

Women's Empowerment and Its Impact on Women's Role in Adaptation to Climate Change

Citra Indah Lestari, MSc International Development, University of Birmingham, the United Kingdom / Project Communication Manager of The Partnership for Governance Reform, Indonesia

citra.ilestari@gmail.com

+62811934611

Torina Parkview Kav.27, Jalan Pasir No.145, Ciganjur, Jagakarsa, Jakarta Selatan DKI Jakarta, Indonesia

Summary:

Men and women react differently to climate change. Women cope to adapt to fulfill the immediate need of their household, to make sure their family are fed and healthy, whilst men tend to rely on long term political solution or migrating. The difference reaction reflects different needs between women and men in adaptation to climate change. Women's reaction is more about family immediate daily needs, while men tend to think about longer term needs. Women rely more on the availability of natural resources to fulfill family's daily need and food security. However, women's control over natural resources management often limited. Moreover, their control over decision making on supports or training that are most needed by the community to adapt to climate change often hampered by gendered and class power relations (Brockhaus & Djoudi, 2011).

This paper questioned how women's empowerment initiatives bring impacts to the involvement of village women in addressing their immediate needs to cope with climate change, and to receive equal benefits with men.

The findings were then analyzed using the women's empowerment framework by Sara Longwe (March et al., 1999), which argues that women's development will be achieved through five levels of empowerment, which are welfare, access, conscientisation, participation and control. It finds that women's empowerment is slowly progressing, pushed by affirmative actions from development projects. However, the strong perception of the people on the differentiation of women's and men's role in development strongly affects the achievement of women's empowerment. The level of empowerment affects women's control over decision making on adaptation to climate change activities outside domestic issues, such as the management of natural resources and land rehabilitation.

Nevertheless, as the paper captures women's substantial role in making decisions on household issues related to education, health and immediate needs of the family, the paper concludes by suggesting that women are the potential agent of change in the effort of villages to adapt to climate change, especially to safeguard their family. It is acknowledged, however, that limitation of women's involvement in village's issues outside household's territory may exclude women and children from the benefit of adaptation to climate change programs, especially if it is related to power over the management of natural resources and land ownership.

Introduction

Indonesia is a home for one of the largest rainforest in the world, with thousands of animal and plants live in it, and millions of people depend their livelihood on it. However, Indonesia is also one of ten biggest emitters of greenhouse gases which most of them have resulted from forest fires (UNFCCC, 2017; WRI, 2017). Therefore, Indonesia is extremely vulnerable to climate change, especially people who live in a remote rural area. Not only vulnerable to

climate-change-related impact, but also because of the low socioeconomic capacity of rural people, especially the poor. Exposed to sea level rise, high tide, or extreme weather, the community often does not have adequate resources to adapt to climate change, and to find innovative solutions and alternative livelihoods.

Indonesia pursues sustainable development from the periphery, by empowering villages to strengthen its economic potential and basic services, including its ability to adapt to climate change (Bappenas, 2015). In 2014, Indonesia enacted Village Law that allows the villagers to decide their own development activities. Based on the law, the national and local government entitled to provide village grant up to \$ 75,000 to each village each year. The grant can be used for any development activities, agreed by the community, to address their local problem, including to initiate adaptation and mitigation efforts (The RCA team, 2016).

Various pilot projects to mainstream adaptation and mitigation efforts in village law have been carried out with tremendous support from various development agencies. Such projects including training for a community in renewable energy, assistance to deploy micro-hydro power, as well as exploring the opportunity in low carbon economy through preceded programs of the village law, PNPM, the National Program for Community Empowerment of which the principles and mechanisms are followed by the Village Law.

However, it is still questionable whether women and men receive equal benefits from such efforts, as climate change brings different impact to women and men. Availability of natural resources affects more to women, as they tend to depend more on it for their daily life to fulfil their livelihood and food security (Brockhaus & Djoudi, 2011). It is also questionable whether the available adaptation efforts to climate change taking into account views of women on what they need to adapt to climate-related changes that maybe occurred to their family and whether women are involved in decision-making process in the use of village fund; involved in trainings related to green economy or adaptation to climate change activities; which in the end will receive equal benefits with men.

This paper examines the impacts of women's empowerment initiatives in the involvement of women in the village development, and in addressing women's needs to adapt to climate change. It does so by analyzing study cases in two different regions in Indonesia, Central Java and North Sulawesi, looking at the perceptions of and actual practice of women's empowerment and participation in village development agenda, including the adaptation to the climate change.

Is Adaptation to Climate Change Gender Neutral?

The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as "an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (IPCC, 2001). Studies conducted by IPCC suggests that adverse impacts of climate change will affect community with the least resources and capacity to adapt (IPCC, 2001; Tompkins and Adger, 2004). It means vulnerability to climate change will be close to poverty issue and marginalized people, including women. UNDP Human Development Report (1995, p.4) stated that "Poverty has a woman's face", as 70% of people living in poverty are women. Therefore, development is not gender neutral. Gender mainstreaming in development started in the 1970s, following a study conducted by Ester Boserup titled 'Women's Role in Economic Development' arguing development may have benefited only men and had adverse effects on women (Karl, 1995).

Following Boserup's findings, various approaches to mainstream women as one of the principal issues in development interventions were developed, namely Women in

Development (WID) approach and Gender and Development (GAD) approach (March, 1999; Karl, 1995; Cornwall, 2007). "Green" version of these approaches also emerged, such as Women, Environment and Development (WED) and Gender, Environment and Development (GED), which contribute to women's involvement in projects related to environmental conservation and adaptation to climate change (Leach, 2008).

As the adaptation to climate change closely related to poverty and vulnerability, it is argued that adaptation to climate change is not gender neutral. A various study in the past decade argues that women and men react differently to climate change. Women adapt by fulfilling the immediate need of their household, to make sure their family are fed and healthy, whilst men tend to rely on a long term political solution or migrating (Brockhaus & Djoudi, 2011). Women highly dependent on natural resources, including land, forest and water (Tompkins and Adger, 2004; Brockhaus & Djoudi, 2011).

However, their control over and access to these resources tends to socially restricted or hindered by patriarchal power relations (Tompkins and Adger, 2004). In addition, studies in various contexts also suggest that women's participation in decision making over land and natural resources is limited. The limitation of women's power may become problematic for women to cope with climate change when women hampered by little choice they have when the family needs conflicts with the function or availability of village's natural resources (Brockhaus & Djoudi, 2011).

Nevertheless, series of evidence shows that women possess knowledge, control and abilities to manage natural resource management (Brockhaus & Djoudi, 2011). This has especially occurred where ecosystem based adaptation approach is implemented. Such approach that takes into account the available natural resources and potential as a contribution of the ecosystem in reducing communities' vulnerability to climate change (Vignola et al. 2009). The approach, when integrated with community-based adaptation, will potentially address the need and priorities of the community, especially the women and marginalized groups (Colls et al. 2009).

Brockhaus & Djoudi (2011) argument that women's reaction to climate change, as well as their reliance on natural resources, formulate specific abilities and knowledge to adapt to climate change. Such knowledge that may transform women's role to be the agent of change in the society to develop and implement adaptation strategy in their village. This paper examines a project with community-based adaptation approach, PNPM, to see the role and involvement of women in village development strategy, especially strategy to adapt to climate change.

Indonesia Case – Women's Empowerment and Adaptation to Climate Change from the Periphery

Indonesia is among the largest archipelagos in the world which constituted of over 18,000 islands, with around 230 million populations. Indonesia is vulnerable to climate change. Scientists had observed changes in climate indicators in Indonesia over the past several decades, and concurrently made projection that average surface temperature in Indonesia will reach 0.8°C-1°C until 2020-2050; sea surface temperature increases will reach 1-1.2°C by 2050; and sea level rise (SLR) is projected to reach 35-40 cm in 2050 (Achmadi et al, 2012)

Considering its geographic traits as an archipelagic country that consists of not only large but also great numbers of small islands, changes in the above indicators could potentially bring a significant impact and affect diverse development sectors in Indonesia, especially to almost 50% of Indonesian population who live in rural area. Not only vulnerable to climate

related impacts, the risks for the population are high because of their low socio-economic capacity. 17 million people out of 27 million poor people in Indonesia live in rural areas with minimal access to basic services and infrastructures (BPS, 2017). Exposed to sea level rise, high tide, or extreme weather, the community often does not have adequate resources to find innovative solutions and alternative livelihoods (Achmadi et al, 2012).

Currently, Indonesia emphasizes the importance to pursue sustainable development from periphery, or villages. In 2014, Indonesia enacted Village Law that allows the villagers to decide their own development activities. Based on the law, the national and local government are entitled to provide village grant up to \$ 75,000 to each village each year. The grant can be used for any development activities, agreed by the community, to address their local problem, including to initiate adaptation and mitigation efforts (TNP2K, 2015).

Village law principle and mechanism is based on mechanism and principle of the preceded community-driven development program, the National Program for Community Empowerment (Program Nasional Pemberdayaan Masyarakat/PNPM) that was implemented for 15 years since 1998 to 2014. PNPM performed affirmative actions to push women's empowerment, as PNPM acknowledged the imbalanced power relations between men and women in the decision-making process in villages. Such actions including a quota of women who should participate in a community meeting and requirement of the presence of female village cadre. PNPM also require villages to conduct a special meeting for women to make sure that every village will have at least one proposal from women's group (Akatiga, 2010; Azarbaijaini-Moghaddam, 2015).

Adaptation and mitigation to climate change were encouraged in the implementation of PNPM with tremendous supports from various development agencies. Such supports including implementation of a pilot project under PNPM mechanism that focus on environmental issues, titled PNPM Green. The project aims to raise communities' awareness of possible activities to improve their livelihood, while also preserve the environment and decrease their vulnerability to climate change. The project follows the principle of ecosystem-based as well as community-based adaptation approach, that take into account the available resources and community voices as the basis in formulating the projects. Such projects in PNPM Green may include training for the community on renewable energy, assistance to deploy micro-hydro power, as well as exploring opportunities for villages to contribute to low carbon economy (Putriraya, 2014).

As part of PNPM, PNPM Green implement the same affirmative actions, rules and regulations on women's empowerment. It required women participation at all level of implementation and had a special meeting for women to make sure that at least one proposals will come from women group at every village (Putriraya, 2014).

The special meeting for women was required in PNPM to avoid biases at community meeting caused by power relations against women (Crawley, 1998). Such meeting also provides opportunities for women to exercise women's confident (Wong, 2001), as well as provides flexibility for women to set time and location that will suit the needs and schedule of women (the World Bank, 2003).

Azarbaijaini-Moghaddam (2015) argues that PNPM's affirmative actions that were consistently implemented over a decade had increased the awareness of communities and local government on the value of women's participation and the importance of women's practical needs for communities at large, such as water supply or health and education facilities.

However, many studies argued that the affirmative actions in PNPM were not enough to empower women (Wong, 2001). The project's strict rules were mainly focused on numbers

of women participating and became too mechanistic (Akatiga, 2010; Scanlon, 2012; Azarbaijaini-Moghaddam, 2015). Hence, the substance and quality of women's participation often ignored to be assessed (Cornwall, 2003; Mukhopadhyay, 2007). Therefore, while special meeting brought positive impact to the awareness raising, it is important to note that it did not automatically improve women's control over decision making in the village (Crawley, 1998). For women to be involved, is not correspond to having a voice or control over decision making (Cornwall, 2008).

In addition, critique around affirmative actions on women's empowerment in such program also challenge the linkage between poverty, class and gender relations that often missed by programs, position of women that often being seen as a 'target group' instead of 'agents of change', and homogenization of women (Crawley, 1998; Cornwall, 2003; Mukhopadhyay, 2007; Akatiga, 2010; Azarbaijaini-Moghaddam, 2015).

Women's empowerment framework developed by Sara Longwe sees women's empowerment as a process, that can be achieved through five levels of equity between men and women (Karl, 1995). The first level is equality in the achievement of basic needs; the second level is equal access to the resources or services; the third level is conscientization which defines as awareness that role of people in a society is not distinguished by sex. In the achievement of this level, women have self-awareness and confident that they can reinforce equal role between men and women in the society. The fourth level is women's participation to make decision equally with men, and the fifth level is equal control over decisions related to their lives, their children and development process affected them (March et al., 1999; Unicef, 1993, p.5).

Using Longwe's women's empowerment framework, this paper examines research findings on the impacts of women's empowerment affirmative actions, carried out by PNPM project, including the PNPM Green, to women's role and participation in village development, including the village's activities in adapting to climate change.

Women's Empowerment and its Impact on Women's Role in Adaptation Agenda

This paper is drawn based on writer's previous research on the impact of women's empowerment initiatives in PNPM to the role and involvement of women in village development (Lestari, 2016), and another research on gender mainstreaming in PNPM Green (Putriraya, 2014).

The two-research found that women's empowerment initiative and affirmative actions pushed by PNPM project were relatively successful in raising awareness on certain activities might not have been done if they were not proposed by women. Such activities mainly are activities related to household issues, including health and education of the children, water and sanitation, and waste management (Friedman, 2004; Putriraya 2014; Lestari, 2016). However, Lestari (2016) found that such activities were repeatedly proposed every year, resulting in similar activities every year. This finding, even though shed a positive signal of the fulfillment of women's needs, indicates that women's role and involvement in village development are still limited to domestic issues. It also confirms the previous findings that PNPM's affirmative actions are not enough to empower women (Wong, 2001). The strict rule in the project became project's formality in accommodating the usual women's needs, rather than an effort to discover what women really need at different places and a different time (akatiga, 2010).

Lestari (2016) argues that it was caused by differentiation on women's and men's role in development. The research conducted by the writer in four villages in Java found that the

differentiation of roles between men's and women's role in development agenda is strongly institutionalized in village's daily life.

A study argues that the distinction between women's and men's role in development have been encouraging by the government of Indonesia since Indonesia's New Order regime ruled in the 1970s. The regime formed a special group for women in every government administration throughout Indonesia, including at village level. The group is called PKK (Pembinaan Kesejahteraan Keluarga) that is translated into the Development of Family Welfare. PKK is led by the wife of a local leader such as the wife of governor at a provincial level, the wife of major at a city level, and the wife of village head at a village level. The group functions to 'empower' women to provide information and technical skills related to domestic issues. Even though, after the New Order regime fell, the group is criticized as a state-led disempowerment effort that limits women's role to domestic issues, PKK remains exist as 'formal' women's group at all administration level, including at village level (Hadiwinata, 2003). The special meetings for women in PNPM were often treated as PKK meetings, discussing how women can better address household needs. It is a common practice in villages to have two different meetings to discuss village development; They are PKK meeting for women and Village meeting for men (Lestari, 2016).

The differentiation of role between men and women also occurred in the implementation of PNPM Green in Sulawesi. Putriraya (2014) found that men are responsible for issues outside the household, such as earning money from fishery or farming, while women are responsible for issues inside a household. The division of role influence the level of women's participation. Women tend to actively participate in village meeting if the discussions were related to domestic issues, which were close to their daily life.

Nevertheless, Putriraya (2014) argues that women's responsibility and control on household issues shed positive development on women's empowerment to make sure they are involved in the decision-making process related to village's plan on adaptation to climate change. The research found that women are not oppressed, socially and culturally, in making a decision for their family, including decisions that can benefit them in facing climate change. This is important as women's reaction to climate change is related to the fulfilment of immediate needs and safety of their family (Brockhaus & Djoudi, 2011). Such activities that have been facilitated by PNPM Green are training on alternative renewable energy to fuel kitchen or mangrove rehabilitation to safeguard their house from being inundated during high tide (Putriraya, 2014).

However, it is acknowledged in the research that the limitation of women's role only to domestic issues also limit their opportunity to address their needs when the needs are related to village's natural resources or village's land. Such issues including the need for women to have mangrove rehabilitation to prevent a flood from entering their house or the management of natural resources in their village for the benefit of women, especially to make their household core easier (Putriraya, 2014). Therefore, while it is important that women's role in domestic issues is acknowledged to be important in the decision-making process of adaptation activities, the limitation of women's role in only domestic issues reflects that equal control between men and women in village decision making has yet to be achieved.

Decision making related to land ownership and natural resources is continued to be acknowledged as men's area that limits women's access and control to be benefited. In addition, issues related to income generation also tend to be controlled by men and benefiting men (Brockhaus & Djoudi, 2011). While women may receive the benefit through her husband, it may hinder the women headed household to receive equal benefit with another household that headed by men.

Reflecting Longwe's women's empowerment framework (March et al., 1999), the affirmative actions promoted by PNPM tried to facilitate women in achieving five levels of women's development; welfare, access, conscientization, participation and control. PNPM acknowledged the imbalanced power relation between men and women, hence arranged affirmative actions to challenge it. PNPM also tried to mobilize women to collectively participate and provides channels and opportunities for them to have equal control in the decision-making process. However, the impact of PNPM on women's empowerment to village development is still relatively low. The improved awareness at conscientization level stops at the role of women in development related to domestic issues. Therefore, equal participation and control only occurred at domestic level, including a control to make a decision on their life or their children live, while equal control in village development's decision-making has not yet be achieved. The level of empowerment achieved is actually has been practised in the villages in Indonesia before PNPM era, continuing what PKK has always promoting; empowering women on domestic issues to empower their family.

However, this practice is important for adaptation to climate change, as women reaction to climate change is different with men. Women tend to be more concern to make sure their family cope well with the changes, that the family are fed and healthy, whilst men tend to rely on a long term political solution. Therefore, women to be acknowledged more to be the agent of change in the effort of adaptation to climate change, as women's power over decision making at home is high, women's knowledge on alternative resources and solutions to cope with climate change at the household level is important to safeguard their family. It is acknowledged, however, that limitation of women's involvement in village's issues outside household may exclude women and children from the benefit of adaptation to climate change programs, especially if it is related to power over the management of natural resources and land ownership.

Conclusion

The impact of women's empowerment initiatives in PNPM project in Indonesia had raised the awareness of villagers on the importance of activities related to household issues to be taken into account in village development agenda. This development shed positive development on women's empowerment to be able to cope with climate-related change that will affect their family. It mainly because women's reaction to climate change is different with men. Women tend to be more concern to make sure their family cope well with the changes, that the family are fed and healthy, whilst men tend to rely on a long term political solution.

However, this paper highlighted that such limitation of women's role may backfire the ability of women to adapt to climate change, especially if the immediate need to safeguard her family conflicts with natural resources management and land ownership that mainly are controlled by men.

This paper criticized women's empowerment initiatives in PNPM that had not been able to broaden women's role and involvement beyond household issues. The paper particularly highlighted the role played by PKK, a state-led women's organization established by the New Order regime on the 1970s, to limit the role of women in village development. PKK is until now still very conscientization institutionalized at the village level, that has not been changed by PNPM.

Nevertheless, as the paper captures women's substantial role in making a decision on household issues related to education, health and immediate needs of the family, the paper suggests that women need to be acknowledged more to be the potential agent of change in the effort of villages to adapt to climate change.

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