



URBAN WOMEN'S MOVEMENT FOR ENVIRONMENTAL PROTECTION: TRANSFORMING WASTE INTO A CIRCULAR ECONOMY IN ACEH, INDONESIA

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ABSTRACT

This article explores an environmental awareness movement led by urban women that contributes to the development of a circular economy system. The study employs a descriptive qualitative approach. Data were collected through direct observation, in-depth interviews, and document analysis. Field observations were conducted in Gampong Blang Krueng, Banda Aceh City, Aceh Province. Interviews were conducted with nine informants to gather detailed insights relevant to the research focus. Document analysis was used to complement findings from observations and interviews. The data were analyzed qualitatively through processes of categorization, organization, and descriptive interpretation. The findings reveal that the environmental awareness movement initiated by women particularly through the establishment of a waste bank has led to the development of a circular economy system as a form of sustainable practice. This reflects a strong linkage between women and environmental concern, manifested through collective action. The waste bank in Gampong Blang Krueng exemplifies a circular economic cycle by converting waste into valuable products, thereby creating a sustainable economic loop. The establishment of the waste bank was made possible through partnerships with local universities and the mobilization of social capital within the community.

INTRODUCTION

The movement to preserve the environment through a circular economy has become an intriguing phenomenon to investigate. Within this movement, women's participation in environmental improvement efforts reflects the spirit of equality in global environmental management. As household managers, women contribute significantly to sustainable waste management (Setyawati & Siswanto, 2020; Ankesa, et al., 2016). On one hand, they are actively improving environmental conditions within their homes. On the other hand, they are also creating sources of independent economic income that are managed in a structured manner. This involves cross-sectoral collaboration to ensure the continuity of economic income, so that the environmental improvement movement led by women receives full support (Asteria, 2016). The environmental improvement initiatives initiated by women have a tangible impact in addressing environmental issues through a household-based approach.

So far, studies on environmental improvement efforts carried out by women tend to focus on women's participation in environmental management, economic impacts, and education on waste management. However, this study originates from an environmental awareness movement initiated by women, which receives support from educational institutions, ensuring the sustainability of environmental management. Existing studies indicate that: first, there is community participation in managing waste within their local environment. This has fostered the role of women in protecting cleanliness and maintaining environmental ecosystems (Putri, 2010; Ankesa, et al., 2016; Solihin, et al., 2019). Second, studies have targeted the economic impacts generated when environmental management efforts lead to additional income for the community (Setyawati & Siswanto, 2020; Setiawan & Wijayanti, 2023). Third, existing studies highlight the educational value that women provide while engaging in these activities (Leonard, 2022; Hamimu, et al., 2021; Ibrahim & Yanti, 2021). Nevertheless, despite these studies, there seems to be a lack

of research specifically exploring environmental awareness movements that were initially initiated by women and later supported by educational institutions.

This study aims to address the gaps in existing research by examining how the environmental awareness movement led by women can attract educational institutions to collaborate in waste-based environmental management. Universities, as educational institutions, can significantly impact the strengthening of women's environmental improvement movements and facilitate sustainable empowerment (Anwar & Fitriana, 2021; Rahman & La Patilaiya, 2018; Nalhadi, et al., 2020). Nurhasanah (2017) argues that educational institutions can benefit society by fostering knowledge and creativity. Khair (2021) also asserts that educational institutions serve as platforms for nurturing individuals and guiding them toward improvement. Therefore, educational institutions can have a strategic impact on societal progress through empowerment practices, particularly in the context of environmental stewardship.

This study is based on empirical field facts that demonstrate women's contributions to environmental sustainability. In this context, the role of women in environmental conservation has become increasingly apparent, ultimately gaining support from educational institutions. This support becomes key to ensuring environmental sustainability through collaborative efforts involving both women and educational institutions. Thus, the sustainability of environmental stewardship initiated by women, in collaboration with higher education institutions, has made a significant impact, effectively addressing waste-related environmental issues in their communities.

LITERATURE REVIEW

Ecofeminism is an awareness of the oppression and exploitation of women in society, both in the workplace and within the family, and the conscious efforts by both women and men to change this awareness. Ecofeminism is increasingly important due to the impact of environmental changes on women's existence. Field observations have shown that women play a crucial role in the sustainability of sustainable development. Sustainable development, understood as development that considers the future by controlling resource utilization and environmental

quality, will require the active participation of women in its implementation. Given the relatively balanced population of women and men, as well as women's education, it can be expected that women's involvement in achieving sustainable development will increase.

In this context, women's involvement in the successful achievement of sustainable development should begin with positioning women not only as objects of development, as has often been the case, but also as active subjects of development at both the micro and macro levels. This would prevent the underutilization of the potential of the female population. Making women subjects of development means involving them in the development process of a country. This involvement should not be limited to legislative or parliamentary roles but should also include women's participation as civil society, who will also experience the impacts of development. This effort can be achieved through the integration of gender perspectives in various development processes (Muryani, 2017).

Circular economy is an alternative to the traditional linear economy (take, make, dispose) where we aim to keep resources in use for as long as possible, extracting the maximum value from their use, then recovering and regenerating products and materials at the end of their life cycle. In general, circular economy is defined as "a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops; this can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, recycling, and upcycling" (Geissdoefer in Rayuna, 2017). Of course, the success of implementing a circular economy cannot be achieved without the involvement of the community. It requires the support of behavioral change within society, starting from simple activities carried out by each community member.

Circular economy emphasizes a shift in the paradigm and behavior of society, industry, and government. Governments have begun implementing regulations requiring industries to reuse the waste from their products as raw materials. Products such as plastics and clothing, which have production processes that generate significant carbon emissions, are being encouraged to recycle their

production waste. Technology and regulations are being developed to support the implementation of the circular economy. Meanwhile, society is expected to change its consumption behaviors towards goods. The demand from society for goods will also drive industries to produce more, in line with the increasing global population (Rayuna, 2017).

Social capital is a component of a community or social entity. Whether consciously or unconsciously, a community or social entity possesses what is referred to as community capital. In general, this community capital encompasses four fundamental elements: human capital, produced economic capital, natural capital, and social capital. Simply put, social capital refers to the resources held by groups or individuals within a society. Therefore, social capital is a process within a community that consists of several key elements. First, the existence of social networks (the involvement of group members). Second, shared values. Third, common rules or norms. Fourth, friendship (neighborhood) or social solidarity (social cohesion).

According to Pierre Bourdieu (1986), social capital is no less than a network of relationships that is neither naturally nor socially given but is something that must be cultivated. Social capital is the result of strategic investments by individuals or collectives, consciously or unconsciously acquired through social relationships that can be directly utilized. Based on this, Bourdieu interprets social capital as "...the aggregate of the actual or potential resources which are linked to ... membership in a group—which provides each of its members with the backing of the collectivity owned capital," emphasizing the social networks that provide access to the resources of a community or group. In Bourdieu's understanding, social capital is part of a concept that embodies three fundamental meanings (Zaka, 2018).

RESEARCH METHODS

This study was conducted in Gampong Blang Krueng, Banda Aceh City, Aceh Province. This village is located near both the State Islamic University Ar-Raniry and Syiah Kuala University in Aceh, Indonesia. The location serves as the focus of this research, addressing waste-related issues and the efforts made by individuals and groups, such as the waste bank, to tackle environmental problems in the area.

This study employs a qualitative approach, which aims to explain social phenomena in depth through the holistic collection of data (Rahmat Kriyantono, 2006). The qualitative approach can reveal specific social situations by describing reality in a natural form using words. The qualitative research method is not merely an attempt to describe data holistically, but also involves natural processes to obtain results that align with the phenomena and social situations present in the community (M. Djunaidi Ghony & Fauzan Almanshu, 2004). Therefore, this study uses a qualitative approach with a descriptive type. The goal is to provide a systematic, factual, and accurate description of the facts and characteristics occurring in the research object.

The data for this research is sourced from observations, interviews, and documents. Observation is a technique widely used by social scientists to obtain facts about the real world encountered in the field (Sugiyono, 2017). This activity involves observing the research object to obtain more accurate information about the aspects under investigation, specifically how the environmental care movement through circular economy is practiced by urban women. Interviewing is one of the qualitative data collection techniques conducted using questions prepared by the researcher for the informants. This study employs semi-structured interviews for data collection. The researcher prepares a systematic set of questions and asks the informants for their opinions regarding the research focus.

The researcher selected nine informants to provide the necessary data and information. These informants include Rama Herawati, Azwar, Azizah Nazar, Teuku Muslim, Indra Sari, Fahrina, Sakdiyah, Teuku Badlisyah, and Fegi Andriani. Seven of them are residents of Gampong Blang Krueng, and two are representatives from universities.

Document study refers to records of past events that can be used as data sources. Documents can take the form of writings, images, or monumental works of an individual. Written documents include diaries, newspapers, regulations, and policies. Document forms also include images, sculptures, films, and others. Document study complements the use of observation and interview methods in qualitative research (Sugiyono, 2017).

Data analysis in this study was conducted qualitatively, where the researcher sorts the data collected from the field, categorizes it, and describes the data through interpretation to derive meanings from social reality. The data is then concluded in accordance with the object and context of the research focus.

RESULT AND DISCUSSION

4.1 Women's Waste Awareness Movement in Gampong Blang Krueng

Gampong Blang Krueng serves as a transmission hub for knowledge, as it is located near individuals with high intellectual capacity. This is due to its proximity to two major universities: the State Islamic University of Ar-Raniry and Syiah Kuala University. As a village often used as a residential complex for university lecturers, the presence of waste detracts from the image of intellectualism itself. As stated by Mrs. Rama Herawati, the founder of the waste bank:

"I established the waste bank because I was concerned about the condition of the village, which was dirty, even though Gampong Blang Krueng is home to many lecturers and is close to the university. If our village is dirty, it certainly creates an unpleasant impression. Furthermore, processing waste into organic fertilizer is the right solution, which is also beneficial for the plants." (Interview, 09/02/2021).

The information conveyed reflects the concerns of the Blang Krueng community regarding waste in the midst of intellectual activity. The phrase "lecturers' housing" implies that waste has become an adversary, considering that lecturers, as intellectuals, should be aware of waste issues. However, the large amount of waste in the lecturers' residential complex became a source of concern for Rama Herawati, prompting her to initiate a waste care movement. A similar opinion was also expressed by Teuku Badlisyah, a lecturer at UIN Ar-Raniry:

"I am a lecturer and a native resident of Blang Krueng. Since the beginning, when Gampong Blang Krueng was turned into a housing complex for lecturers, waste has been an issue that, frankly, is unpleasant to see. When the lecturers started living here, we also faced communication challenges, as many of them are from outside the area. This communication barrier affects the low participation in community efforts. It's as if they just live here, stay at home, and work, and that's it. Therefore, the attention towards the environment of Gampong Blang Krueng is low. This is quite disheartening considering that lecturers are intellectuals. I am very grateful for the movement initiated by Mrs.

Rama Herawati, who has started the waste care movement." (Interview, 11/02/2021).

Based on the interview above, it shows that communication is a factor influencing participation in communal work. The large amount of household waste being discarded indiscriminately without regard to environmental aspects, as well as the lack of integration between local residents and newcomers in Blang Krueng, become obstacles in addressing the waste problem. Therefore, the environmental care movement initiated by Mrs. Rama Herawati has made a significant contribution to encouraging community participation in addressing the waste issue.

In 2010, Rama Herawati, along with other housewives, took the initiative to sort waste for the management of useful items. Due to the high participation from housewives in waste care, Mrs. Rama Herawati formed a waste management group called *Kelompok Usaha Bersama (KUB) Pesat*. This group focuses on handling household waste for the Blang Krueng housing complex, specifically in the Cot Sibati sub-village. The community emerged due to the concern and discomfort of seeing residents habitually disposing of waste irresponsibly. Trash was scattered everywhere and poorly managed, even though Cot Sibati is a housing complex for academics. At the beginning of its movement, KUB Pesat managed to involve around 40 households, and the number has continued to grow year by year.

Waste sorting becomes essential in the process of organic waste being turned into compost and inorganic waste being used for handicrafts. This waste sorting method received a positive response from the community, especially since many of them are also gardeners. As stated by Azwar, the secretary of Gampong Blang Krueng:

"The waste sorting conducted by KUB Pesat produces organic fertilizer that benefits the community of Gampong Blang Krueng. Looking at the profile of Gampong Blang Krueng, about 45% of the population are gardeners and farmers. Therefore, the organic fertilizer developed by KUB PESAT becomes a useful product for the people of Blang Krueng" (Interview, 11/02/2021).

The same opinion was also conveyed by Azizah Nazar as a resident of Gampong Blang Krueng:

"The fertilizer at KUB Pesat is really beneficial for us, and the price is very cheap with plenty of supply available. The price of compost fertilizer here is IDR 3,000

per kilogram and liquid fertilizer is IDR 10,000 per liter. If I buy it elsewhere, it could cost up to IDR 5,000 per kilogram for the compost. So for me, besides being nearby, the compost fertilizer from Blang Krueng also supports the village itself" (Interview, 11/02/2021).

The explanation above shows that there is support from the Blang Krueng community for purchasing fertilizers from their own village as a form of support for Gampong Blang Krueng. Thus, an interesting aspect of the movement initiated by Ibu Rama Herawati, which established a circular economy "by the community, for the community," is that the product has been well received by the community. Until now, Ibu Rama Herawati is recognized by the Blang Krueng community as an environmental hero. KUB PESAT, which was established in 2010 by Ibu Rama Herawati, has seen a continuous increase in the number of households involved, reaching 115 households. In 2015, the Gampong Blang Krueng Village-Owned Enterprise (BUMG) initiated an effort to integrate KUB PESAT as one of the business units of BUMG Blang Krueng. This initiative is outlined in Qanun Gampong Blang Krueng No. 4 of 2015 concerning the Management of BUMG Blang Krueng. The scope of activities includes household waste collection, organic and inorganic waste processing, weekly waste savings, and other waste management efforts.

4.2 Waste Bank as an Environmental Conservation Model Based on Circular Economy

To support the KUB PESAT initiative spearheaded by Mrs. Rama Herawati, the establishment of a waste bank has emerged as a viable solution to the environmental issues in Blang Krueng. The waste bank serves as a strategic approach to waste management aimed at realizing a circular economy. Prior to its establishment, household waste in the area was unmanaged—typically discarded or burned. With the presence of the waste bank, waste management has become more organized and effective, providing a sustainable solution to the ongoing waste problem.

In 2017, KUB PESAT had 64 active members who regularly deposited waste at the waste bank. The positive response from the community in supporting environmental preservation became a key factor in the establishment of the waste

bank. As stated by Teuku Muslim, the village head (Keuchik) of Gampong Blang Krueng:

"The waste bank is one of the business units under the management of the Gampong-Owned Enterprise (BUMG). Therefore, it is the government's responsibility to promote the waste bank to the community through group discussions and by involving all village officials and hamlet leaders. The Gampong government also disseminates information about the waste bank through social media platforms such as WhatsApp, Facebook, and YouTube" (Interview, 11/02/2021),

The interview above demonstrates the support provided by the Gampong government for the waste bank managed by BUMG Blang Krueng, both through Focus Group Discussions (FGDs) and via social media platforms. A similar view was also expressed by Indra Sari, the Head of BUMG Blang Krueng:

"The establishment of the waste bank in Gampong Blang Krueng has changed the community's mindset regarding waste. It is hoped that the community will benefit from the presence of the waste bank—not only in terms of environmental cleanliness, but also through the economic value that waste can generate and its potential for reuse by the community" (Interview, 11/02/2021).

The waste bank not only holds economic value but also produces compost fertilizer as one of its outputs, which can be utilized by the community. This benefit has become a key motivation for residents of Gampong Blang Krueng to participate in waste collection and sorting activities. The sorted waste is categorized into organic and inorganic materials, then placed in front of each house along with the owner's identification. Waste collection officers then record the data and transport the waste to the waste bank as a central collection point. Hence, the waste bank serves multiple functions—educational, empowering, economic, and environmental. Although the financial gains may be modest, the improvement in environmental cleanliness is one of the main incentives for community participation. As noted by Azizah Nazar, a resident of Gampong Blang Krueng:

"The presence of the waste bank in Gampong Blang Krueng has brought numerous benefits, both economically and educationally. Even the children in the village are learning to become more aware of waste issues. In my view, the commitment of the waste bank's management has left a strong impression on the community in addressing household waste problems through each of the bank's programs" (Interview, 17/02/2021).

Organic waste (wet waste) is collected in a separate designated area due to its potential odor, and is then processed and fermented into compost fertilizer. Similarly, inorganic waste is sorted and cleaned before being shredded into plastic pellets. The waste bank's handling practices must adhere to Standard Operating Procedures (SOPs). These SOPs regulate the provision of land and composting facilities. Additionally, each member is required to provide two waste bins in front of their house (one for organic and one for inorganic waste). The waste bank officers are responsible for educating each household about composting to convert waste into valuable resources, with weekly weighing to be recorded as part of the members' savings. As members, they must place their household waste in the bins by 8:00 AM daily. To accommodate the workforce for waste collection, sorting, and processing, members are required to pay a monthly contribution of IDR 30,000. The waste collection officers will pick up the waste daily between 9:00 AM and 12:00 PM. Of the IDR 30,000 monthly fee per household, IDR 25,000 goes to the waste collector, and IDR 5,000 is allocated to the waste bank unit. Each waste collector is also provided with IDR 10,000 daily to cover transportation costs.

After all the waste has been processed and converted into money, the funds will be distributed to the members who have deposited their waste at the waste bank every three months. In summary, there are several stages that the waste bank management must follow, including: Every Saturday, the waste bank staff will announce to the community through the mosque that waste collection will be conducted at the homes of registered members. Each waste bank member is responsible for sorting their household waste into organic and inorganic materials. The waste, along with the owner's identification, will be collected from in front of the house by the waste bank staff. The collected waste will be brought to the waste bank for further processing. At the waste bank, the waste along with the household identification will be weighed and recorded. The sorted waste will be processed: inorganic materials, such as plastic bottles, will be shredded into plastic pellets, while organic waste will be converted into compost fertilizer. After the compost is sold to collectors, the funds will then be disbursed to the members, with the distribution taking place either every six months or annually, depending on the amount of waste deposited.

The waste bank's concern for the environmental issues in Gampong Blang Krueng not only addresses environmental problems but also provides income for the community. Based on the explanation above and the findings from the field research, the researcher discovered that there are at least two contributions: the aspects of awareness and circular economy. Regarding the awareness aspect, the presence of the waste bank has fostered a sense of responsibility among residents to collectively combat waste. As stated by Mrs. Fahrina (a housewife):

"I have been a member of the waste bank for two years. Besides the fact that there is income to be gained from being a member, the waste bank's activities have had a positive impact by raising awareness among the community about waste issues. Moreover, it has strengthened the bonds of fellowship with other community members who care about waste management. Additionally, the children have also become enthusiastic about saving through this waste bank movement" (Interview, 13/02/2021).

The emergence of community awareness about waste has indirectly expanded knowledge, which can then be passed on to their children. In this way, educating children to become individuals who care about waste from an economic perspective will encourage them to develop a habit of saving through waste management. The second aspect is the circular economy. The process carried out by the waste bank management reflects the principles of the circular economy for the community of Gampong Blang Krueng. The circular economy becomes evident when the waste produced by the community is converted back into money, which can then be used to support the local economy. As stated by Mrs. Sakdiyah (a housewife):

"Since joining the waste bank, I have been eager to help address the environmental issues in Gampong Blang Krueng. Household waste is well managed, and I also receive savings from my waste deposits, amounting to IDR 35,000 every 6 months. The amount may not be significant, but the most important thing is that the presence of the waste bank helps manage household waste effectively. Additionally, the compost fertilizer produced benefits the community, especially those who are involved in gardening in Gampong Blang Krueng" (Interview, 12/02/2021).

The circular economy explained in the interview above provides benefits not only in the form of money but also compost that can be utilized by the community. Therefore, the circular economy, "from the community, for the community," through

the waste bank becomes a key product for the residents, as its benefits are directly enjoyed by the people of Gampong Blang Krueng.

4.3 University Collaboration in Realizing the Environmental Movement

The success of the waste bank as part of BUMG Blang Krueng's initiatives is closely linked to its collaboration with two prominent universities in Aceh, namely Syiah Kuala University (USK) and UIN Ar-Raniry. This collaboration is further supported by the geographical location of Gampong Blang Krueng, which is close to both UIN Ar-Raniry and USK, making it easier to engage with highly intellectual individuals. When Blang Krueng was awarded the title of Best BUMDES at the national level in 2016, several students and academics visited BUMG Blang Krueng. As stated by Teuku Indra Sari, the Manager of BUMG Blang Krueng:

"The benefits felt by BUMG Blang Krueng from the presence of students include research that provides valuable suggestions for evaluation, as well as promoting BUMG Blang Krueng's products on social media, such as the Keukarah cake. We are very open to students and academics, and even the mentor of Gampong Blang Krueng, Bang Badli, is also an educator at UIN Ar-Raniry" (Interview, 13/02/2021).

The openness of Gampong to students has become a key asset for Gampong Blang Krueng in developing its BUMG business unit. Similarly, the waste bank issue at BUMG Blang Krueng was formed through the collaboration between the campus and the village. Initially, the waste bank was a community service program by Mr. Ashabul Anhar, a lecturer from the Faculty of Agriculture at Syiah Kuala University (Unsyiah), and Mr. Teuku Badlisyah, a lecturer from the Faculty of Chemistry Education at UIN Ar-Raniry, who also happened to be the Secretary of Gampong and is currently a member of the Supervisory Board of BUMG Blang Krueng. This community service initiative resulted in the creation of a machine capable of processing waste into organic fertilizer, which benefits local agriculture.

As a result of this research, in 2016, a waste bank business unit was established, headed by Mrs. Rama Herawati. Mrs. Rama is the wife of Mr. Ashabul Anhar, as stated by Mrs. Rama:

"Initially, before it was named the waste bank, it was called KUB PESAT, which was established in 2010. We became concerned with the large amount of waste in Gampong Blang Krueng, especially during social events like Maulid

and others, where the waste was overwhelming. Given my background in agriculture, I initiated the idea of processing the waste into organic fertilizer that would benefit Gampong Blang Krueng. Prior to this, my husband, through a community service program from the Faculty of Agriculture at Syiah Kuala University, who also happens to be a lecturer there, helped develop a machine to manage waste, which has been very useful for the waste bank business unit at BUMG Blang Krueng. I learned a lot from him about how to process waste through the waste bank when I became the Head of the Waste Bank Business Unit at BUMG Blang Krueng. In 2016, KUB PESAT officially became the waste bank business unit of Syiah Kuala University" (Interview, 09/02/2021).

The information above demonstrates the dedication of Mrs. Rama and her husband in managing waste. Their involvement, along with the contributions from the campus, played a significant role in the establishment of BUMG Blang Krueng. As the founder of the waste bank, Mrs. Rama did not work alone; she also invited students from both Syiah Kuala University (USK) and UIN Ar-Raniry to learn about waste management through the Environmental Awareness Community at Unsyiah. As stated by Mrs. Rama Herawati:

"In its management, I often invite students to continue to love the environment through waste management. In my opinion, it is very important for students to care about waste, and the right platform for this is through the waste bank. Indra Sari, as the manager of BUMG, is very open to the presence of students who come to learn about waste management at BUMG Blang Krueng" (14/02/2021).

The openness of Indra Sari, as the manager of BUMG Blang Krueng, to students has led to high participation from students, both from UIN Ar-Raniry and USK. He even mentioned that the students themselves contributed to the purchase of a rickshaw to transport waste for the Blang Krueng waste bank.

The efforts of Mrs. Rama and the academics in tackling waste through the establishment of the waste bank have proven to be the right solution and have brought benefits in terms of economy, environment, and education. Moreover, with the establishment of the Unsyiah Waste Bank (BSU), every morning, the waste collectors from BSU not only collect waste from Unsyiah Campus but also from Gampong Blang Krueng. This is because, even though Mrs. Rama Herawati became the head of the Unsyiah Waste Bank in 2019 and has been active ever since, the name of the BUMG Blang Krueng Waste Bank has slightly declined. However, due to her dedication and love for Gampong Blang Krueng, she remains actively

involved in collecting waste from the village. To this day, Gampong Blang Krueng is one of the villages in Greater Aceh that still does not have a waste collection truck. As stated by Mrs. Rama Herawati, the head of the waste bank:

"This collaboration came about because both the waste bank at BUMG Gampong Blang Krueng and the Unsyiah Waste Bank have the same leader, which is me. My love for Gampong Blang Krueng has made me continue to manage the waste at BUMG Blang Krueng even though I am now the head of BSU. I believe that the intellectual environment in the world of education can solve the waste problem. That's why now, the waste from BUMG Blang Krueng is being transported to the Unsyiah Waste Bank" (Interview, 09/02/2021).

The fact that Mrs. Rama Herawati holds the position of head of the Unsyiah Waste Bank (BSU) did not receive any negative response from the BUMG Blang Krueng apparatus. On the contrary, they view this as a collaborative process between the village and the university, where both the community and students can participate in the waste bank activities together to be further processed at BSU.

Mrs. Rama Herawati's attention as a woman to the environmental movement has made Gampong Blang Krueng not only successful in terms of business but also successful in making a positive impact on the environment through the circular economy model. The movement of women's environmental awareness is part of the feminist movement, viewed from an ecological perspective (Yasin, 2021). Ecofeminism has become an important focus in environmental studies because environmental care is commonly associated with Non-Governmental Organizations (NGOs), both central and local governments, and universities (Astuti, 2012). However, on the other hand, women are always linked to nature and the environment, such as the metaphor of the Earth as Mother Earth, flowers, rice, and the moon (Nurhasanah, 2019). This metaphorical language implies that there is a strong connection between women's issues and the environment. Ecofeminism is often regarded as part of cultural feminism (Astuti, 2012).

Karen J. Warren (in Maulana, 2019), states that it is not surprising if the environment is associated with women, given that society is always shaped by values, beliefs, education, and behaviors that seem to exist within a patriarchal "top-down" framework. Warren (in Susilo, 2016) believes that hierarchical and dualistic thinking is a masculine way of thinking, which threatens the safety of both women

and the environment. This is also experienced by Mrs. Rama Herawati, who initiated the environmental movement by establishing KUB-PESAT, an idea that came from her own initiative along with other housewives (IRT) who were concerned about the dirty and smelly environmental conditions. The concern about the environment came from a woman. Mrs. Rama Herawati's movement demonstrates that women play an important role in the environment. When they are placed in domestic roles, they tend to interact more frequently with the environment around their homes. Warren (in Fahimah, 2017:11) even states firmly that "thus, women, because they are characterized similarly to nature, are caregivers, protectors, and preservers of the environment".

One of the outputs of KUB-PESAT is the establishment of the waste bank, which remains one of the business units in BUMG Blang Krueng. The waste bank has become part of the circular economy. According to the Ellen MacArthur Foundation in Nurmalitasari (2022), circular economy is a system that can address the high levels of waste and pollution through economic activities that minimize waste and pollution, such as circulating products and materials at high value and regenerating nature. Furthermore, Mishra, et.al (2020) states that the circular economy aims to maximize the product lifecycle, from resource selection, production, consumption, to disposal, by promoting practices such as zero-waste design, reuse, and repair of various resources. Rama Herawati, as the head of KUB-PESAT, believes that waste is actually a by-product that can be transformed into something productive for the community, both as part of waste awareness based on the economy through the waste bank and as compost products made from organic waste, which are useful for the farmers in Blang Krueng.

The waste bank can be considered as part of the circular economy because it fulfills the stages of the circular economy. As mentioned by Colucci (2021), the stages of implementing the circular economy consist of resources, design, production, retail, consumption, and end of life. Furthermore, the application of the circular economy in these six stages is as follows:

Table 1. Implementation of the circular economy

No.	Stages	Explanation
1	Resources (raw material level)	Bocken (2016) said that the circular economy must pay attention to resource efficiency and use fewer resources to make products. This statement differs from the reality of the waste bank in Gampong Blang Krueng, where the waste bank was formed due to the large number of household waste that is not managed as a resource in creating a waste bank, so one of its outputs is compost. Therefore, the more waste customers are members of the waste bank program, the more production from waste becomes fertilizer. So, waste is no longer understood as waste but has become a resource for the Gampong Blang Krueng waste bank.
2	Design (product design)	This waste bank product design is through a waste processing machine into fertilizer. This design initially came from the campus academics' social service program in Gampong Blang Krueng. This waste treatment product is also designed to be durable and has a long service life to reduce public consumption. So until now, after the Gampong Blang Krueng waste bank became part of the Unsyiah waste bank, the role of the campus has become important in the maintenance of waste processing equipment.
3	Production (production stage)	This part of the production is carried out in a location far from community and student

		activities. To avoid various pollution such as odours and sounds from the engine. In addition, in the production process, there are very few chemicals. Even around the waste processing machine, there are also a lot of gardens and trees that directly use compost fertilizer from processed waste.
4	Retail (Sales Stage)	At the sales stage, the products sold from waste processing through the waste bank system are compost fertilizers. The price of compost here is Rp. 3,000 per kilogram and liquid fertilizer Rp. 10,000 per litre. This price is more expensive if bought elsewhere, which is Rp.5,000 per kilogram. This sales stage is interesting because the ones who profit are waste bank managers and customers who collect waste, so the waste bank is a community-based circular economy system.
5	Consumption (stage of consumption)	Pada tahap ini, sampah yang telah diolah menjadi pupuk kompos dikonsumsi oleh masyarakat lokal Gampong Blang Krueng yang sebagian berprofesi sebagai petani. Bank sampah Gampong Blang Krueng dianggap sebagai solusi dari permasalahan mahal nya harga pupuk yang saat ini melanda petani-petani di Indonesia (Nugroho, 2022; Victoria, 2023); l'thisom, 2023).
6	End of life (tahap akhir masa pakai)	At this stage, the circular economy can be implemented by considering other alternatives to throwing away products, such as reusing the recycling process. In the case of this waste bank, waste processing with the birth of

		compost fertilizer will return to nature as part of replanting in support of the environment so that no waste is disposed of from circular economy activities through waste banks.
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Source: Author's analysis based on Colucci's views (2021)

The collaboration between the village (Gampong) and the campus in realizing the circular economy through the waste bank system is part of social capital. Based on the literature found, studies on social capital are generally closely related to business and political issues. However, what is interesting when studying the circular economy in Gampong Blang Krueng is the role of social capital in the establishment of the waste bank in Gampong Blang Krueng. Gampong Blang Krueng is indeed located near Syiah Kuala University and UIN Ar-ranirry. This location becomes an asset for Gampong Blang Krueng because it is surrounded by people with high intellectual capacity (Rizki, 2023).

Thus, in waste management, Rama Herawati did not work alone but also invited students to join the Environmental Awareness Community at USK. The proximity between the Gampong and the campus is part of the social capital that creates relationships with academics. As Bourdieu stated in Rizki (2023), social capital is the total of both actual and potential resources related to possessing institutional relationship networks based on mutual acquaintance and recognition. In other words, by becoming a member of a group, the group will gain support from the collective capital it possesses. Furthermore, Bourdieu explains that the amount of social capital a member of a group has depends on the quantity and quality of relationship networks they can create, as well as the volume of economic, cultural, and social capital each individual within the network possesses. Therefore, Bourdieu (in Rizki, 2023) states that capital is always cumulative, meaning that a capital cannot stand alone without the presence of other capitals, such as cultural and symbolic capital.

CONCLUSION

The discussion about Rama Herawati's role in establishing a waste bank in Gampong Blang Krueng underscores the significance of women's participation and

the collaboration between local communities and academic institutions in environmental preservation efforts. Four key findings emerged from this study. The first is the role of ecofeminism, which emphasizes the vital role of women in the environmental movement and aligns with the notion of women being closely tied to nature. This demonstrates the strong connection between women and environmental concern. The second is the circular economy model, which illustrates the sustainability of the waste bank business in Gampong Blang Krueng as a practical example of a circular economy. This cycle turns waste into valuable products, fostering a sustainable economic loop. The third finding is the importance of collaboration with partners such as universities in initiating and operating waste banks, facilitating knowledge and resource exchange to address environmental challenges. Lastly, social capital, fostered by the strong relationships between the community and the campus, generates substantial social capital, enabling knowledge exchange, student involvement, and support for environmental initiatives.

This study, however, has limitations in analyzing the engagement of women, as the informants are all married women. Future research on the same topic could focus on unmarried women's involvement as environmental advocates. This would provide insights into how women from diverse backgrounds can actively contribute to environmental care in the context of climate change.

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