

# Women's Resistance in Cotton Industry: Study on Environmental Degradation in East Sumba

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## Abstract

National Cotton Acceleration Program (Program Akselerasi Kapas Nasional, PAKN) being inceptioned in East Sumba since 2008 has created three forms of resistance among female farmers in Tanamanang Village. The first form of resistance includes referring to the PAKN cotton as "project's cotton," which represents a negative inference, and can be categorized into a form of symbolic resistance. The second resistance is an open resistance since the actions can be observed in the female farmers' daily routines. This form of resistance is done by defying the PAKN rules, such as the farming method and the sales agreement. The third form of resistance can be regarded as assertion resistance, which is done by rejecting the cotton demonstration plot being implemented in their front and back yard.

**Keywords:** women, cotton, resistance, ecofeminism.

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## Introduction

East Sumba, which is located in East Nusa Tenggara, is one of the 4 regencies situated in eastern Sumba Island. With the area covering 7,000.5 km<sup>2</sup>, East Sumba consists of 22 districts comprising 156 villages (East Sumba Central Agency on Statistics, 2013). East Sumba lies in a hilly terrain, distributing 43% of its villages over the hillside and 29% throughout the coastal area. According to the 2011 statistics, the poor population amounts to 72,000, reaching 30.63% from the total population. Since the early 20th century, Waingapu, the capital of East Sumba, has been the urban region having richer dynamic than any other cities in the whole island. More than one-fourth of East Sumba population occupies Waingapu that provides easier access to education, health, and commercial activities. Sumba's airport and seaport located in Waingapu makes the capital city an important gate for business transaction and people from outside and inside Sumba.

In 2012, the number of East Sumba inhabitants reaches 237,956 comprising 115,471 females and 122,485 males. From the statistics, the sex ratio is 106, which means in the region consisting of 100 females, there are 106 males. Furthermore, the people who are illiterate constitute 12.14% of the total inhabitants: Illiterate female inhabitants outnumber the male counterparts, with 13.84% over 10.54%. Meanwhile, the percentage of people who do not go to school amounts to 10.07%, with 12.35% of female inhabitants and 7.88% of male inhabitants. This uneven distribution of literacy between men and women is related to the gender inequality issue that exists within the Sumba culture. Just like in the other patriarchal culture, Sumba families prefer to send their sons to school rather than their daughters. Besides, Sumba people traditionally classify the social status into three classes: aristocrats (*maramba*), freemen (*kabihu*), and slaves (*ata*). This hierarchical social class system, even though has nearly disappeared in the other 3 districts, still evidently exists in East Sumba. Within this social system, Sumba culture does not only give bigger opportunities to men over women, but also differentiates people based on the social class and age. Consequently, East Sumba society perceives that women's social status is lower than men's; slaves are lower than aristocrats and freemen; and, children and unmarried young people are lower than adults.

Related to the gender issue, Sumba women are commonly in charge of housekeeping, weaving (if able to), and raising small livestock, such as chickens and pigs; meanwhile, men serve as decision makers within a household and society. Furthermore, people who have lower social status are traditionally in charge of more laborious chores, such as farming, fetching water, gathering firewood, and shepherding big livestock, such as horses, buffalos, and cattle.

Sixty point twenty seven percent of the working people in East Sumba primarily work in agricultural enterprises (East Sumba Central Agency of Statistics, 2013). However, the agricultural population in East Sumba possesses different characteristics compared to those in the other regions in Indonesia. Commonly, East Sumba farmers can be categorized as dryland farmers<sup>1</sup> since they live in a semi-arid region<sup>2</sup> (Benu, 2011). In such an area, rainfall becomes the key factor within the farming system (Campbell *et al.*, 2002 as cited in Njurumana, 2008). The variability and changing mean annual precipitation in semi-arid regions familiarize the farmers to adapting with unpredictable and ever-changing climate (Fox, 2001). As a survival strategy, the farming population in this area commonly employs a dryland mixed farming system with various husbandry activities (semi-pastoral or called *polipalen* farmers in Indonesia), such as cultivating land, raising livestock, fishing, fish farming, and other profitable activities (Njurumana, 2008)<sup>3</sup>.

These farmers usually utilize polyculture farming, which is to grow multiple crops in the same space simultaneously with a particular pattern. Compared to monoculture farming, polyculture is considered as one of the right methods for dryland area, on which the local people

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1 Even though the definition of dryland farming is still being debated, Benu (2012) argues that in the macro context, all agricultural methods in semi-arid and arid regions are categorized as dryland farming.

2 According to Mudita (2010), the word *arid* in terms of climate refers to a particular condition of mean annual precipitation ratio (involving rainfall, moisture, and snow) to annual potential evapotranspiration (involving evaporation from open water and organisms).

3 In Anthropology, a group possessing those characteristics is called agro-pastoralist, commonly found in Africa.

can rely for agriculture subsistence as well as for balance of nature (Fox, 2001).

### **Ecological Threats of National Cotton Acceleration Program**

National Cotton Acceleration Program (Program Akselerasi Kapas Nasional, PAKN) is an Indonesian government program launched in 2007, aiming to develop the local cotton production (Indonesian Sweetener and Fiber Crops Research Institute, ISFCRI, 2009). The initiation of PAKN is triggered by the rising cotton price on the world market after the World Trade Organization (WTO) ruled against the cotton subsidies in 2006 (Sudaryanto and Hadi, 2009). Being the fifth biggest cotton producing country, Indonesia's textile industry was massively affected, because 99.5% of cotton fiber as the main textile material is still imported (ISFCRI, 2009). This situation urged Indonesian textile enterprises to shift to the domestic cotton (Basuki *et al.*, 2009). Unfortunately, the volume of domestic cotton production from small farmers only contributes to 1,000–2,500 thousand tons or less than 0.5% of the national demand (ISFCRI, 2009). This condition pushed Indonesian government to give a particular attention to the national cotton farming by specifying cotton as one of the prioritized commodities in the plantation revitalization program (*ibid*). In doing so, the government in 2006 conducted a workshop in Surabaya about the effect of cotton subsidies removal on the subsistence of national textile and textile industries. The workshop aims to plan a strategy to increase the domestic cotton production, including the organization of cotton production development; technological support; and resources, such as lands, workers, and infrastructure (*ibid*). In the following year, this workshop was manifested by the launching of PAKN.

During the implementation of PAKN in 2007, the central government was preparing East Nusa Tenggara as “The Cotton Belt of Indonesia” (Directorate General of Estate Crops, Indonesian Ministry of Agriculture, 2012). Among the islands in this province, Sumba had been chosen to initiate PAKN. The government believed that cotton farming development would be successfully implemented by the Sumba people,

considering their weaving custom for women<sup>4</sup>, in addition to the vast availability of lands and supporting climate.<sup>5</sup> This program was also expected to eradicate the poverty in many districts through the provision of an alternative source of household income<sup>6</sup>. Besides, the existence of a commercial cotton company (PT Ade Agro Industri, AAI) operating in East Sumba in 2006 was also considered as a supporting factor of PAKN implementation in Sumba. This commercial company is appointed by the central government to be in charge of providing the cotton seed and managing the cotton production in Sumba<sup>7</sup>. However, after five years, the implementation of PAKN in East Sumba did not meet the expected results.

The Indonesian government highly expects the participation of female farmers in the innovation and implementation of agriculture development programs, because they are the ones who usually serve a significant role in rural agriculture sector. However, in the countries whose agriculture based on technology modernization and global capitalism, all programs carrying the word "development" are considered as a threat for women and environment<sup>8</sup> (Salman, 2007). For example, the studies by Mies (1986) and Shiva (1989) describe how Indian women are exploited and faced with various health problems because of the commercial agriculture, deforestation, and mining that have changed their traditional way of life. As a result, instead of supporting, women frequently disapprove of various development programs that are seen as a threat to their subsistence and harming the balance of nature. It is unfortunate that various forms of women's

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4 <http://202.146.4.119/read/artikel/29867>

5 FloresNews.com; BNI Securities

6 <http://kupang.tribunnews.com/read/artikel/30059/pemprop-ntt-dukung-pengembangan-kapas-di-sumba>

7 FloresNews.com; BNI Securities

8 The environmental issues faced by women in developing countries and those in developed countries are different. In nonindustrial societies, the environmental issues commonly encountered is access to clean water and other resources, in addition to poverty and health issues. Meanwhile, in industrial societies/developed countries, the environmental issues/degradation may not be plainly observable (Salman, 2007).

resistance, which include fighting for their and environmental sustainability, are often “hidden” within the world’s history (Salman, 2007).

The emergence of ecofeminism approach is primarily triggered by the awareness of the central and significant role of women in environmental management. Ecofeminism is derived from two ideologies; “ecology” and “feminism” that share the same objective, which is to “free” the world from any forms of domination (Wulan, 2007). This approach deals with the problems concerning women, natural resources, and environmental sustainability in a deeper and complex means. Ecofeminism, which emerged between the end of 1970s and the early 1980s, is a critic against sciences and modern technologies developing under patriarchal culture, which are considered as a threat to human and nature sustainability (Shiva, 1989). Besides ideology, ecofeminism resistance also appears in the forms of protests and social movements against the recurring degradation of nature, which causes never-ending ecological disasters (Wulan, 2007). However, people—even the women themselves—often do not realize that the actions of women aimed to criticize gender inequality and environmental destruction are forms of “ecofeminism”.

This study, which highlights the implementation of PAKN and the accompanying women’s resistance, is significant, because: Firstly, female farmers are often left out in the introduction and dissemination to various innovation efforts within the agriculture sector, in which they actually hold highly significant role, especially in rural areas. Hence, to determine the success of a particular agriculture program, the women’s opinions on agricultural product development is that of an importance to be considered. Secondly, Indonesia lacks of studies on the resistance of women who come from dryland agriculture population toward a particular development program; whereas, the Indonesian dryland area covers 52.5 million ha, including dryland area with tropical dry climate that is commonly found in eastern Indonesia, and that with tropical wet climate that is commonly found in western Indonesia (Benu, 2011).

Even though there have been enough studies worldwide on women’s resistance (Abu-Lughod, 1990; Kornelsen & Grzybowski,

2006, Ghosh, 2008; Anagol, 2008, Paterson, 2009), there is only a few in Indonesia. Among the few, two studies have been conducted in Bali by Sukeni (2006) and Widiastiti (2002). In her study, Sukeni analyzes a phenomenon of women's resistance in Tejakula District, Buleleng Regency, toward the Keluarga Berencana (KB) program (a government program to control the birthrate in Indonesia) in Bali. Sukeni uses Gramsci, Feminism, and Resistance theories. Another study on women's resistance in Bali was also conducted by Widiastiti (2012), which addresses Balinese women's resistance in Pasekballi, Dawan District, Klungkung Regency toward the creative industry sector. Widiastiti's study uses cultural studies as the main approach. Even though the studies about women's resistance employing ecofeminism approach are still limited, the studies written by Wulan (2007) and Astuti (2012) really helped the researcher in understanding ecofeminism approach. Wulan (2007) highlights the transformative ecofeminism approach in deconstructing a relation between women and the environment. In her study, Wulan analyzes the link between ecology and feminism; rooting the chronology of ecofeminism movements and reviewing various ecofeminism typologies. In particular, Wulan describes how to use transformative ecofeminism approach in achieving gender equality and sustainable environment. Meanwhile, Astuti (2012) emphasizes the women's role in maintaining ecosystem using ecofeminism perspective. The article also elaborates the instances of women's role in sustaining and protecting the nature and environment in many countries, which is done by understanding those countries' local wisdom. Different with two previous studies, this study uses ecofeminism perspective to depict the resistance from dryland female farmers toward the cotton farming development launched by the central government in East Sumba. This study also serves as a preliminary study related to the agrarian transformation within dryland farming population in Sumba. This study examines the previous cotton production development program in the autonomy era as a case study. This study is an explorative study since there has not been a previous study analyzing the same topic and taking place in the same region.

## Women's Price in Cotton Industry

Cotton is the most important natural fiber used as the main material in textile industry around the world. Nowadays, the percentage of natural cotton used in textile industry reaches almost 40%, while synthetic fiber reaches 55% (Proto *et al.*, 2000 as cited in Chapagain *et al.*, 2005). Approximately, 50% of cotton existing worldwide is imported from Asian countries, such as China, India, and Pakistan. In these countries, cotton industry development becomes an important strategy to press the poverty rate in rural areas. Likewise, Mancini (2006) asserts that cotton is the only crop serving as an alternative household income for millions of small farmers in Asia. However, the world's cotton production cannot be separated from the issue of environmental degradation because of the use of various kinds of pesticides, synthetic fertilizers, and chemical substances on the massive cultivation (Goldbach *et al.*, 2003; Mancini, 2006). The damage to cotton crops caused by pests reaching 15% from the world's total cotton production leads to the dependency on chemical pesticides. In Asian countries, the amount of US\$1.5 billion is spent annually for the procurement of chemical products. It is predicted that the use of 20% of insecticide and 30% of pesticide in the whole Asia are applied to cotton crops. This dependency on chemical substances is called as "pesticide treadmill," which describes that the use of pesticides will only produce successful result in the first year, but years later, it will bring a catastrophic disaster to the environment (Jean-Christophe *et al.*, 1999).

This has happened in Thailand and other cotton producing countries around the world (Barducci, 1973; Hearn, 1975; Eveleens, 1983; Matthews, 1989 as cited in *ibid*). "Pesticide treadmill" commonly occurs following some particular pattern and characteristics, including 6 stages: subsistence stage, ecological stage, exploitation stage, crisis stage, disaster stage, and integrated supervision stage (*ibid*). The other similar studies show that this pattern is not only found in Thailand, but also in many cotton producing countries worldwide (Smith, 1969; Falcon and Smith, 1973; Bottrell and Adkisson, 1977 as cited in (*ibid*)). The excessive use of pesticides results in the pests becoming immune, and obviously, environmental degradation (Mancini, 2006). Because the pests are getting immune to pesticides, the population of pest natural

predators will decrease, which will in turn disrupt the natural chain of life and cause some organisms in the verge of extinction. The use of chemical substance in cotton farming also damages the soil's ability to regenerate itself and degrades the quality of water and groundwater (Goldbach *et al.*, 2003; Mancini, 2006). Chapagain *et al.* (2005) stated that in agricultural stage (the cotton farming production), there are three types of effects that would possibly happen: the evaporation of rainfall for cotton growth, the reduction of the discharged groundwater for irrigation, and water pollution caused by the excessive use of chemical fertilizer and pesticide. Chapagain's study also estimates that cotton industry is held responsible for the use of 2.6% water globally. Another environmental issue related to cotton industry is the use of land for cotton farming: If all human outfits in this world are made of cotton, there would not be enough land for agri-food sector (Goldbach *et al.*, 2003).

Meanwhile, the 2012 United Nations Conference on Sustainable Development in Rio concurred that the prioritized global development is a sustainable development, which is the development that meets the needs of present generation without compromising the needs of future generation (World Commission of Environment and Development, 1987). Furthermore, at the minimum level, sustainable development should not endanger the natural system supporting all living things on earth. To achieve sustainable development, one of the factors should be done is to overcome environmental degradation without sacrificing economic development and social justice. The 2005 World Summit on Sustainable Development announced that sustainable development is comprised of three main pillars, which are the economic, social, and environmental aspects that are interlinked and reinforce one another. Sustainable development should not only concentrate on the economic issue, but also social and environmental issues: Thus, cotton industry that supports sustainable development is the one that also supports social development and environmental preservation, instead of focusing only on the economic development. Among the means that can be done to develop cotton production is to apply integrated pest management (Mancini, 2006) and organic agriculture. Organic agriculture has proven to provide a good opportunity for developing

countries as well as contribute to sustainable development (Kilcher, 2007).

Besides the environmental issue, Mancini (2006) also argued that cotton industry is related with social issue, especially the involvement of women and children as labor workers. Cotton industry is one of the labor-intensive industries, especially during growing and harvesting seasons. Meanwhile, the cotton value chain, including textile industry, provides jobs for the general population, which is mostly women, as laborers. For women's enormous contribution in cotton industry, Salman (2007) stated that the weigh of cotton industries is on women's shoulders, because thousands of women laborers worked to manually reap the cotton during harvesting time, which is later used to produce cotton yarn and other end products. Salman estimates that there are approximately 700,000 labors of cotton reaper in Pakistan, consisting of women and children that work during the period of September to December. Meanwhile, Mancini (2006) also states that in India, women that work as cotton reapers often bring along their children while working. However, the crop environment is hazardous because the toxic from pesticide is still attached to the plants (Goldbach *et al.*, 2003, Mancini, 2006). If the labors work for 8-9 hours a day, being exposed to the residue of pesticide, there is a great risk for them to be poisoned. Siegmann's study (2006, as cited in Salman 2007) discovered that 74% women that work as cotton reapers are exposed to pesticide toxic at the intermediate level, while some others suffer at the dangerous level of intoxication. Moreover, Mancini (2006) also mentions that the children of these labor workers also suffer from various health and mental problems caused by pesticide residue. The above discussion shows that global cotton industry is heavily related to women. Even though serving as an alternative source of household income, the women and children labors reaping or processing the cotton have a huge risk of being physically and mentally harmed by the pesticide residue used in commercial cotton industries.

### **Women's Resistance**

The forms of resistance in daily social relationship are considered to be one of the relatively new issues (Gosh, 2008). A study by James

Scott (1981; 1985; 1993) in the Southeast Asia (Burma, Vietnam, and Malaysia) in 1970s highlights the forms of resistance in the daily life of agriculture population. Meanwhile, according to Kerkvliet (2009), opposition or resistance refers to any kind of acts done by a person or a group of people, which expresses anger, dislike, disapproval, or resistance toward anything done by a group of people or an institution having higher social status, which is considered unfair or does not fit with their social values and norms. Through resistance, subordinated people or population struggle to assert their claim on what they believe to be their rights according to the values and norms accepted by most people having equal status with them. Based on Scott and his followers' concept on "everyday forms of peasant resistance", Kerkvliet then developed his concept called "everyday politics of the peasant". Contrary to the common definition of politics, the everyday politics referred by Kerkvliet (2009) is the actions of peasants that are not considered as "propagandistic". However, these actions are actually intended to avoid or resist anything that opposes their ideology and way of life.

Unfortunately, the resistance theories introduced by Scott and Kerkvliet do not take into account the gender issues related to power struggle, and failed to consider the heterogeneity within women population (Ghosh, 2008). Even though unobservable, in reality, women differ in class, social status, race, and ethnicity (Argawal, 1992 as cited in Rao, 2012). Hence, women cannot be classified into only one category, or belong to the same homogenous group based on nationality, or even worldwide (Argawal, 1992 as cited in Gaard, 2011). Upon this heterogeneity concept, Haynes and Praskash (1992) define resistance as a behavior and cultural practice by subordinated group against social hegemony formation. This definition is believed to be able to accommodate various forms of women's resistance. Based on Haynes and Praskash's definition, Anagol's study (2008) develops a definition of women's resistance through analyzing Indian women's resistance during Maharashtra colonial era. This study argues that women's resistance refers to unconscious actions marked by a plan occurring upon gender equality issue in society, which often emerges because of the uneven distribution of power relation between men

and women (Anagol, 2008). From the cultural studies point of view, Holid (2010, as cited in Widiastiti, 2012) mentions that resistance is a subcultural phenomenon that has particular characteristics, natures, forms, and various manifestations.

Meanwhile, on the power struggle under male domination, women's forms of resistance are greatly different from those of men (Gosh, 2008). Anagol (2008) in general classifies three forms of women's resistance: symbolic resistance, assertion resistance, and open resistance. In a study carried out in India, Anagol indicates that symbolic resistance is forms of resistance conducted symbolically, such as through writings, poems, songs, or dances. Anagol points out that during Maharashtra colonial era, Indian women used various literary works as a means to protesting the unequal power relation between men and women. Meanwhile, assertion resistance appears in the forms of real actions done by women to express their existence, without being bold. Assertion resistance also includes women's lawsuit to fight for what they believe to be their rights. Within the context of India during Maharashtra colonialism, a widow could bring lawsuit to stand for their rights since the legal system back then allowed it. Furthermore, open resistance commonly comes to play if the two previous strategies have not met the expectations. Open resistance usually include extreme actions, such as demonstration, bold resistance, even killing others. Anagol (2008) recounts a story of a wife that killed her husband as a means of protest against unequal power relation. Likewise, Holid (2010, as cited in Widiastiti, 2012) also asserts that resistance can be done overtly to resist and even alter the main social structure; but, resistance can also be carried out continuously through social conflicts, negotiation, or even compromise and adaptation.

Besides the aforementioned forms of women's resistance, Anagol (2008) points out that women's resistance is brought forward in various forms depending on the women's culture, custom, education, social structure, politic, and economy. Nonetheless, these various forms of resistance share the same objective, which is to reform the existing system towards the better one for themselves and the society. In Indonesia, Sukeni's study (2006) indicates that the Balinese women's

resistance against the KB program is affirmed by the tradition, belief, and economic factors. This resistance was realized by the refusal to use contraception devices, but using calendar-based contraceptive method instead. Meanwhile, a study by Widiastiti (2012) points out that another resistance of Balinese women was initiated to reform the patriarchal culture in society, especially in the creative industry sector. The women's resistance in Pasekbalu was not only carried out boldly, but done as a massive action aiming to destroy one side of the coin. This resistance is affirmed by the economic, educational, and cultural factors. The results of these resistance movements include the increase of household income, psychological effect, and gender equality.

Using ecofeminism perspective, the assorted forms of women's resistance discussed previously are considered as the women's response toward the gender equality issue, as well as natural and environmental degradation. These kinds of response from women often do not get counted as a struggle over the continuing unequal distribution of power relation. Moreover, Salman (2007) provides the examples of ecofeminism movement carried out by women from many countries, including: Love Canal movement in the US, *Chipko* movement in India, Green Belt movement in Kenya, and reforestation in Bangladesh and Pakistan. The US government had just considered the Love Canal movement as a means of women's resistance against water pollution caused by the industrial sector, when a group of women carried out open resistance by setting fire and planning demonstration, causing some of them put in jail (Seager, 1993 as cited in Salman, 2007). Meanwhile, *Chipko* movement<sup>9</sup> in India was conducted as a spontaneous response from women to protect the trees by hugging the trees that were about to be cut down. Likewise, Green Belt movement in Kenya was an effort toward reforestation, which was conducted in 1977. Nevertheless, Salman (2007) mentions that none of these movements achieved expected results. The Love Canal and Green Belt movements are successfully led by women, who brought their campaigns from scratch to the global-level campaigns. The domino effect of these movements keeps the

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9 *Chipko* means *hug* in Indian.

other movements continue, which become an aspiration to the world population. However, *Chipko* movement, which had gotten huge attention in the beginning, seems to have quieted down a while later. Meanwhile, in Bangladesh and Pakistan, the endeavors to introduce women and environmental issue, for instance in preserving the forest and cotton farms, were mainly supported by institutional donors instead of the efforts of the local women seeking to reform. Because of these phenomena, it is important to differentiate between the professional ecofeminists—which are usually academicians and also often enroll as activists—and the natural ecofeminists, which commonly come from relatively modest background but have extraordinary efforts toward ecosystem preservation with their simple ideas (Andalas, 2013)

### Women's Narratives from Tanamanang Village

To Sumba people, cotton (*Gossypium, sp*), or *kamba* in the local language, is very well-known locally. Even though a legal documentation on the history of cotton farms in Sumba has not been discovered, but a report by *Opperhoofd*<sup>10</sup> placed in Sumba during 1750-1800, mentions that cotton grew in Sumba Island (Wielenga, 1916 as cited in Wellem, 2004). In a report about Sumba, Wielenga, a Dutch missionary, also states that there were, indeed, cotton plants in Sumba, even though Wielenga had not discovered any estate cotton plantation<sup>11</sup>. Cotton usually grew around the house yards in rural areas (*paraingu*). Even though deliberately being planted by the ancestors, cotton in Sumba grew without specific nurture treatment. During old times, Sumba women having the ability to weave made use of cotton fiber as the main material for fabric (ikat, or ikkat weaving technique). However, ever since synthetic fabric was manufactured in 1980s, Sumba weavers have nearly never used cotton fiber for weaving. Since then, cotton crop became less significant for Sumba household income.

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10 Dutch for VOC workers placed in particular regions to supervise.

11 According to Wielenga (1916, as cited in Wellem, 2004), Sumba people did not build cotton farms because they were afraid of being attacked in robbery and war.

In 2008, PAKN was implemented in three Sumba regencies: East Sumba, Central Sumba, and West Sumba (Directorate General of Estate Crops, Indonesian Ministry of Agriculture, 2012). Two years later, in the fiscal year of 2010, the central government widened the PAKN coverage to Southwest Sumba. Thus in 2010, this program had covered all districts in Sumba. Furthermore, the government expected 3,500 ha of estate cotton crops distributed in Sumba Island per 2011, including 1,000 ha in East Sumba, 500 ha in Central Sumba, 500 ha in West Sumba, and 1,500 ha in Southwest Sumba (Directorate General of Estate Crops, Indonesian Ministry of Agriculture, 2012). During 2012, in just East Sumba, the area of estate cotton crops reached 2,250 ha, with the total fund of IDR800 million supported by the Budget Revenue and Expenditure in 2011 and increased to IDR1,250 billion in 2012<sup>12</sup>. In the prime harvest event in 2009 attended by Anton Apriyanto, the incumbent Minister of Agriculture, East Sumba Regent mentioned that most districts in East Sumba have potential to take part in the cotton farming development program<sup>13</sup>.

In 2008, the East Sumba Department of Estate Crops appointed Tanamanang Village as the location of demonstration plots of the cotton farming development program in East Sumba, particularly in Kalionga watershed (*mondu Kalionga*), with the total area of approximately 20 ha. Two groups of farmers living just by the watersheds were appointed to plant cotton seeds to support PAKN<sup>14</sup>. These groups received full supports from the government, which include production facilities and infrastructure. The government even provided 2 units of water pumps, as well as the funds for diesel fuel and gardener. The space of cotton farms depended on the area owned by the farmers, and the wide was determined by each farmer's ability; commonly ranged from 0.5-1 ha. Previously, these areas were used for agri-food farming using polyculture

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12 <http://www.waingapu.com/disbun-sumtim-dampingi-warga-kembangkan-kapas.html>

13 <http://www.waingapu.com/mentan-panen-kapas-perdana-didampingi-lula-kamal.html>

14 Besides being the appointed location to demonstrate the cotton plantation development program, Tanamanang also one of the villages implementing PAKN. There are 2 other groups of farmers receiving social support of cotton seeds in 2008.

farming method. At the end of 2008, the cotton farm areas of these two groups were flooded and the harvested products did not meet the expectation. Once again, in 2009, these groups of farmers were appointed to grow cotton in their *mondu*. Unfortunately, the pest attack also kept the harvest outcomes from meeting the government's target.

The demonstration plots of cotton farming development in Kaliionga watershed shifted the farming pattern of the local people. Previously, the farmers in these two groups planted anything, used any method, and utilized their *mondu* and land for anything; but, since being "appointed" to develop the demonstration plots, the farmers had to spare some area in their land for growing cotton, which narrowed area for growing foodstuffs. Besides, cotton should be planted using particular method instructed by the Department of Estate Crops. Some farmers planted cotton and corn seeds in an intercropping manner, which was done by plotting two lines of corns and 3 lines of cotton. According to the field instructors of the Department of Estate Crops, this was done to prevent the pests from attacking cotton plants. There were also farmers who used monoculture farming by planting cotton throughout their farms. This method kept farmers from planting foodstuffs, because the pests might threaten the cotton crops. However, the farmers came to know that cotton crops are prone to pest attack. Nearly every week, the farmers should spray pesticide<sup>15</sup> from the government. If they ran out of pesticide, they had to buy it to Waingapu, the capital. A tin of pesticide cost IDR75,000, which could be used for a month. After cotton had been harvested, the remaining stems should be cut down and burnt. The government would give another bunch of seeds in the following year. It can be said that the farmers tend to depend on the commercial companies and the government in the procurement of cotton seeds, as well as facilities and infrastructure in the cotton farming. Furthermore, the cotton harvested by the farmers was used as the main material for the national textile industry, especially by PT AAI. Therefore, the farmers should sell their harvested products to

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15 Pesticide is called "*obat hama*" by the local croppers; commonly, most of them do not know the brand, describing the product by the figure of a skull depicted in the tin.

these commercial companies with predetermined price: In 2008, cotton was bought from the farmers with IDR2,000 per kilogram. This shows that the farmers also depended in terms of the cotton price and the target market of their products.

One respondent stated that since her plantation was used for growing cotton, she was no longer able to grow yam, corn, or vegetables. The government discouraged the farmers to grow any other crops because the pests would likely attack cotton and reduce the quality and quantity of the harvested products. As a result, the farmers had to buy vegetables, which could have been harvested from her own land, from the market. Meanwhile, the traditional market (*pranggang*) only operated once a week and was located far from her village, which means she had to spend money on transportation and shopping. Besides, she also felt that she lost the opportunity to earn extra household income, because her land was entirely planted with cotton. When she still grew vegetables and yam in her land, she could sell some of them whenever she needed money. Every Saturday, when the market operated, she brought the harvested crops to be sold. Then, the money was used to buy groceries, such as soap, sugar, coffee, and kerosene. On the other hand, while growing cotton, she could not sell her harvested crops anymore; and, she still had to wait 4-5 months before the cotton could be reaped and collected a lot prior to sale. If the government or cotton industry officers came to collect the cotton at the exact time, the farmers could get the money immediately from the sale. However, the officers' arrival could not be estimated, making the farmers wait too long before the sale. This was worsened because the money from the sale was received by the husbands, which was later usually spent outside the household essentials.

Cotton, which weighs much less than corn, always becomes the main topics of complain within the discussion on PAKN. According to female labors, in producing 1 kg of cotton, they should collect the cotton in a long period of time, consisting of much more amount than that of corn. The respondents described this situation by comparing the harvested corn and cotton collected within a sack with a capacity of 50 kg. Each sack could contain 40-50 kg of corn, while it could only do 30

kg of cotton, even when the cotton was stuffed and pounded with a pestle so that it could fit inside the sack. Moreover, the respondents described that when they still grew corn, they could keep the harvested products as a food supply and sell it to the highest bidders. On the contrary, harvested cotton could not be produced as food, and the respondents had to sell it to predetermined buyers and with a fixed price. The respondents felt that growing corn in a 1 ha area was more profitable than growing cotton within the same area.

Furthermore, all of the farmers would feel itchy while harvesting the cotton because there were many pests attached on the crops. These farmers have complied with the instructions given by the Department of Estate Crops, including applying pesticide to the plants prior to harvest. However, the pesticide covered by the government could not last long within constant use. The farmers finally chose not to use pesticide at all. In the harvest season, the farmers had to immediately pack the cotton inside sacks and store them properly, away from water. These sacks of cotton also prone to fire; thus, the respondents also kept them away from any flammable materials. This worried the respondents as their houses were made of wood: If the sacks of cotton caught fire, it would endanger their family inside the house.

From the discussed issue, the female farmers within the two groups felt burdened by the effect of PAKN. However, their social status within patriarchal culture restrained them from voicing their opinion, especially in the official forums attended by men, government officials, or field instructors. These women only showed what Kerkvliet (2009) presents as the "everyday politics of the peasant" to express their resistance toward their duties within the demonstration plots. This resistance can be classified into several forms. The first one is related to the "project's cotton" or "*kamba proyek*" by the government. The residents of Tanamanang village differentiate cotton (*kamba*) into several varieties, including: *kamba humba* (Sumba cotton), which refers to the local cotton believed to be their ancestors' legacy; *kamba ranga*, which grows wild throughout forest; *kamba jawa*<sup>16</sup> (Javanese cotton), which

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16 In other regions of East Sumba, *kamba jawa* is used in the local language to refer to kapok tree.

refers to a cotton variant distributed by the government in the 1980s<sup>17</sup>; and *kamba hika* from kapok tree, which is used to produce pillows, bolsters, and cotton mattresses. Meanwhile, the cotton varieties for PAKN are hybrid and Kanesia 8 cottons, which are referred to by the local people as project's cotton or *kamba proyek*. Besides differentiating PAKN cotton from the other varieties of cotton well-known among people, the term project's cotton also has negative inference since the word "project" is usually related to an occupation carried out to spend money carelessly, or only favoring a group of people without bringing welfare to society.

Another form of resistance was expressed by planting cotton seeds without adhering to the pattern. The disappointing experience of growing cotton in 2008 encouraged the female farmers to express their disapproval through this resistance in the growing season of 2009. The pattern of 2 lines of corns interspersed with 3 lines of cotton was not complied. This action was also boosted by the fact that PAKN cotton seeds were not delivered on time. Consequently, the farmers planted corns throughout their plantation, without nearly sparing any space for growing cotton. When they finally received the seeds, they only planted them on between the corn crops, or even on the sidelines of the plantation. As a result, the harvested cotton was far less than the government's target. In reality, there existed such thing as an agreement of the demonstration plots, which was announced when the company officers came to "socialize" and "disseminate" the program. One of the "promises" they made was that they would come when it was time to collect the harvested cotton. The farmers would report about the cotton harvest to the field instructors or officers from the Department of Estate Crops, which would in turn contact the officers from the cotton company. These representations from the cotton company would come, collect, and weigh the harvested cotton directly with the farmers' presence. The payment would be processed after the cotton had been weighed. However, in the harvest season of 2008, the harvested cotton

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17 Since 1979, the central government has undertaken efforts to reduce the dependency in importing cotton and increase the domestic cotton production through the Intensification of People's Cotton program or *Intensifikasi Kapas Rakyat (IKR)* in Indonesian. This IKR program was also implemented in Sumba Island in the 1980s.

had piled up for months, but these officers had yet to come and collect. When they finally came, the payment was not immediately processed. The harvested cotton that had been weighed in the farmers' houses, were taken away to be reweighed in the cotton factory; meanwhile, the payment was processed after. One of the respondents was disappointed because the scale when the harvested cotton was weighed in her house was different with that in the factory. Consequently, the sum of money she received was not as much as she had expected. This issue triggered her to defy the rules of cotton farming in the following year, such that the harvested cotton failed to meet the target. She even used the harvested products to replace the worn cotton inside the mattresses and pillows in her house.

The disappointment faced by the female croppers in 2008 and 2009 encouraged them to act out and resist PAKN assertively. They committed not to allow their *mondu* anymore to be the location of cotton demonstration plot in the following fiscal year. Such a commitment can be regarded as the third form of resistance from the female croppers. However, instead of explaining their disappointment and bitter experience toward the cotton demonstration plot, these women argue that the concern toward the flood in *mondu* area is the one underlying their resistance act. This is understandable, because since 2008, their lands, which are located just by the watershed, experience flood every year. This resistance was later supported by the other farming groups, which cause the East Sumba Department of Estate Crops do not extend *mondu* Kalionga as the location of cotton demonstration plot. The department later leased an area of 3 ha, which was not far from the previous demonstration plot location, in which three of its instructors continued to manage the program. In May 2013, flood occurred in Kalionga watershed and destroyed the corn corps in Tanamanang, including the new demonstration plot location on which, until the end of July 2013, there did not seem to be a restoration or renewal.

Various forms of women's resistance in Tanamanang Village discussed above show women's response against the gender inequality happening in society, particularly on the implementation of PAKN that restricted women's access to earn additional household income from agricultural products. If the female farmers could no longer sell their

harvested crops, they would depend a lot on the husbands' earning to make ends meet. Furthermore, they could not immediately receive the money they earned from the cotton farming because their husbands were the ones who obtained the payment. Instead of becoming an additional earning, PAKN is perceived by the women in Tanamanang as the cause they did not have any cash. Besides the response towards gender inequality, women's resistance in Tanamanang also shows their concern towards the sustainability of the balance of nature. Monoculture farming, which is applied in PAKN, has been widely understood as one of the factors responsible for environmental degradation. Even though increasing agricultural products in the harvest season, monoculture farming causes the plants prone to pest attack, such that requires much more chemical fertilizer, insecticide, and pesticide. Once pests attack an area of plants, it would instantly attack wider area. As a consequence, farmers would face crop failure because their crops are destroyed. On the other hand, the traditional polyculture farming well-known among Tanamanang population is able to preserve the balance of nature as well as maintain the sustainability of the environment and the farm's crops.

## **Conclusion**

The implementation of PAKN in East Sumba since 2008 triggered women's resistance in Tanamanang Village. However, instead of employing a bold and destructive movement, this resistance is nearly unobservable because it is blended with their everyday behaviors as farmers. The forms of women's resistance in Tanamanang can be classified into three categories. The first form of resistance was carried out through referring to PAKN cotton as "project's cotton" (*kamba proyek*). The use of this term can be regarded as a form of symbolic resistance since the word "project" attached has a negative inference. The second form can be considered as an open resistance since the actions can be seen from their daily activities. In the context of PAKN implementation in Tanamanang village, the women's resistance was carried out by ignoring the farming method that had been instructed and defying the agreement about the sales of harvested cotton. Therefore, the open resistance in this study is different with the

Anagol's (2008) definition that emphasizes more on the destructive and dangerous forms of resistance. Meanwhile, the third form of resistance can be categorized as an assertion one, because it includes the female croppers' overt protests against PAKN implementation in their village. Instead of trying too hard to be a model group of farmers, these women rejected the cotton demonstration plots in their land.

Although not getting to the court, these forms of resistance assertively depict the role of female farmers in Tanamanang. These three forms of resistance happened simultaneously, albeit distinctive one to another. Hence, there is no form of resistance more prominent than the others, because this study emphasizes the "everyday" actions of women in facing many kinds of injustice. Using an ecofeminism perspective, the various forms of women's resistance in Tanamanang can be viewed as a response against gender and ecological inequality; because, these women were kept from earning additional household income, and manifested their effort toward the balance of nature by resisting monoculture farming and, instead, using traditional polyculture farming that supports sustainable agriculture. Moreover, this study also shows the way natural ecofeminists, who come from agriculture population, struggle against the power relation between the dominating and the dominated in their everyday lives.

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