Article

Protecting Women's Domestic Area & Environment:

Study on Eco-friendly Batik

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Introduction

Batik has been determined as one of 76 important cultural heritages by UNESCO. This emphasizes that batik is a part of people's lives, an identity for Indonesia, and is widely accepted in the global market. These events encourage government policies—both national and local—to require batik as one of formal attires on weekdays. The implication of this policy is obviously to encourage the development of batik industry and to boost the production of batik, both in domestic and export market. The Report of Indonesian Ministry of Trade (2012) showed the increase of batik production to 3.9 billion in 2011, if compared to 2.9 billion in 2010. The number of export demand of batik production keeps increasing. From 2008 to 2012, the average export of batik grew 33.83%. In the last three years, the increasing value of total export of all batik and derived-batik products showed US\$22.3 million in 2010, US\$69 million in 2011, and US\$278 million in 2012 (http://kemenperin.go.id). This development prompted the

government to decide Batik as main commodity that could be included in one of creative industry product (Media Industri, 2010; Kementrian Perdagangan RI, 2012, 2013). However, this positive market acceptance somehow created paradoxical condition, as seen from four main issues: batik as commodity, the relations of production involving actors and batik production space that happens in domestic area, the environment, and the preservation of batik (Mahatma and Hunga, 2009; Hunga, 2013).

At the level of commodity, batik undergoes a degrading process into a mere economic commodity. Original batik is against textile batik (full-printed batik), which is produced by machine, mass-production oriented, cheaper price, it also emphasizes the image of batik as a commodity, and involves more male workers. Whereas, the original batik uses wax and give more room of exploration by women batik artisans. The presence of textile batik of course jeopardized the unique characteristic of Indonesian batik that has socio-cultural values (Susanto, 1973; Tirta, 1996; Doellah, 2003; Tirta, 2001). The production technique of textile batik (full-printed batik) requires investment on large equipment, which can possibly be done by medium-large scale industry. Surely, only the medium-large scale industry will have the benefit from this, and this can 'shut down' the micro scale and selfemployment industry (Hunga, 2004). Furthermore, the original domestic batik cannot compete against the imported textile batik. According to industry news, the Ministry of Industry stated that in 2012, Indonesia imported batik cloth and finished Batik products from China as much as US\$30 million or Rp. 285 billion. This is an irony and become a heavy blow as batik is the original product and as the identity of Indonesia (http://www.kemenperin.go.id/artikel/5715/2012).

At the level of the relations of production and batik production space, informal relations of production occurs that use women and women's domestic sphere as the main space of batik production to reach the highest efficiency with lowest worker wage. The relations of production are brought into homes, use and transform a residence it into a factory. Academically speaking, this method is commonly called "putting-out" system (POS). By applying POS, such industry does not need to provide a certain place; working equipments; facility and

its supports such as water, electricity, batik equipment, etc.; provide insurance costs for workers such as good, transport, health, accident, etc. Homes as domestic arena, women, and their womanhood (gender) become the reason of their low wage; even some family members are not paid. They are paid through per unit payment system (per unit, sheets, etc.) and through these systems, the hard work and humans' creativity, especially women's are degraded into a mere product lower than men just because they become the breadwinner and work outside their domestic sphere. As this manipulation and destruction of domestic production keeps happening, it also damages the environment and its surrounding due to production waste. Homes turned into factories; they become slums, dirty, and polluted by production waste. As a result, families no longer have place to relax after work, where they acquire and share affections, explore socio-family relationships, obtain education on characters, etc., instead these are replaced by relations of production that is measured by monetary value (Hunga, 2013).

At the level of the environmental influence, both process of making batik and stamped batik cannot be separated from the use of dyes. Commonly-used dyes contain chemical-induced colors which give negative impact both on the nature/environment and humans (producer, worker, and consumer). Batik image faces the fact that the production is no longer environmentally friendly as it produces dangerous waste to the nature and human. Every year, batik industry produces the highest CO2 emissions among other SME sectors, which commonly the result of how they depend on fossil fuel (kerosene) and the high use of electricity. A large number of smallmedium batik industries still uses wax, dyes, and excessive ratios of bleach, which indeed has negative influence towards the nature and society (Hunga, 2004; Clean Batik Initiative, The German-Indonesian Chamber of Industry and Commerce-EKONID, 2011). This fact becomes urgent matter since most of batik production process happens not only in factories but also in the workers' home, on micro-scaled and self-employment batik industry. Production waste becomes the responsibility of the entire family, especially women and children who are much more active inside a house. At the level of batik preservation, the development of batik product does not go hand-in-hand with the

regeneration of batik. This becomes a question as to how Indonesia can maintain and preserve it. On a UNESCO meeting with several clusters of batik, mostly batik workers are middle-aged women and the growing lack of interest of young people to become one (http://bisniskeuangan.kompas.com/read/2012).

The points above shows a paradox between batik as a commodity and the image attached to it (its meaning and symbol) at public level; the actors (especially for the middle-upper entrepreneurs) who reap the positive benefits and the workers, especially women who are marginalized in micro level; and rapid/wide array market acceptance subsequent to the pollution as the result of production waste (chemicalinduced colors, kerosene burning pollution, and wax waste) which can threaten the environment, family's health where batik production occurs, and the preservation of batik. Amid these problems, ecofriendly batik can be a solution in solving the problems arising from commodity, actor/worker (especially female workers), and environmental aspect. However, eco-friendly program as suggested by the government and some parties has not reached the workers (especially female workers) who produce batik in their house for industrial purpose¹ (www.cleanbatik.com). They (HW batik) always escape from public attention as the approach used still employ formal industry indicators that are factory-based production. POS and HW, especially women are still "hidden". Women oppression within this system is seen as the cooperation result of capitalist and patriarchy, which is supported by the government (Hartmann, 1977; Allen and Wolkowitz, 1987; Dangler, 1994, 1997; Prungh, 1999). If seen through the perspective of ecofeminism, the manipulation of domestic sphere, the fact that female home workers are marginalized within POS, and the environmental crisis are the manifestation of double oppression, which are patriarchy and capitalism, towards women and environment (Shiva and Meis, 1993; Shiva and Vandana, 2005). This paper describes women implementing eco-friendly batik and interprets this as a strategy to protect their domestic sphere and the surrounding environment. The

¹ Check Program Report of Clean Batik Initiative conducted by The German-Indonesian Chamber of Industry and Commerce-EKONID 2011 and 2012.

data used to explain this fact include primary data, which are obtained by conducting qualitative research applying case study method and literature study, and the other secondary data obtained from various sources.

Studying Women and Environment through Ecofeminism Perspective

Advances in science also contributed on the approach and way of exploring the nature to meet the human needs (primary, secondary, and tertiary), which somehow would result in ecology crisis and poverty. In the midst of an ecological crisis, it was time for all parties to question their decision to study, appreciate, and justify human's success in exploiting the nature in the name of development, education, and even religious interpretations. This is important to be reflected as to how can the nature and earth utilization created poverty to some human entities (women, children, and other marginalized groups) also towards the nature. It is an essential part so that humans can explain the dialectic of the God's grace through His creation for the welfare of all mankind regardless their background; as well as maintaining the continuity of nature as the expression of glorifying God the Almighty.

Critical attitude towards ecological crisis which gave negative impact towards women had been started by Francoise d'Eaubonne in her book Le Feminisme ou la Mort (Feminim or Death) which was published in 1974. This was the start of ecofeminism terminologies, although the term was officially introduced in the 1980s. Ecofeminism became popular during protests emerged against environmental destruction and ecological disasters (Shiva and Mies, 1993). Francoise d'Eaubonne (1974) revealed the close link between the oppression of women and nature, which could be studied through its culture, economy, social, and politic. King, Ynestra (1983) emphasized the dialectic between the oppression of women and nature done by men. This oppression took root from the patriarchal culture, and in this system, women and the nature occupy the same position (construction) as the object, not the subject. Karen J. Warren (1993) developed ecofeminism within a conceptual, methodology, and practice framework, which rooted from the women's perspective towards ecological crisis that focused on studying, criticizing, and finding a solution in the interconnection of women, nature, and human for gender equality and environmental sustainability. Shiva and Mies (1993) on their book *Ecofeminism* argued that ecofeminism movement and thought was the critique towards the development approach that did not consider ecological sustainability and marginalized a certain entity, women. Therefore, ecofeminism was brought to solve both humans' and nature problems based on women's experience and made it as a source of learning to manage and conserve the nature. This also meant providing more fair and equal space (and access) for women alongside with men in the management and conservation of nature.

Feminism issue and ecology are interrelated and historical (casual historic). Women are always associated with nature; therefore, women are conceptually, symbolically, and linguistically identified with nature. Karen J. Warren (in Arivia, 2002) stated that this association was strongly linked with the society construction, which was shaped by values, beliefs, education, and patriarchal-based behavior, where the justification of domination, subordination, and oppression of women by men existed. Due to the fact that women were equated with nature, there was a crucial link between domination towards women and nature. The current ecological destruction was due to the views and practices of andocentric and anthropocentric. Ecofeminism philosophers believed that the basic concept of double domination towards nature and women was the duality and hierarchy of values. Therefore, the role of feminism and environmental ethics was to expose and dismantle this dualism and reconstitute the underlying philosophical ideas. Thus, feminism and ecology movement would have mutually-reinforcing purpose; both wanted to build a view on the world, which was not based on patriarchal models and dominations (Darmawati, 2002).

Ecofeminists also revealed that the gender roles given to women gave them more 'sensitivity' and 'closeness' towards nature. In a society that use nature and earth as the source of life, people created a relationship, which was not only based on material but also earth and society, the earth and its habitants was an intimate interconnection (Shiva, 2005). By the name of construction, the approach used focusing

only on economic growth; it dispersed the intimate relationship between human and nature, transforming it into material relationship. In the midst of ecological and inter-human (gender) crisis, it is urgent to create a critical education to 'completely change' values/concepts which build the mindset, redefine and revise (giving new interpretation), explore the positive local values, and transform them into a real action that give gender equality in order to manage and conserve the environment. Therefore, shared commitment is needed to make a 'socio-cultural' participatory move based on women's and marginalized groups' experience in order to manage and conserve this 'forgotten' and deliberately 'marginalized' nature. Ecofeminism is a 'social movement' as a response towards ecological crisis, as well as a critique towards a construction approach that neglects ecological sustainability and marginalize a certain human entity, women. Ecofeminism is a dialectic that moves within a concept (theory) and practices in order to solve relation crisis among humans and the relation crisis between human and nature. In this case, this is done by achieving system change and changing society structure, which positions men and women, as well as nature into one integral-holistic unity. Therefore, there is a link between economy and social justice, gender equality, and the environment, and it is essential for peace to prevail (Darmawati, 2002).

Whose Factory My Home is? Manipulation and Destruction of Women's Domestic Sphere

The restructuring of global economy forced a change in industrial institutional to become more flexible and informal, which allowed industry to achieve efficiency and compete in the market. Therefore, industry is no longer a factory with big building, formally employed and organized labors, controlled working system in a factory area. Home or domestic area becomes a favorable option, then factory moved to domestic area, dominating this arena, and become 'hidden' in it. It means, capitalist method of production that previously occurred in factory, penetrates, overlaps, and manipulates domestic area, which is identical to women to ensure the production process in factory, as well as creating long-term problems to family members, especially women and children who are much more active at home (ILO, 2004; Doane,

2007; WIEGO, 2010; Hunga, 2011, 2013).

In academic world, industries, which most of its activities happen outside of the company such as at the workers' house or other places chosen by the workers, are known as industrial homework or worker'shome-based industry by applying putting-out production system (Dangler, 1985)². In the Homework Convention 1996, ILO (1996) defined Putting-Out System (POS) as a production system that most of its production process happen outside the company or in a house or place chosen by the workers, and without or with very little supervision from the employers. This production system employs labors that are commonly known as home based work or home-worker3 (HW). These workers do not have formal ties with the employer; therefore, their employment truce is informal and exploitative. As HW integration in production network gets more intensive, it encourages HW as an important part of global production chain. It also raises a variety of HW type, they are: (a) home-workers (HW) or Pekerja Rumahan who take a job, carry it, and work on it within or around his/her house and acquire certain wage based on the unit they produce; (b) unpaid HW who work on a family business; and (c) self-employment (SE) workers who produce their own goods/service and sell their own products, this is also done in/around their house⁴. Based on the three types of homebased work mentioned above, most of them are home-workers (ILO, 2004).

In Indonesia, home-workers have not been widely known and among researchers and activists who pay attention to this phenomenon, homeworker is translated into *Tenaga Kerja Rumahan* or *Pekerja Rumahan*. However, the author avoid using the translated version since *Tenaga Kerja Rumahan* or *Pekerja Rumahan* sometimes are misinterpreted and

² Commonly known as out-worker, and home-workers is a part of out-worker category.

³ Home-workers are also commonly called as home-based work. In Indonesia, home-workers mean Pekerja Rumahan. Based on the author's experience in scientific discussion, people sometimes misinterpret the term Pekerja Rumahan as home servant (Pembantu Rumah Tangga). Therefore, the author does not use Pekerja Rumahan to avoid the misinterpretation.

⁴ A value positions a certain gender (male) as superior from another gender (female).

This value encourages inequality between both gender (Saptari and Holzner, 1997).

identified as home-servant or is commonly known as Pembantu Rumah Tangga (PRT). Although both workers work in domestic sphere, their works are different. HW produce commodities for industry while homeservant use their strength to finish some domestic works in a household (Hunga, 2013). POS is already applied to many commodities, one of the products manufactured using POS method is batik. Batik in our society is identical to women. This view is associated to: the work requires precision and patient, which are the stereotypes of women; the work area is in domestic area, and this is women's sphere, and most of the workers are women. Since years ago, women brought the cloth from their employers and made batik in their own homes (Tirtaamidjaja, Anderson, and Marzuki, 1966). There are some local terms used to refer to home workers; they are mangklon, sanggan, tempahan, rengsi, buruh borongan, beto wangsul, buruh mancal, rengsi, "jrogan gaok," pengrajin. These terms vary depending on the area or regions; and each term has different meaning related to female or male or each gender (Hunga, 2013). People understand the concept of public and domestic arena. Previously, both of these arenas were strictly separated in terms of physical/material and concept/value. Public space is the representation of working arena (factory), productive, produce money, and a place where men are the breadwinner. This space is capitalist area and where the capitalist production occurs. On the contrary, domestic space is not productive, does not produce money, a place for women and housewives, where they devote their lives for their husband and children as an expression of obedience towards patriarchal values, and where patriarchal production takes place.

However, within POS context when batik production activities take place at home or in domestic area, then there is a contradictory situation—batik production (for industry) and waste production that happen in the same arena. In the same time, domestic production also occurs, cooking, laundry, child care, and other reproduction activities done by women in a long time. In fact, batik production needs more time, and that they do part-time work is a mere myth as they work more than 12 hours per day. They work till midnight and wake up early in the morning but they do not get overtime pay. They are paid based on what they produce or per unit; this system is known as *borongan*. Sutini and

Sutiyem are senior batik artisan, and both of them have eight children. At first, they think they could work while taking care of their children. In the practice, batik production was more time-consuming then they thought. Their houses were full of cloth, still-being-processed batik, wax, wax residue, and color dye. It was all messy with unorganized things since there was not enough space in their house. When their children became toddler, their employers often got angry at them since they couldn't reach their target, they often changed their employers, even their children sometimes fell from stepping/bumping into materials stacked everywhere in the room. Both of them are pembatik halus and well-known to batik merchants and they had served on a fairly large batik industry for many years; however, their skills still could not provide them with economic improvement. They still receive low payment just because they are housewives and part-time worker. This manipulation is done by the industry so that the workers think they deserve low wage (Hunga, 2005, 2011, 2013).

The facts mentioned above showed that factory work brought into a household would cause an overlapping activities between batik production and household activities. However, the income obtained by both women remained low, and the justification was that home is associated to women and household reproduction activities. If production activities occur at home, the outcome is associated to whoever (women) did it and remains unequal to those, which are done in public space (factory) by men. Therefore, homes also remain save for production waste. They see the production process as 'part-time', discontinue, only a few numbers, and save. Almost all respondents in this study, both women and men, see homes as reproductive area. For female HW, making batik is a part-time job, whether it is done in or outside the house. On the contrary, male HW thinks that making batik is a full-time job, whether it is done in or outside the house, and they consider home as a work place and the symbol of their authority. They think by working at home, it gives them freedom and authorities (Hunga, 2011, 2013).

The manipulation of women's domestic sphere by the capitalist is strongly associated with the construction of women symbol and their womanhood⁵ as cheap labor, and this has occurred for some time. In order to support the industry, women remained at home and on certain condition, these labors were brought into factory, and when economy restructuring occurred due to crisis, they were brought back into home. This strategy was a capitalism fact in order to get the highest advantage (Hartmann, 1976). POS becomes the perfect channel for businessman (batik merchant) since HW and home as the production place give the justification of gaining highest advantage from production efficiencies by: not providing certain place for the worker, not providing working equipment, not providing workplace maintenance cost, not providing production cost for electricity and water, not providing social security for workers, not providing waste processing cost, etc.

In batik POS, there is a transfer of some important types of work from batik production chain from factory to home workers' homes. This transfer goes hand in hand with the transfer of production cost, including the production damage and cost caused by production risks such as social, health, pollution or environmental damage. This production cost exists since the production process happened in or around the house and involving the family members, including children without any supervision from the employer. Therefore, HW is different to factory workers. In POS relations of production, HWs do not only rely on their skills, they also subsidize the industry. In batik industry, the employers do not provide the equipment such as supporting materials (wax and color), kerosene, stove, workplace, working tools, electricity, water, allowance for production risk, accidents in work, and even health risks from production waste. The home-workers also do not have a choice whenever they were recruited or fired. Although the working system remains informal. HWs are still bound in unwritten rules such as the prohibition of working under more than one employer, deadline for work, and the quality of work that is determined unilaterally. Homeworkers, especially women, sometimes work more than 12 hours per day to reach the deadline determined by the employer. Undoubtedly,

⁵ A term commonly used by feminist researchers to show gender construction of women which rooted from gender 'ideology'. This value exists not only on domestic sphere, but also in working area. This value is the legitimacy on how woman become a mere object (Brigitte and Saptari, 1997).

the working hour becomes longer as she has to finish other household chores such as taking care of their children (Hunga, 2013).

Costs that are indirectly-related to production are social costs such as diseases caused by pollution or production waste. Some prominent diseases in batik production and convection are respiratory disorders due to fine threads from the cutting and sewing process; respiratory disorders due to kerosene air pollution; skin diseases caused by chemical dyes waste production; and kidney problems caused by the mixture of chemical dyes and the well water as the source of water for drinking, cooking, laundry, and showering. Pain in lumbar area caused by prolonged sitting position and the batik artisan seating position (dingklik) which is too short. Other diseases caused by consuming energy drink to increase stamina to reach the target (setoran), for example: kuku bima, extra joss, etc. Other toll is the loss of family comfort because some home-workers do not have their own workshop, thus making their domestic area into a workplace. They tend to use their housing area as the working area, and this place is unorganized and messy. Children lose their place to play and study. Furthermore, the noise, unpleasant odor, and dust can not only affect the homeworkers and their family members' health but also the environment. The industry never considers this comfort loss and becomes the burden of the HW and their families.

They should also consider the surrounding ecological damage, which is very important. People are disposing batik production waste containing chemical dyes and other chemical substances into the surrounding area of home-workers' housings. Some waste flow through the sewer to irrigate the rice field, some seep into the wells and contaminate water for household needs. According to the information obtained from the farmers who lived around the HW's home and micro entrepreneurs, their paddy were contaminated by the waste; and although their paddy look healthy, there is no rice seed inside it (Javanese: <code>gapuk</code>). The government who should be dealing with environmental matters seems to be ignoring this, since they think batik production waste is not dangerous due to its insignificant volume. Sometimes this matter remains "hidden" for the reason that batik production in HW housings is small scale business. This notion is not

a proper thing to do. Based on a study conducted by Hunga (2004), a unit of batik production in HW housing produces an average of 3 m³ production waste containing chemical dyes and substances, which contaminated the natural water, rice field, river, and well water. Moreover, there are a large number of batik production units that become this type of unit. Statistically, this automatically cumulates the number of production waste and that the number becomes a threat to family's health and ecological damage. Other social costs that should be considered are the child labor involved in the production process and other unpaid family member labors. Child labor issue in batik industry needs to be studied properly. It is a usual sight for 9-to-12-years-old children (usually female) to help their parents in making batik. They work for their own mothers, families, or neighbors who work as batik artisan. They are paid poorly, Rp 500 to Rp 1,250 for half a day. Batik artisans and their parents do not see this as a problem as they consider employing children as a part of learning process for batik production. We can also see the same situation in batik convection. Children usually help cutting the thread remains, buttoning, and other supporting parts.

Strategies to Protect Women's Domestic Sphere

The State Minister for the Environment has identified batik industry in micro-small-medium scale (Industri Mikro-Kecil-Menengah or IMKM) as one of the worst cause of river pollution in Indonesia. Lack of environmental awareness among batik buyers became one of the reasons why batik producers did not want to employ eco-friendly production method. ECONID (2011) found an important fact that there was a low appreciation towards female batik artisans who devoted their patience and creativity to make batik. An international conference in Geneva on 20th-23rd of June 1995 on Ecolabelling and Environment became an important moment to encourage government pushing the businessmen to stop using certain types of artificial dyes or dyes containing azo group that is carcinogenic. Since April 1, 1996, trade of products containing those dyes is prohibited, especially in Germany and the Netherlands (Balai Besar Kerajinan dan Batik Yogyakarta, 2007). This warning is a good start to use natural dyes and reduce/stop the use of artificial color, if Indonesia wants to put their products into the international market.

Historically, batik was originally produced by using natural materials from plants (word, root, leaves, and stems) and women played a great role in it. Batik was associated to women since making batik required patience, precision, and peace of mind. Nature was also associated to women. Thus, it was not strange that the symbolization of batik and woman was also linked to nature color used in batik production. The process of acquiring color from nature such as leaves, roots, stems, sap, flower, etc. requires patience, persistence, and precision. The motif in batik was also inspired from the nature because they think nature was the integral part of human's consciousness to its dependence on nature. Pujianto (2003) and Hidayat (2004) explained that natural elements motif could be found in Semen motif that could be interpreted as growing or creeping shoots, meaning fertility; Sawat (Garuda) motif in the form of two open wings, symbolizing courage or violence; and Alas-alasan (forest) described forest nuance reflecting the nature of life, obstacles and tranquility. The coloring process from natural dyes was considered a lot more complex, and took more time, resulting in more expensive product. The increasing market demand force people to look for quicker, more efficient, and cheaper way of production. They changed natural materials with the artificial ones. They replaced canting, the tool to draw batik, with stamp and print. The use of artificial color slowly shifted the natural dyes (Susanto, 1973). This process continued and as the result, they disposed the dangerous production waste and endangered the environment and its ecosystem. Batik production waste, which contaminated the HW housings, also threatened health, especially children and women. Since batik production mostly occurred in HW housings, the negative impact of the solid and liquid production waste went through the HWs in a whole batik production center (Hunga, 2013).

Focusing on batik produced in HM housing, then the manipulation of women's domestic sphere, low appreciation towards women's creativity on producing batik, HW housings pollution, and environmental damage in HW housings surrounding area were the result of androcentric and anthropocentric views and practices. As Karen J Warren (in Arivia, 2002) stated that there was an important link between the domination

of woman and of nature. This happened because woman was associated to nature, and conceptually, symbolically, and linguistically, women and nature became the victim of this oppression. This link was strongly associated to society's construction, which was formed by patriarchal values, belief, education, and behavior, where the justification for women domination and subordination existed. The construction of female subjectivity consciousness underwent a long process. This could be found as batik making activities and unconsciously forming a habit in batik making (Bourdieu, 1977). The following is the interview with Ibu Ginem done by the author:

Bagi saya membatik seperti merawat anak dengan penuh kasih. Saya merasakan seperti ada suatu keterikatan bathin dengan batik yang terus terbangun sejak hari-hari awal memulai pekerjaan membuat batik. Keseharian selalu diisi aktifitas mulai dari membuat pola, mempersiapkan mori, memindahkan pola (kopi) ke atas mori, melukis atau menggores lilin di atas pola sebagai contoh yang nantinya dibagikan ke pekerja, mengoreksi pekerjaan pembatik, mengawasi proses pewarnaan, dan seterus-nya, sehingga pada suatu waktu, tukang warna yang disebut juga tukang kelir salah dalam memberikan warna bahkan ada yang rusak, saya sangat bersedih. saya menatap sampai deleg-deleg atau ekspresi bigung bercampur sedih pada tumpukan lembaran batik. Saya duduk memegang lembaran-lembaran batik dan berpikir keras mencari akal dan teknik untuk memperbaikinya. Saya membayangkan berhari-hari, waktu, pikiran, tenaga, perasaan telah ditumpahkan, dan doadoa dipanjatkan untuk lembaran-lembaran batik. Untuk menyelesaikan satu lembar batik tulis tradisional yang dikerjakan dengan baik, khususnya yang menggunakan warna alam, membutuhkan waktu 3 – 5 bulan. Membatik seperti halnya petani yang berhari-hari memelihara tanaman atau seorang ibu hamil telah berhari-hari merawat kandungannya. Tentunya sangat bersedih bila tanamannya rusak atau kandungannya terjadi sesuatu dan mengalami keguguran. Saya sering tidur sampai larut malam setiap hari, menghabiskan waktu memeriksa satu-persatu helaian batik yang masih dalam proses, meletakkan dengan rapi agar tidak rusak, dan selanjutnya sampai batik selesai dan diambil oleh pemberi kerja atau juragan. Saya sangat bahagia bila batik selesai dengan baik sesuai dengan kualitas yang diinginkan. Ia sadar bahwa mereka hanya bisa memandang dan mengelus lembaran-lembaran batik. Batik tersebut akhirnya diambil oleh juragan. Sebagai pembatik, saya tidak memiliki batik tulis yang bagus karena biayanya relatif mahal. Rasanya tidak percaya, pembatik tetapi tidak memiliki batik tulis yang bagus⁶.

Batik production could take place in private housings, showed how women faced 'forces' of the employer and the household authority owner (husband) determining (no option) whether to accept the work done in their house. The consequences were the transforming housing condition, messy, contaminated by production waste, and received lower payment as previously described. However, women were not always the losing party and not intended to always lose in order to protect their domestic sphere. The choice where batik production would take place and where they would put the working equipment were women's strategy. They chose a certain area inside, next to, or attached to the main house or somewhere near the house but remained separated and usually near to other batik artisans' house. Wajan (pan) was placed in anglo (brazier) or a small stove placed in the middle of the room and next to the stove, she placed *canting* container. She placed 4-8 seats or stools around the brazier and the pan in circular formation, and gawangan—to place the cloth for batik making—was placed in the outermost position. All other equipment circled the pan and brazier, which were in the middle.

The place selection and tools placement indeed needed a lot of consideration. The place selection facilitate their work while watching their children or finishing other household chores. While circular the tools placement was from their habit while working. Usually they finished their work while talking, gossiping on their daily lives and the talk about their works such as how they got the job, a raise, allowance bonus (THR), and strategies on how dealing with the employer or

⁶ The author knows Ibu Ginem since 1999 and still in contact with her to the present.

tempahan⁷ (vice employer) or HW coordinator. According to them, the position would ease them of sharing experience, learn from each other when there was a complicated or new motif (in Javanese *nyontohi*: giving example), or help each other (*bonceng*) drawing one batik cloth together to finish it quicker. *Bonceng* was one strategy to reach the deadline target from the employer, or to avoid the employer's anger if they could not reach the deadline, or when they had some urgent needs. *Bonceng*—as illustrated by people riding a bike, one person pedaled on the bike while the other hitchhiked in the bike to reach the same destination. They could sit there for hours, and there was no water around them, and they took a rest when they realized that their feet ached, or in Javanese, *keju-keju*. They knew the stools they used were too short, but they never changed them into the taller one, because they thought the stools and other equipment were one package, as they said, "sudah *sa'k setel* sudah *thuk'e*".

From the explanation above, it showed that - unconsciously through a recurring process-the process of the place selection and tools placement in order to support batik production as individuals or as a group had been according to logical thinking and became a habit. This setting did not only make it easier, especially for the female home-workers to conjoin batik making process, household chores, and nurturing children, but also to finish the job quickly and how to get a steady (ajek) job, and a chance to improve their position in production chain and organization. These small actions by batik artisan as mentioned above showed their strategy to survive and protect their domestic sphere. This showed that they had the ability and resources to negotiate with those who dominated the POS. Their knowledge and skill in batik making became the resources for them in POS relations of production to face the challenges of market change and environmental issues. One of actions done by woman-individually or in groupwas by switching to eco-friendly batik (Hunga, 2011, 2013). Although only some industries applied eco-friendly batik and it was still done individually by women, this could be seen through women's responses

⁷ From Javanese, "tempohke" which means the representation; could also mean the vice employer.

in protecting their domestic sphere and gave positive influence towards not only in the house but also to the environment.

Based on the literature reviews and secondary data collected from various sources, the author found that most of the pioneers in eco-friendly batik are women. However, industry that employed ecofriendly batik was still very limited - even though the exact number was not found. Even, the eco-friendly pioneers did not come from the popular batik centers such as Surakarta, Pekalongan, and Yogyakarta (www.cleanbatik.com). There are some women who keep struggling and fight and promote the production of eco-friendly batik; they are Sancaya Rini with Creative Kanawida batik and Lulut Sri Yuliani who invented mangrove batik. Both of them proved their consistency on fighting for the economy development of the less-have, preserving batik as Indonesian culture, and at the same time protecting the environment. Their results paid their hard work, as their business grow, more people and networking promoting eco-friendly batik, and they received award from the government and association concerned to environmental crisis. There are other women and woman communities continued to fight for this, they are: members of the batik community Handarbeni Desa Giriloyo, Wukirsari, Imogiri Bantul; Candra Diana, Yogyakarta; Shinta Pertiwi, Yogyakarta; Kelompok Usaha Perempuan Batik, Desa Pancur, Rembang; Siti Maimona di kota Bangkalan - Madura; Hajjah Zulfa, Tanjungbumi - Madura; Sri Lestari, Dusun Jodag, Sleman, Yogjakarta; Yuke Yuliantaries, Bondowoso; Ririn Asih Pindari, Ds. Jatipelem, Diwek Kabupaten Jombang.

Women mentioned above struggle in their own way (femininely) and they fought through the gender role assigned to them, starting from their homes, domestic role, and their reproductive responsibilities but they were still able to transform themselves and their efforts to change the condition of women and environment. Ibu Sancaya started her business to fill her spare time at home with creative activities, because as her children grew up, they went to school outside their hometown. Instead of only not to feel bored, Ibu Sancaya also spent her spare time by doing creative activities. Acquiring skill to make batik was one of her way spending her spare time, but she actually already had knowledge in batik since her grandmother was batik artisan. She grew

enthusiastic as she saw unemployed young people around her, since she always tried to fight not only for herself but also for people around her (the unemployed youths). Her awareness towards environment grew later as she realized that her surrounding area became more and more uncomfortable, contaminated by chemical dyes, and dirty. Her knowledge on the danger of chemical dyes for her surrounding area and environment drove Ibu Sancaya to change her chemical dye to natural dye. Ibu Lulut started her batik business as a part of her concern towards her surrounding area, especially everything related to mangrove. Her awareness towards mangrove was a part of her daily lives as she lived in this region. Her woman instinct emerged and it provided her with everything she needed for she cared about the environment and the welfare of her surrounding communities.

Based on the women's stories above, the exploration of color from nature was not an easy thing to do, and it needed patience, persistence, precision, and willingness to continue on looking for more natural resources as coloring agent. Eco-friendly batik production process needed longer timeframe since the coloring process requires more time. However, this is not a tough job for women since their surrounding had transformed them through their gender role to be patient, diligent, meticulous, and persevering to face a life which starts from themselves, family, and society. Reproductive activities in domestic sphere had taught women to be tough through womanly struggle, which was being patient, diligent, and meticulous. Women's intelligence employed their feminine ways had proven of creating tough women in fighting manipulation inside their domestic sphere. Therefore, ecofriendly batik is a potential way of women's struggle to protect their domestic sphere and the environment. This process is equal to the values and philosophies of batik as an economy, social, cultural, and environmental product. Based on this appreciation, eco-friendly batik attains higher values.

Eco-friendly batik movement gains its opportunity when the global awareness, especially among the international society who are concerned on the consumers' safety and the environment, emerged. This becomes the chance for the batik producer who uses natural color for their batik to meet the consumers' needs both in domestic and

overseas market. Indonesia is famous its natural resources such as the vast area of forest that has wide variety of plants in each province, which can provide natural color dyes for batik production (Farida, 2009). However, some problems may arise from employing natural colors as there is a limit to available colors, the coloring process needs longer timeframe, the color retrieval technique from the nature and the stability of the color acquired (Fitriana, 2007). Furthermore, the study showed that the batik artisan faced some difficulty in maintaining color consistency for certain numbers of production. These are the obstacles faced in the market, especially in the international market. Despite the fact that natural color trend begins to increase, the number is still far below those using chemical-induced colors (Soejipta and Hunga, 2009).

Conclusions

Restructuring of the global economy led to a more flexible and informal institutional change. Production method by applying puttingout system, which moved the production process from factory to workers' homes, became a highly beneficial option for industry. Therefore, the rapid flow of the factory production mode to homebased production (home-workers) was unavoidable. In POS, home and women became the main target of this activity, making them as cheap labors. Batik and batik industry was one of commodity produced through POS. Batik has become a cultural heritage and the identity of Indonesians. The World's recognition as stated by UNESCO becomes the momentum of the development of batik industry in Indonesia. However, this development is also a paradox, since batik underwent a commodification process and changed into a mere object. Textile batik, especially imported and with chemical-induced color ones, made batik industry as the contributor of ecological crisis due to its production waste. This crisis became increasingly urgent as the production method used by batik industry was POS that occurred in home-workers' domestic area, and the numbers were relatively high in clusters of one unit of production.

The manipulation of domestic sphere as a production area corrupted the space and reproductive activities in a house since house was supposed to be a sphere where family shared affection, built socialfamily relationship, etc. This condition worsened as the impact of batik production was not only economic but also environmental; this took form on the waste that contaminated the surrounding area, diseases due to water and air pollution, as well as other diseases inflicted the workers who consumed stamina drink to reach their deadline and production target. The displacement of production method not only creates economic burden associated with the procurement of production equipment, materials, and supporting material (water, electricity, place, etc.) but also the social and health costs as described above. This burden increased as the given wage was also very small since it was given per unit, piece, or as a bulk and without any warranty. The emergence of environmental crisis, global awareness upon the danger of production waste, and the awareness of eco-friendly goods was a positive opportunity for the implementation of eco-friendly batik. Promoting eco-friendly batik in the middle of environmentally unsustainable and profit-oriented batik posed a challenge. The State Minister for the Environment and the Ministry of Industry had reported that batik industry was the main contributor of the ecological crisis due to its production waste and there was only small number of merchants who moved to eco-friendly batik. Women who supported eco-friendly batik appeared in the middle of this issue. Eco-friendly batik became a strategy to protect women's domestic sphere as well as the environment. These women fought in their own way (feminine) and transformed it into a power to fight the environmentally-unsustainable batik which brought negative effects towards family, household, and environment.

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