Climate finance and gender on the ground
Insights from mitigation and adaptation interventions in Indonesia

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Key messages

• Financial mechanisms and climate change-related interventions should prioritize activities that are locally adapted and accessible for both genders, considering the different roles and constraints of each gender.
• Ministries responsible for climate action require a specifically tagged budget to enable interventions to be gender-responsive. The gender-specific indicators provided in this study can support ministries responsible for delivering climate action to include gender within the Indonesian KRISNA (Collaborative Planning and Budget Performance Information) budget system.
• On-the-ground interventions need to acknowledge the necessity of integrating women and the poor as vital allies in achieving climate change adaptation and mitigation objectives – from the design phase through all stages of implementation – and translate this into pro-poor and gender-responsive strategic planning and operational guidance.
• Building the institutional capacities of stakeholders is required at all levels so that plans and actions can be synergized, and different finance sources can be combined to ensure positive gender and pro poor outcomes and the long-term sustainability of finance mechanisms.
• Gender-responsive budgeting needs to include gender variables in monitoring at all levels: this includes indicators for immediate and intermediate results that act as stepping stones in changing longer-term gender relations, therefore contributing to gender transformational change.
• Indicators need to go beyond the usual economic assessments, to look at the social factors related to decision-making processes, agenda setting, the representation of women in institutions, their access to assets and markets, and capacity building.

Introduction

Climate change-related adaptation and mitigation strategies have gender-differentiated impacts (Djoudi et al. 2016). This is why climate finance 1 needs to address differentiated vulnerabilities as well as avoid unintended consequences, notably for women and the poor (Djoudi and Brockhaus 2011; Habtezion 2013; PATTIRO 2020). Even though this was acknowledged and embedded

1 Climate finance refers to financial flows mobilized by industrialized country governments and private entities that support climate change mitigation and adaptation in developing countries (Habtezion 2016).
The Government of Indonesia committed to addressing gender inequality in 1984 when the country ratified the CEDAW (Convention on Elimination of All Forms of Discrimination Against Women). This was followed up with Presidential Instruction No. 9 of 2000 on Gender Mainstreaming in National Development 2004–2009, a presidential decree that lay the foundations for a long-term national development plan (RPJPN 2005–2025) committed to gender equality and the alignment of Indonesia’s national development agenda with Sustainable Development Goal (SDG) 5 (UNDP nd).

The study that underpins this info brief focuses on adaptation and mitigation climate action at sub-national level within Indonesia. Climate action is defined as projects and programs to mitigate or adapt to climate change at the household, village or district level. These actions include, but are not limited to, budget items tagged in the Indonesian Climate Budget Tagging system (CBT) as climate change mitigation and adaptation action. In this study we adopted a multilevel approach to assess whether climate financial flows and climate actions contribute to long-term gender transformative change and pro-poor co-benefits on the ground. We adapted the Gender Analysis Pathway (GAP) (Bappenas and KNPP 2007) and Gender Transformative Change (GTC) conceptual frameworks (Hillenbrand et al. 2015) to design the study and develop indicators that can support the integration of gender in future interventions.

**Research sites**

Two climate actions were selected; both were funded by the state budget (*Anggaran Pendapatan dan Belanja Negara*, APBN) at subnational level:

i. The agroforestry program run by the Watershed Management and Forest Protection Agency Serayu Opak Progo (*Badan Pengelolaan Daerah Aliran Sungai dan Hutan Lindung Serayu Opak Progo*, BPDASHL SOP), under the Ministry of Environment and Forest (MoEF) – this was tagged as climate mitigation. In 2017, BPDASHL SOP received around IDR 7.2 billion for agroforestry interventions; the agroforestry program was implemented in 45 villages across the watershed on around 25 ha in each village, with a budget allocation of IDR 160 million per village (~USD 11,000). The ‘bottom-up’ budget flow was based on provincial and village-level dialogue. Beneficiaries included men, women, young, old and poor who were members of a farmer’s group.

ii. The artesian well program, run by the Geological Agency of the Center for Groundwater and Environmental Geology in Bandung, under the Ministry of Energy and Mineral Resources (MoEMR) – this was tagged as climate adaptation. Targeting 500 locations in Indonesia, the program is one of the national priority programs. MoEMR is responsible for ensuring the availability of ground water, as 59% of the population depend on wells for drinking water. Ground water plays an increasingly important role as a raw water source to meet the need for clean water, particularly in disaster-prone areas or areas where water is difficult to source. As such, the government is obliged to guarantee people’s rights to clean water by establishing artesian wells for local communities. The budget flow was top–down; companies were subcontracted at national level and constructed wells were given to the district government. Beneficiaries included men, women, old, young and poor in one village community.

Data was collected through a desk review, key informant interviews and focus group discussions. This included a total of 21 key informant interviews (13 men and 8 women), and 8 focus group discussions, with 4 groups of men (22) and 4 groups of women (20). For the agroforestry program, three villages in Central Java were selected to represent different geographies in which agroforestry projects were being implemented. Villages were located in an area prone to disaster/landslides (Site 1), a water catchment and recharge zone (Site 2), and an area along the riverbank (Site 3). For the artesian well program, one village (Site 4) in East Lombok was selected, where an artesian well was built in 2018 (see also Liswanti et al. 2020).

**Lessons learned: Climate action on the ground**

Climate actions in the two subnational projects have provided mitigation and adaptation benefits. The agroforestry projects were carried out on previously unproductive lands that were prone to landslides and erosion. The selected tree species have contributed not only to carbon absorption, but also to soil retention,
thus decreasing disasters like erosion, landslides and floods. The artesian well also helped the local community through the dry season. Its function, which was not only to provide drinking water for humans but also for livestock, brought positive impacts to the local community.

**Linking adaptation and mitigation planning is key to enhancing the co-benefits of budget and interventions, particularly within the same sector, project and/or region.** This can be done by considering the mitigation outcomes (i.e. carbon sequestration) of adaptation interventions, and vice versa, taking into account any adaptation benefits that can enhance local people's adaptive strategies when planning for mitigation interventions. For instance, the mitigation intervention studied here consisted of planting trees for carbon absorption, but at the same time, this intervention was protecting local people from landslides. Synergizing adaptation and mitigation benefits at the jurisdiction or landscape level will make financing climate action more efficient, as generally it is the same stakeholders who are involved in implementing the different programs and actions taking place at the jurisdiction level.

**Combining and synergizing different financing mechanisms and streams at the local level is key.** In the adaptation project, the local actor was able to create synergies between the different programs, even though financing for these programs came from different streams. For example, the village leader used Dana Desa (Village Fund) to increase farmers’ assets by providing cows to farmers groups; these groups were then able to take cattle water supplies from the artesian well. The farmers using the well water gave monthly contributions to maintain the well, thereby enhancing the sustainability of this intervention. Leveraging different funds, stakeholder leadership and community social capital at the local level, can create synergies and enhance the sustainability of climate actions.

**While poverty alleviation is clearly prioritized in all the climate projects studied, gender equality has not received commensurate attention.** The climate change mitigation (agroforestry) and adaptation (artesian well) programs are included in the national priority programs of the Ministry of Environment and Forestry and Ministry of Energy and Mineral Resources, as stated in their 2015–2020 plans. The main objectives of these plans are: (1) to rehabilitate key land areas that are either community-owned or non-state forest lands (mitigation); and (2) to provide clean water resources in areas with no or limited access to water, or in areas that are drought-prone (adaptation), with the expectation of alleviating poverty. Alleviating poverty is seen as more of a priority than gender equality. This means that the focus is on improving all livelihoods via the agroforestry intervention, just as providing water resources for consumption and domestic work has a particular focus on the poor, with no differentiated impacts planned for different social groups, or men and women.

**The results of focus group discussions and semi-structured interviews reveal that no gender analysis was included in the budget or design of either adaptation and mitigation initiatives studied.** The initial design of the agroforestry project (mitigation) focused on environmental impact for the community, with a brief analysis of the social and economic aspects of the local community. Similarly, the development of artesian wells (adaptation) prioritized areas with no or limited access to water, or drought-prone areas. Even though some positive impacts were found in the adaptation project in terms of some women’s workloads reducing, these impacts can be seen as unintended positive gender outcomes; the project’s initial aim was to secure water for the community at large and women were not specifically included in the design or implementation. Although our discussions in the field revealed people perceive that, “what is good for the community is good for women,” our results show that in reality this is not always the case.

**Increased workloads affect women’s vulnerability; most women are responsible for productive and reproductive work, both in the home and in the field.** Our results showed that in the mitigation project, intervention activities increased the workload for women. This is particularly problematic when the trees planted don’t improve women’s income directly or provide them with secured access to resources, decision-making processes and capacity building programs. Many women responsible for trees planted in the field did not really understand the long-term outcomes of the intervention; they were more aware of the disadvantages they brought, like increased workloads and the difficulties that came from having additional trees in their fields. Although the intervention may have initially resulted in increasing the community’s adaptive capacity, the lack of women’s integration in the program, and particularly in the capacity building
sessions, jeopardized the intervention’s objectives in the long term. In the artesian well project, decreasing the water-collection workload did not always lead to less vulnerability. Relying on other family members to collect water means that women become highly dependent on the presence of these family members at home. Findings showed different insights and the complexity of gender considerations that climate change interventions need to address, as well as the need for differentiated and context-specific gender analysis within climate change interventions.

Budgets to cover gender-responsive interventions must also cover gender-differentiated monitoring, at all levels. This needs to include immediate and intermediate results that act as stepping stones, shifting longer-term gender relations and therefore achieving gender transformational change. Measured indicators need to go beyond the usual economic assessments, to include social factors related to decision-making processes, the representation of women in all institutions, their access to assets and markets, empowerment and capacity building (see Table 1).

Table 1. A summary of indicators relevant for the two studies, elaborated using the Gender Transformative Change (GTC) conceptual framework (Hillenbrand et al. 2015)

| Indicator | Examples from the study | Questions to address the indicator, in future interventions |
|-----------|-------------------------|----------------------------------------------------------|
| Income    | Indicator 1: Gender wage differentials | AF: wage salaries differed by gender, with men receiving higher incomes | Do women and men derive similar income from the products and assets provided by the intervention? |
| Labor and workload | Indicator 2: Changes in time use in selected activities | AF: planting trees resulted in higher workloads for women, as tree maintenance is undertaken by women. | Are the activities related to the intervention changing work repartition at the household or community levels? |
|           | AW: women saw a decrease in workload, as water collection was undertaken by men (children, elderly, husband), except for widows or single women. | Does the workload increase or decrease for women? If it decreases, how do women use the time they gain? |
| Assets    | Indicator 3: Ability to claim the output and income produced by the asset | AF: The income derived from tree products is aimed to benefit the family; women’s ability to claim this income depends on the willingness and abilities of men to share this income with women. | Can all benefits and assets generated by an intervention be accessed equally by different community members (women and men)? |
|           | Indicator 4: Proportion of women to men with access to those assets (physical, social, economic) that are key to resilience | AF: Tree fruits are usually collected by women and sugar palm is collected by men (because it is located deep inside the forest). | What proportions of men and women have access to assets which are key to adaptive capacity and resilience in face of crisis (climatic or non-climatic)? Does the intervention improve those access mechanisms or reduce them? |
|           | Indicator 5: Agroforestry products that are key to resilience | AF: The trees protect fields houses from landslides and erosion equally for all members of community (both genders). AF: The fruit trees (for Site 1 and Site 2) derive economic benefits but men are generally responsible for selling the fruit. | How do those assets influence the resilience of communities to future events? Are the impacts the same or different according to gender, age, etc? |
|           | Indicator 6: Gendered rules governing access to productive assets and markets | AW: No gendered rules regarding access to water. AF: Local gender-specific restrictions for land tenure (most land is owned by men). | What are the gendered rules governing access to productive assets and markets? Do women and men have the same access to land and market opportunities? |
Table 1. Continued

| Indicator | Examples from the study | Questions to address the indicator, in future interventions |
|-----------|-------------------------|-------------------------------------------------------------|
| Knowledge, skills and awareness | Indicator 7: Extent of training or networking among local women, compared to men | In both interventions, women rarely joined the many training sessions or community meetings regarding the intervention. | What is the rate of participation of women and men in community’s organizations? How is the participation of women characterized? (Just presence, active, proactive?) |
| Agenda | Indicator 8: Increased rate of participation in community’s organizations | Women were neither consulted nor part of the capacity-building programs at most sites, in both interventions. | Did the intervention increase the participation of women in local institutions or organizations? |
| | Indicator 9: Systemic acceptance of women’s entitlement and inclusion | AF: Women’s involvement in the program is related to their ownership over the land, which is mostly owned by men. | How was the participation or inclusion of women seen, by themselves, by other community members and by other stakeholders? |
| Internal and psychological resources | Indicator 10: Self-esteem, self-efficacy and psychological well-being | AF: the program did not contribute to increasing women’s confidence, as they were not involved in capacity building or empowerment actions. AW: the program reduced the workload for women, which may lead women to use that time for well-being related activities. | How did the intervention influence the self-esteem and wellbeing of women? What about conflicts? |
| | Indicator 11: Assertiveness and autonomy | AF: the program could contribute to women’s financial autonomy when trees start producing fruits. | To what extent was the intervention able to create autonomy for women? |
| | Indicator 12: Perceived ability to change things collectively in the community | AF: In one village, both men and women collaborated to maintain the results they achieved. | To what extent was the intervention able to create collective and social coherence in the community? |
| | Indicator 13: Group cohesion, trust and inclusivity | AF: The implementation of the agroforestry project was done individually, however the achievements are seen as a group achievement. The farmers acknowledge the benefits of the program for protection against landslides and increased land productivity. | How does the intervention influence the social capital and inclusiveness in the community? |
| Collective agency and action | Indicator 14: Women’s perception that their interests are represented | AF: Most women in the three villages were not involved in decision making around the agroforestry project. In one village, women were consulted indirectly by their husbands, but the species retained were those preferred by men. In one site, women attended a meeting but stayed silent throughout the meeting because of social and cultural gender restrictions. | Do women perceive their interests and needs to be represented in the design and implementation of interventions? |
| | Indicator 15: Perceived group accomplishments and future expected accomplishments | AF: The agroforestry program was coordinated by a farmers’ group leader, but implementation was carried out individually. | How did the intervention influence women’s ability to realize group achievements? What are the prospects for future achievements? |
A key narrative around gender and poverty was observed across the study sites: Reducing the poverty of everyone is a noble, altruistic goal to ensure basic human dignity. Gender equality is about women demanding their rights. Poverty reduction therefore takes priority over gender equality.

This narrative ignores the fact that gender and poverty are interlinked – we cannot reduce poverty as a society if half of the population suffers more than the other. Our findings reveal gender-differentiated impacts in both the mitigation and adaptation activities. These programs were built on the assumption that women are part of the community, however as each woman is differently affected (e.g. by poverty, disability, marital status), it is vital to integrate gender and vulnerability issues into planning and project design in order to effectively tackle poverty. Agricultural activities see clear gender divisions; although men take on the physical work, women’s ongoing workloads are increased, and there is no capacity building for women. This results in a limited understanding of the importance of trees for preventing disasters, with women cutting trees down if they disturb their crops. In the adaptation activity, workloads differed among women. Although women dominate in the domestic sphere, women with husbands or children rely on them to take water from the wells, unlike the widows or single women who take the water themselves.

There were limited opportunities for women and the poor to voice their concerns and influence fund management and use. This was reflected in the implementation of interventions at community level, as shown in Box 1 and 2.
Box 1. Mitigation: Gender inclusion helps to both avoid maladaptation and achieve mitigation objectives

The agroforestry projects we studied planted trees on privately-owned farmlands to sequester carbon and provide additional livelihood benefits. Women were responsible for most of the planting, maintenance and harvesting activities where these trees were planted. Yet they were not involved in the planning and design of the agroforestry projects, including site and species selection. Subsequent capacity building and socialization sessions targeted men, who are perceived to be the ‘farmer’. Despite being given responsibility for them, women were not familiar with the trees and or the climate change rationale behind the action.

A failure to integrate women in the design of the intervention, and the lack of capacity building targeting women, resulted in little incentive for women to take care of the trees, which resulted in trees dying in many fields. The lack of gender integration thus hindered the long-term sustainability of the climate change action, as the objective was to protect the fields from erosion and landslides.

Box 2. Adaptation: Intervention benefits for women and the poor

The artesian well project was proposed jointly by provincial authorities and farmer group leaders in a bottom-up approach to project implementation, however women and the poor were still excluded from decision-making. The artesian well project, designed to achieve adaptation objectives, provided some benefits for women and the poor, however, women were not consulted during the implementation of the project. Women and the poor benefited from the wells, as their presence reduced the time needed for water collection, but they were not involved in decisions that could have improved the effectiveness of this project, for example on the location and maintenance of the well. Access depends on the ability to transport water from well to the house, which excludes the poorest households (notably the elderly, and women-headed households) from benefiting.

Recommendations

Gender, climate change and intersecting vulnerabilities

Climate change adaptation and mitigation interventions must be based on a solid gendered vulnerability assessment, including sex-aggregated data on workloads, income, access to assets and land, and representation in decision-making processes. Participatory scoping, to identify the specific needs of women, men and vulnerable groups thus ensuring the gender responsiveness of programs, is key in order to determine gender-differentiated climatic and non-climatic impacts, and to design adaptation strategies which enhance the capacity of the vulnerable. The availability of sex disaggregated data to assess the gender responsiveness and gender-differentiated impact of interventions is crucial in this process.

Capacity building

Capacity building programs targeting farmers need to make sure that the target groups are representative and gender balanced, so they can benefit women and men equally. Building the institutional capacities of stakeholders is needed to be able to synergize action and plans, combine different sources of finance to increase the sustainability of actions, and ensure the long-term sustainability of finance mechanisms at regional and local levels.

Climate change mitigation and adaptation budgets

Ministries responsible for delivering national priority programs on climate change adaptation and mitigation need to include the artesian well and agroforestry projects in the existing gender-responsive climate budget tagging system. Ministries providing gender-responsive budgets need to develop guidelines for gender-responsive climate budgeting, for delivering ministries to better understand the benefits of tagging in the KRISSNA (Collaborative Planning and Budget Performance Information, Kolaborasi Perencanaan dan Informasi Kinerja Anggaran) budgeting system. It is critical to improve coordination between delivery ministries – the Ministry of Women’s Empowerment and Child Protection, the Ministry of Finance, and the Ministry of National Development Planning – in particular for Indonesia’s climate budget, gender-responsive budget, and the process of developing Gender Analysis Pathways and Gender Budget Statements.

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References

[Bappenas] Badan Perencanaan Pembangunan Nasional and [KNPP] Kementrian Negara Pemberdayaan Perempuan. 2007. Gender analysis pathways (GAP): Alat analisis gender untuk perencanaan pembangunan. Jakarta, Indonesia: Bappenas and KNPP. https://www.bappenas.go.id/files/5913/8146/3811/gap-revisi-2007_alat-analisis-gender__20130716120956__0.pdf

Djoudi H and Brockhaus M. 2011. Is adaptation to climate change gender neutral? Lessons from communities dependent on livestock and forests in northern Mali. International Forestry Review 13(2):123–133.

Djoudi H, Locatelli B, Vaast C, Asher K, Brockhaus M and Basnett Sijapati B. 2016. Beyond dichotomies: Gender and intersecting inequalities in climate change studies. Ambio 45(3):248–262. https://doi.org/10.1007/s13280-016-0825-2

Habtezion S. 2013. Climate funds update: Gender and climate finance. UNDP Policy Brief 5. New York, USA: United Nations Development Programme (UNDP). https://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB5-AP-Gender-and-Climate-Finance.pdf

Habtezion S. 2016. Gender and climate change: Gender and climate finance. UNDP Policy Brief 5. Gender and climate finance.: New York, USA: United Nations Development Programme (UNDP). https://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/UNDP%20Gender%20and%20Climate%20Finance%20Policy%20Brief%20WEB.pdf

Hillenbrand E, Karim N, Mohanraj P and Wu D. 2015. Measuring gender-transformative change: A review of literature and promising practices. Working Paper. Atlanta, USA: CARE.

Liswanti N, Tamara A and Djoudi H. 2020. Leveraging climate finance for gender equality and poverty reduction: A guidance for sector pilot projects to better contribute towards gender transformative change and adaptive capacity of poor women and men in select subnational sites (WP2). Project Report. Bogor, Indonesia: CIFOR.

MacGregor S. 2010. A stranger silence still: The need for feminist social research on climate change. The Sociological Review 57(2):124 –140.

PATTIRO. 2020. Kajian pembiayaan perubahan iklim yang responsif gender. Jakarta, Indonesia: PATTIRO. Accessed 1 December 2020. http://pattiro.org/2020/05/kajanpembiayaan-perubahan-iklim-yang-responsif-gender/

[UNDP] United Nations Development Programme. nd. Gender equality: National ownership. New York, USA: UNDP. Accessed 1 December 2020. https://www.id.undp.org/content/indonesia/en/home/gender-equality.html

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