision, meticulousness and high skills, so very few people know about these traditional crafts and it also does not attract young people to follow and inherit.

Secondly, brocade products imported from China with plentiful designs and low prices are unequal competitors for Mong's self-woven brocade products.

Thirdly, due to the increasing demand of tourists, a part of the profit-chasing population has sold fake and poor quality

products, which significantly affects the reputation, quality and brands of traditional crafts.

Moreover, in order to save costs, manpower and time, many people choose to make stamped beeswax instead of drawn beeswax products. It may indirectly make the product lose its exclusivity and increase the risk of ending making traditional and sustainable crafts among ethnic groups.

4. Conclusions

Indigo dyeing and beeswax batik is the cultural essence of the Black Mong people in Cat Cat village. In order to continue developing and preserving these unique traditional professions in the future, it is necessary to:

- Have better remuneration policies for workers, especially artisans and skilled craftsmen, to ensure that workers have stable income for their living condition and continue to pursue the profession.
- Focus on vocational training for workers, especially encouraging young people who are children in the village to participate in vocational classes taught by artisans in order to preserve their precious traditional crafts.
- Have policies to encourage and support people engaged in occupations through preferential loans for people to invest in career development, promote and find outputs for products and create stable income sources for workers.

5. Acknowledgement

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