



Leveraging climate finance for gender equality and poverty reduction

A comparative study

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Women Focus Group Discussion on adaptation program at Padamara village, East Lombok.

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Acronyms

APBN	State budget (<i>Anggaran Pendapatan dan Belanja Negara</i>)
Bappenas	Ministry of National Development Planning (<i>Kementerian Perencanaan Pembangunan Nasional Republik Indonesia/ Badan Perencanaan Pembangunan Nasional</i>)
BKF-PKPPIM	Fiscal Policy Agency – Centre for Policy on Multilateral and Climate Change Financing (<i>Badan Kebijakan Fiskal – Pusat Kebijakan Pembiayaan Perubahan Iklim dan Multilateral</i>)
BLUP3H	Public Service Agency for Forest Development Financing Center (<i>Badan Layanan Umum Pusat Pembiayaan Pembangunan Hutan</i>)
BPD	Village Council (<i>Badan Permusyawaratan Desa</i>)
BPDLH	Environmental Financing Agency (<i>Badan Pengelola Dana Lingkungan Hidup</i>)
BPDASHL	Watershed Management and Forest Protection Agency (<i>Badan Pengelolaan Daerah Aliran Sungai dan Hutan Lindung</i>)
BPDASHL SOP	Serayu Opak Progo Watershed Management and Forest Protection Agency (<i>Badan Pengelolaan Daerah Aliran Sungai dan Hutan Lindung Serayu Opak Progo</i>)
BPDAS	Watershed Management Agency (<i>Balai Pengelolaan Daerah Aliran Sungai</i>)
CIFOR	Center for International Forestry Research
DAK	Special Allocation Fund (<i>Dana Alokasi Khusus</i>)
DAK-LHK	Special Allocation Fund – Environment and Forestry (<i>Dana Alokasi Khusus – bidang Lingkungan Hidup dan Kehutanan</i>)
DPR	House of Representatives (<i>Dewan Perwakilan Rakyat</i>)
FTA	CGIAR Research Program on Forests, Trees and Agroforestry
GAP	Gender analysis pathway
GBS	Gender budget statement
GCF	Green Climate Fund
GHG	Greenhouse gas
GTC	Gender Transformative Change
HD	Village forest (<i>Hutan Desa</i>)
HKm	State-owned community forest (<i>Hutan Kemasyarakatan</i>)
HR	Community forest (<i>Hutan Rakyat</i>)
HTR	Community plantation forest (<i>Hutan Tanaman Rakyat</i>)
ICCTF	Indonesia Climate Change Trust Fund
IDM	Village Development Index (<i>Indeks Desa Membangun</i>)
Kemendagri	Kementerian Dalam Negeri (<i>Ministry of Home Affairs</i>)

Kemendes PDTT	Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (<i>Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi</i>)
Kemenkeu	Ministry of Finance (<i>Kementerian Keuangan</i>)
Kementan	Ministry of Agriculture (<i>Kementerian Pertanian</i>)
Kemenhub	Ministry of Transportation (<i>Kementerian Perhubungan</i>)
KLHK	Ministry of Environment and Forestry (<i>Kementerian Lingkungan Hidup dan Kehutanan</i>)
KPH	Forest management unit (<i>Kesatuan Pengelola Hutan</i>)
KPPPA	Ministry of Women Empowerment and Child Protection (<i>Kementerian Pemberdayaan Perempuan dan Perlindungan Anak</i>)
KESDM	Ministry of Energy and Mineral Resources (<i>Kementerian Energi dan Sumber Daya Mineral</i>)
KII	Key informant interview
KPUPR	Ministry of Public Works and Housing (<i>Kementerian Pekerjaan Umum dan Perumahan Rakyat</i>)
KRISNA	Collaborative Planning and Budget Performance Information (<i>Kolaborasi Perencanaan dan Informasi Kinerja Anggaran</i>)
KTH	Forest Farmer Group (<i>Kelompok Tani Hutan</i>)
LCFGEPR	Leveraging Climate Finance for Gender Equality and Poverty Reduction
M&E	Monitoring and Evaluation
<i>Musdes</i>	Village-level deliberation forum (<i>Musyawahar Desa</i>)
NDC	Nationally Determined Contribution
NGO	Non-government organization
NTFP	Non-timber forest product
PAMDES	Village Water Company (<i>Perusahaan Air Minum Desa</i>)
PAMSIMAS	Community Based Water Supply and Sanitation program (<i>Penyediaan Air Minum dan Sanitasi Berbasis Masyarakat</i>)
PKT	Dana Desa's 'Cash for work' program (<i>Padat Karya Tunai</i>)
PPRG	Gender-responsive planning and budgeting (<i>Perencanaan dan Penganggaran Responsif Gender</i>)
PSD	Social Services (<i>Pelayanan Sosial Dasar</i>)
RAN-API	National action plan for climate change adaptation (<i>Rencana Aksi Nasional Adaptasi Perubahan Iklim</i>)
RAN-GRK	National action plan for greenhouse gas emission reduction (<i>Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca</i>)
REDD+	Reducing Emissions from Deforestation and forest Degradation, and enhancing forest carbon stocks
UNDP	The United Nations Development Programme
UNFCCC	The United Nations Framework Convention on Climate Change

Executive summary

Climate finance, gender and poverty are not stand-alone, independent topics. Climate change affects all people in different ways. Climate finance can catalyze actions that can either alleviate or exacerbate gender equity and poverty. Mechanisms that fund climate action should be designed to enable, rather than hinder marginalized populations, notably women and the poor, in facing climate change.

The landscape of Indonesia's climate finance is dynamic and can offer important lessons for designing and implementing climate finance in developing countries. Indonesia has enacted various laws, built institutions and engaged with a wide range of stakeholders. The dynamic domestic landscape of climate policies and finance in Indonesia makes it an ideal country to study how domestic financial mechanisms can be used for climate finance, in a way that integrates gender equality and poverty reduction objectives.

In Indonesia, gender mainstreaming and poverty reduction are development agendas with strong regulatory support. Poverty reduction has been a constant development objective since it was enshrined in the 1945 constitution. It is supported by numerous laws and regulations, and features prominently in national development planning and agendas. Gender equality is operationalized through a series of policies on gender mainstreaming that apply at national and sub-national levels.

This research aims to understand the possibility of leveraging climate finance for advancing gender equality and poverty reduction, by assessing five different mechanisms that are, or have the potential to, directly and indirectly channel climate funding from the national level to support climate action at the subnational level. Data was collected in the 3rd quarter of 2019, using literature review and key informant interviews. We assess the strengths

and weaknesses of each mechanism for advancing gender equality and reducing poverty. The knowledge gained from this review will be useful for informing current financial mechanisms, so climate action can be financed in a more effective and equitable manner.

The financial mechanisms studied here include: 1) the Village Fund (*Dana Desa*); 2) the Public Service Agency for Forest Development Financing Center (*Badan Layanan Umum Pusat Pembiayaan Pembangunan Hutan, BLUP3H*); 3) the Indonesia Climate Change Trust Fund (ICCTF); 4) the Special Allocation Fund (*Dana Alokasi Khusus, DAK*); and 5) the Environmental Fund Management Agency (*Badan Pengelola Dana Lingkungan Hidup, BPD-LH*). At the time of study, BPD-LH was being established and not operational.

The study that underpins this report focuses on adaptation and mitigation climate action at sub-national level within Indonesia. 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. Two climate actions were selected; both were funded by the state budget (*Anggaran Pendapatan dan Belanja Negara, APBN*) at subnational level. Data was collected from June 2019 to February 2020 through a desk review and field data using key informant interviews and focus group discussions. For the agroforestry program, three villages were selected to represent different geographies in which agroforestry projects were being implemented. For the artesian well program, one village (Site 4) was selected, where an artesian well was built in 2018 (see also Liswanti et al. 2020).

The government has a climate budget tagging (CBT) system that has been integrated into the national planning and budget system, which goes by the name of KRISNA. Under this system, line ministries must tag programs funded through the state budget across seven themes, including ‘climate change mitigation and adaptation’ and ‘gender-responsive budget’. In recent years the Ministry of Finance, in collaboration with different actors, developed a tagging system linking gender and climate change domestic finance. As an initial stage in developing a combined-tagging system, and to strengthening the climate financing system, the United Nation Development Programme (UNDP) in collaboration with the Ministry of Finance, Ministry of Women and Child Protection and PATTIRO, conducted a study into the gender-responsive climate change budgeting system. To compliment the national focus of their report, the study that underpins this report takes a regional focus to understanding the impact of climate finance, and aims to provide guidance and practical ways to integrate gender in the KRISNA system.

Climate change-related adaptation and mitigation strategies have gender-differentiated impacts.

As such, climate finance needs to both address differentiated vulnerabilities and avoid unintended consequences, particularly for women and the poor. In practice, implementation of pro-poor and gender-responsive climate finance is lagging behind. If the root causes of vulnerability are not taken into account, potential solutions could exacerbate, rather than reduce, existing inequities while leaving the challenges of climate change unaddressed. Since climate change vulnerabilities, equity and poverty are inherently linked, there is growing evidence that equitable and gender-responsive climate finance can enhance climate response efforts, while simultaneously promoting poverty reduction and gender equality.

Indonesia’s vulnerability to climate change is linked to its dependence on natural resources, particularly for its most poor. Indonesia’s gross domestic product (GDP) per capita has increased by an average of 4% annually, at the same time as inequality has risen. Tackling income inequality is becoming a major challenge. Gender-based inequalities are even more complex to address, as inequalities go beyond the economic sphere, and are embedded in social and cultural norms.

The objective of this study is to ensure that climate finance contributes to, rather than hinders, gender equality and poverty reduction. We take a multilevel approach and adopt two specific objectives:

1. To maximize the potential for climate finance mechanisms to promote gender equality and reduce poverty.
2. To ensure climate financial flows and actions contribute to long-term gender transformative change and pro-poor co-benefits, beyond project cycles.

The study focused on two projects delivered at subnational level. The first is the agroforestry program of BPDASHL Serayu Opak Progo (Ministry of Environment and Forestry, KLHK) in Central Java. The second project is that of the artesian well program of the Ministry of Energy and Mineral Resources (KESDM) located in West Nusa Tenggara.

Recommendations regarding national-level climate finance mechanisms, and sub-national climate action within mitigation and adaptation projects, can be summarized as follows:

1. **Recommendations relating to climate finance at national level: Maximize the potential for climate finance mechanisms to promote gender equality and reduce poverty**

Activities that can reduce poverty in the short term need to be sustained by long-term investments into building human capital through community empowerment activities. Villages need support and encouragement to start using more funds for such empowerment activities.

Financial mechanisms could have more positive impact if village administrators received more technical support in identifying funding opportunities and managing their finances efficiently and equitably. Technical support to help villages better manage their finances is being provided, but this support is currently insufficient. It is unclear which ministry is currently spearheading the task of empowering villages to manage their own financial affairs. There are also issues relating to the large turnover in facilitators, which the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT) is trying to address. It is

preparing a guide on empowering women at a village level; this could help address some village-level governance issues.

Financial mechanisms that try to reduce poverty without addressing existing inequalities could lead to larger gaps between women and men, and the rich and poor. There are no explicit rules against female beneficiaries, however, in practice, eligibility and reporting requirements are often stacked against women and the poor, because existing gender and income inequalities were not considered in the design stage of the financial mechanisms. There is no data on participation of the poor, despite explicit aims for poverty reduction. At the household level, the benefits of financial mechanisms for women depend on how husbands and wives share information and power.

In places where gender gaps are widening, extra support is needed for women to be more active in village governance. Collaborations exist between Kemendes PDPT, Social Services and Women Head of Household Empowerment (*Pemberdayaan Perempuan Kepala Keluarga*, PEKKA) to facilitate women's participation in village government bodies and their active participation in village discussion forums. Efforts to encourage villages to make more gender-conscious choices for *Dana Desa* exist, but these are ad-hoc, taking advantage of existing collaborations, programs, projects or staff.

Some financial mechanisms may find it difficult to align their procedures and systems with gender mainstreaming goals. The mandates for specific mechanisms within the institution can lead to difficulties in providing services to women and the poor. For example, BLUP3H is mandated to manage the Reforestation Fund, which, in turn, must follow specific regulations for usage and disbursement. Efforts to reduce the financial risks by financing 'safe' recipients that have clear tenure, technical abilities and financial abilities, could create barriers for the poor and across genders.

Technical aspects of financial mechanisms can have real impacts on gender equality and poverty reduction on the ground. For example, regulations regarding interest rates, subsidies and budgeting can make the difference in terms of whether or not a mechanism has adequate funds to cover the operational costs of providing access to both genders and the poor, and monitoring impacts. Asset-

based loan requirements (e.g. land ownership, skills), for example, can effectively bar women and the poor, while contracting procedures can either leave spouses out of decisions on loans made on household land assets, or ensure both spouses are equally involved. Meanwhile, human resource policies determine the availability of staff to maintain relationships with local beneficiaries, the gender-diversity of field staff, and the level of understanding among staff on gender issues.

Financial mechanisms must be willing to invest in addressing inequalities, as this entails extra short-term costs to ensure long-term benefits. Financial support for small businesses, especially those run by women and the poor, can mean managing large numbers of small and risky loans, retaining skilled field staff, providing regular interactions between beneficiaries and staff, and building the capacity of beneficiaries. Compliance to international standards ensures better integration of gender and pro-poor norms, but this comes with higher operational costs.

Many financial mechanisms lack the monitoring and evaluation that would help them understand their specific impacts on beneficiaries and climate change. Government and non-government institutions are collaborating to ensure women can benefit from *Dana Desa*, e.g. through gender-related capacity building and awareness-raising activities among village community members and leaders. Collaborative efforts like these must be better documented, supported and acknowledged, to leverage on their financing and knowledge.

Finances that are allocated to districts or provinces also need to consider their impacts on gender equality. DAK funds activities that are proposed by ministries, with funds then allocated to local governments. It has two notable features. First, it does not allocate funds to villages, NGOs, community groups, private entities or individuals. Second, gender equality is practically absent in DAK guidelines. DAK defers to each technical ministry for setting the tone on gender equality.

The main obstacle for implementing performance-based budgeting in a way that incorporates gender and pro-poor dimensions is human resources. Specifically, people who: understand and can operationalize gender equality and poverty reduction in budgeting at national and

sub-national levels; can operate the performance-based budgeting system at the ministerial, unit and sub-unit levels; can generate the data needed to monitor outputs; can oversee and coordinate performance-based budgeting implementation across ministries; and can link performance-based budgeting processes with gender mainstreaming processes (e.g. GAP, GBS) so that inputs from one can feed into the other. For example, BLUP3H implemented GAP and GBS, processes which helped to identify indicators for gender-mainstreaming; these indicators could also be used as indicators for performance-based budgeting.

2. Recommendations relating to climate finance action in subnational mitigation and adaptation projects: Ensure climate financial flows and actions contribute to long-term gender transformative change and pro-poor co-benefits beyond the project cycle.

Climate actions in the two subnational projects studied have provided mitigation and adaptation benefits. The agroforestry project was carried out in previously unproductive lands prone to landslides and erosion. The selected tree species have contributed not only to carbon absorption but also to soil retention, thus decreasing disaster events like erosion, landslides and floods. Similarly, the artesian well has supported local people by providing drinking water for humans as well as for livestock throughout the dry season, with positive impacts on the local community.

Linking adaptation and mitigation planning is key to enhancing budget and intervention co-benefits, particularly in 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 extreme weather events. 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 is key at the local level.

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, *Dana Desa* funds were used to increase farmers' assets by providing livestock for farmers groups using the available water from the artesian well. The farmers using the well water gave monthly contributions to maintain it, 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) projects 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 work plans. The main objectives of these work 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.

“What is good for the community is good for 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 mitigation project (agroforestry) 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 the adaptation project (artesian well) prioritized areas with no or limited access to water or drought-prone areas. Even though

the adaptation project generated certain positive impacts in terms of women's workloads, these impacts were 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 either the design or implementation. Although our field discussions revealed that people perceive, "what is good for 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, in both the home and the field. Our results revealed that in the mitigation project, intervention activities increased women's workloads. 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 of the women who had ongoing responsibility for the trees planted 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 long-term objectives. Similarly, in the artesian well project, decreasing the water-collection workload for women did not always lead to less vulnerability. Reliant on other family members to collect water, 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 intended to make sure climate actions are gender-responsive must also include 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. In this study, we adapted the Gender Analysis Pathway (GAP) and Gender Transformative Change (GTC) conceptual frameworks from Hillenbrand et al. (2015), summarizing indicators relevant for the two studied interventions (see Table 14).

1 Introduction

Climate finance is urgently needed as the global price tag of tackling climate change is estimated to be a hefty USD 249 to USD 1,371 billion annually (Habtezion 2013). Climate finance refers to “local, national, or transnational financing drawn from public, private, and alternative sources of financing—that seeks to support mitigation and adaptation actions that will address climate change”¹. Where this climate finance comes from has been evolving over time, from the initial development assistance funding pots of developed countries, to the now-increasing surge of private financing, alongside the domestic budget allocations of developing countries themselves. As well as allocating funds raised domestically, developing countries support climate action through in-kind contributions and lost opportunity costs, which are poorly documented and understood (Ickowitz et al. 2017; UNFCCC Standing Committee on Finance 2018). At the same time, the comparatively little analysis on home-grown climate finance institutions, funding mechanisms and financial allocation in developing countries creates an unbalanced view of climate finance, portraying developing countries as passive recipients of climate funds (Atmadja et al. 2018).

Indonesia is one of several developing countries taking steps to establish institutions and account for domestic climate financing. Indonesia’s national action plan to reduce GHG emissions (RAN-GRK) and national action plan to adapt to climate change (RAN-API) guide the planning, implementation, monitoring and evaluation of the country’s climate action. During the COP 21 UNFCCC held in Paris in December 2015, the Government of Indonesia stated its plan to reduce GHG emissions by 29%

with national efforts alone, and up to 41% with international support, against a business-as-usual projection for 2030, as stated under Nationally Determined Contributions (NDC) document.

The Indonesian government has a climate budget tagging (CBT) system that has been integrated into its national planning and budget system, which goes by the name KRISNA (*Kolaborasi Perencanaan dan Informasi Kinerja Anggaran*, Collaborative Planning and Budget Performance Information). Under this system, line ministries must tag programs funded through the state budget across seven themes, including ‘climate change mitigation and adaptation’ and ‘gender-responsive budget’ (BKF 2020). Recently the Ministry of Finance, in collaboration with different actors, has been developing a tagging system that links gender-related and climate change-related domestic finance. As an initial stage in developing this combined-tagging system, and to strengthening the climate financing system overall, UNDP, in collaboration with the Ministry of Finance, the Ministry of Women and Child Protection and PATTIRO, has conducted a study looking into gender-responsive climate finance.

Climate change-related adaptation and mitigation strategies have gender-differentiated impacts (Djoudi et al. 2016). As such, climate finance needs to both address differentiated vulnerabilities and avoid unintended consequences, particularly for women and the poor (Djoudi and Brockhaus 2011; Habtezion 2013). Even though this was acknowledged and embedded in the Cancun and Paris Agreements (2010; 2015), in practice, the implementation of pro-poor and gender-responsive climate finance is lagging behind. If the root causes of vulnerability are not taken into account, potential solutions might exacerbate rather than reduce existing inequities, while leaving

¹ Taken from <https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance>

the challenges of climate change unaddressed (MacGregor 2010, Djoudi et al. 2016). Since climate change vulnerabilities, equity and poverty are inherently linked, there is growing evidence that equitable and gender-responsive climate finance can enhance climate response efforts, while simultaneously promoting poverty reduction and gender equality (Habtezion 2016).

Indonesia's vulnerability to climate change is linked to its high population density and dependence on natural resources, particularly among its poorest. Indonesia's gross domestic product (GDP) per capita has increased by an average of 4% annually, at the same time as rising income inequality. Tackling income inequality is becoming a major challenge. Gender-based inequalities are even more complex to address as the inequalities go beyond the economic sphere and are embedded in social and cultural norms (Habtezion 2016).

The objective of this study is to ensure that climate finance contributes to, rather than hinders, gender equality and poverty reduction. We take a multilevel approach and adopt two specific objectives:

1. To maximize the potential for climate finance mechanisms to promote gender equality and reduce poverty.
2. To ensure climate financial flows and actions contribute to long-term gender transformative change and pro-poor co-benefits, beyond project cycles.

In this report, we define climate finance mechanisms as the full set of institutional means, governance structures and instruments that mobilize, plan, allocate, distribute, monitor and

evaluate finance used for climate action. 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, the budget items tagged in the Indonesian Climate Budget Tagging system (CBT) as climate change mitigation and adaptation action. We adapted Hillenbrand et al.'s the Gender Analysis Pathway (GAP) and Gender Transformative Change (GTC) conceptual framework (2015) both to design the study and develop indicators to improve the integration of gender in future interventions.

This report is an output of the project titled 'Leveraging climate finance for gender equality and poverty reduction' (LCFGEPR)². This is a project of UNDP's Bangkok Regional Hub, with co-financing from the CGIAR Research Program on Forests, Trees and Agroforestry (CRP-FTA). LCFGEPR is part of the Sustainable Development Financing (SDF) phase II portfolio, that aims to support Indonesia's development planning and budget-making processes toward a more integrated approach to tackling climate change, by promoting gender equality, transparency, and participation-based principles and standards, as well as poverty reduction. Phase II is part of UNDP's 'Strengthening Governance of Climate Finance to Benefit the Poor and Vulnerable' program, funded by the Swedish Government and executed by the Center for International Forestry Research (CIFOR). Section 2 on climate finance mechanisms at the national level is a result of Work Package 1, while Section 3 on climate projects at the subnational level is a result of Work Package 2 of this project.

2 LCFGEPR has three work packages. Work Package (WP) 1 is a comparative assessment of five financial mechanisms for disbursing climate-related funding, looking at advancing gender equality and pro-poor co-benefits. WP 2 assesses selected sector pilot projects to see how they can better contribute to gender transformative change and further the adaptive capacity of poor women and men in select subnational sites. WP 3 focuses on communicating findings through tailored and innovative products and engagements.

2 Climate finance mechanisms at the national level

2.1 Introduction

2.1.1 Background

As the urgency of tackling climate change becomes more evident, governments – rich and poor – are taking action by allocating funds for climate action and developing mechanisms to manage those funds.

Climate finance is urgently needed and the financial mechanisms that mobilize them into action are also, therefore, an urgent matter. Climate finance is sourced from the global to the national and subnational level, using bilateral, multilateral, public and private monies to finance climate actions at the same or lower levels. International policy processes (like negotiations at the United Nations Framework Convention on Climate Change, UNFCCC) and national development agendas shape both the availability and scope of climate finance. As such, climate finance has evolved over time, from initially being development assistance funding given by developed to developing countries, to what we see now – an increasing surge of private financing, along with domestic budget allocations from developing countries themselves.

There is comparatively little analysis on how developed countries bring and manage climate finance using their own institutions, mechanisms and financial resources. This results in an unbalanced view of climate finance, where developing countries appear as passive recipients of climate funds (Atmadja et al. 2018). At a global level, the spirit of climate finance is based on the principle of “common but differentiated responsibilities”, where developed countries carry the main burden of financing climate action, mobilizing additional funds, and assisting developing countries to implement climate action. Studies on the landscape of climate finance have focused on understanding the role of developed countries, international finance mechanisms and multilateral institutions in funding climate action in developing countries (Buchner et al. 2011). At the

same time, there is increasing evidence that developing countries are making significant contributions to climate finance, either through in-kind contributions and lost opportunity costs (Ickowitz et al. 2017), or through the allocation of domestic budget, from domestically-derived funding. These domestic contributions are dispersed and difficult to document.

Such climate finance mechanisms should be designed to enable women and the poor to face climate change, rather than hinder them. Marginalized populations, notably women and the poor, will be the most affected by climate change (Djoudi and Brockhaus 2011; Habtezion 2013). They are less likely to be able to adapt to climate change and are more vulnerable to unintended consequences of actions to mitigate climate change. This is acknowledged and embedded in the Cancun and Paris Agreements (2010; 2015).

This report analyzes the design and implementation of five Indonesian financial mechanisms that are used to directly and indirectly disburse climate-related funding from a gender equality and poverty reduction perspective. As climate change impacts the most vulnerable groups of society, particularly women and the poor, this study focuses on the potential co-benefits of climate finance for gender equality and poverty reduction. We also assess the strengths and weaknesses of each mechanism in terms of its potential to advance gender equality and poverty reduction. The knowledge gained from this review will be used to take more informed decisions on how to adjust current financial mechanisms, so climate action can be financed in a more effective, efficient and equitable manner.

2.1.2 Research questions and approaches

Our research at the national level is based on the following research questions:

1. How are gender transformative and pro-poor norms reflected in the design and implementation

- of the current mechanisms for financing climate change in Indonesia?
2. How can financial mechanisms be more effective and efficient in advancing gender equality and poverty reduction?
 3. How can this analysis inform budget formulation and the performance-based budgeting system?

To answer the above questions, four steps were taken: (i) project refinement and preliminary research; (ii) data collection, through a literature review and key informant interviews; (iii) data analysis; and (iv) report writing. Details of this research process, including consultations taken to design and validate the research, and the data collection process, are described further in Annex 1. Project refinement, data collection and data analysis were conducted between June to December 2019, while interviews were conducted between

18 July until 4 September 2019. Interviewees were selected following consultation with UNDP and key informants, listed in Annex 2. The report is guided by our analytical framework (see Annex 3); this framework characterizes the way that financial mechanisms could contribute to transforming gender inequalities, and how gender-transformative climate finance could contribute to reducing gender inequalities. This framework is translated into a three-step ‘gender and pro-poor’ study process. Each step is comprised of a series of questions that form the basis of our data collection and data analysis (see Annex 4). We used an ‘influence matrix’ (Annex 5) to identify the influence of gender and pro-poor norms on the studied financial mechanisms.

Our study focuses on the following five mechanisms, summarized in Table 1. These mechanisms are analyzed using the same analytical

Table 1. Summary of the five financial mechanisms analyzed in this study

Name	Date established and budget volume	Institution type	Technical ministry/ agency responsible	Incentive type	Beneficiaries	Data source
<i>Dana Desa</i>	2015 IDR 70 trillion (2019 only)	Inter-governmental fiscal transfer mechanism	Kemendes PDTT, Kemendagri	Technical support; political support (through prioritization and decentralization); flexible funding	Village governments, community members	Interview, literature review
BLU-P3H	2007 IDR 251 billion (until 2019)	Public financial service provider	Ministry of Environment and Forestry	Low-interest loans	State/private-owned companies, cooperatives, farmer user groups and their members	Interview, literature review
ICCTF	2009 IDR 198 billion (2015–2017)	Grant mechanism	Bappenas	Grants	Civil society organizations, local governments, ministries	Literature review
DAK	2004 IDR 183 trillion (2018)	Inter-governmental fiscal transfer mechanism	Ministry of Environment and Forestry	Funds to regions for specific programs	Local governments	Literature review
BPD-LH*	2019 IDR 4.29 trillion (2019)	Public financial service provider	Ministry of Environment and Forestry	TBD (performance-based payments, grants)	TBD	Literature review

Note: * Not yet operational

framework, using two data collection methods (literature review and key informant interviews). These mechanisms are complementary because they cater to different beneficiaries and provide different services.

1. The Village Fund (*Dana Desa*)
2. The Public Service Agency for Forest Development Financing Center (*Badan Layanan Umum Pusat Pembiayaan Pembangunan Hutan, BLUP3H*)
3. The Indonesia Climate Change Trust Fund (ICCTF)
4. The Special Allocation Fund (*Dana Alokasi Khusus, DAK*)
5. The Environmental Fund Management Agency (*Badan Pengelola Dana Lingkungan Hidup, BPDLH*).

These five financial mechanisms were chosen based on the following criteria:

- i. their objectives are aligned with climate change or environmental goals, making them potential mechanisms to distribute climate change finance
- ii. they are well-established, either temporally (i.e. since 2010) or financially (i.e. the volume of funds managed is at least IDR 1 trillion/year)
- iii. they represent a diversity of institutional characteristics, objectives, incentive structures for beneficiaries and scope of work.

2.1.3 Climate finance mechanisms, gender and poverty

Climate finance, globally and within Indonesia

At the global level, discourses on climate finance have co-evolved alongside those on safeguard principles, human rights and climate justice. This has led to gender equality being integrated into the Green Climate Fund (GCF), an international financial mechanism established within the framework of the UNFCCC to support climate action. The GCF has adopted an operational approach that is gender-responsive (Green Climate Fund 2018). Its governing instruments refer to gender and women, while the staff and Board are mandated to be gender-balanced (Schalatek and Nakhooda 2015). Other mechanisms, such as the Climate Investment Fund, Adaptation Fund, and the Global Environment Facility, have also made progress over the years in mainstreaming gender into their operations (Schalatek and Nakhooda 2015). There are indications that climate adaptation funds are more likely to consider gender than climate

mitigation funding. The Organization of Economic Cooperation and Development (OECD) reviewed how well members of the OECD Development Assistance Committee integrate gender equality into their bilateral aid for climate change. The review found that in 2013, 29% (USD 6.9 billion) of their members' bilateral aid for climate change had objectives that included gender equality. Of this, 46% targeted climate change adaptation only, 19% targeted climate change mitigation only, while the rest (36%) targeted mitigation and adaptation.

Indonesia's climate financing must align with Indonesia's aim to reduce its greenhouse gas (GHG) emissions by 26% by 2020 without international support, compared with a business-as-usual scenario, and 41% with international support (Ampri et al. 2014). The Indonesian government has established a national action plan for GHG emission reduction (*Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca, RAN-GRK*), a national action plan for climate change adaptation (*Rencana Aksi Nasional Adaptasi Perubahan Iklim, RAN-API*) (Bappenas 2014), and a national secretariat to guide and support subnational governments, and monitor progress towards achieving Indonesia's GHG reduction goals (<http://ranradgrk.bappenas.go.id>; Presidential Regulation Number 61 of 2011 on RAN-GRK/Peraturan Presiden Nomor 61 tahun 2011 tentang RAN-GRK [Perpres 61/2011]).

By 2013, international climate finance pledges to Indonesia were estimated to be between USD 3.1–4.4 billion, mostly (75%) from loans (Tänzler and Maulidia 2013). In 2011, Indonesia's total budget expenditure on climate change mitigation amounted to approximately USD 579 million (Tänzler and Maulidia 2013). Almost 75% of domestic climate finance supported 'indirect' or 'readiness' activities, including policy development, research and development, establishment of measuring, reporting and verification systems, and other enabling environments (Ampri et al. 2014). These activities provide a foundation on which future 'direct' mitigation projects can be implemented (Ampri et al. 2014).

In 2016, Indonesia started to implement budget tagging for climate change mitigation actions, with support from UNDP. This gave a more precise view of the state of climate finance from the national budget, which was not adequately covered

in previous documents (e.g. Tänzler and Maulidia 2013; Ampri et al. 2014). Budget tagging was rolled out in six ministries mandated to implement the emissions-reduction national action plan, *RAN-GRK*: the Ministry of Agriculture (*Kementerian Pertanian*), the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*, KLHK), the Ministry of Energy and Mineral Resources (*Kementerian Energi dan Sumber Daya Mineral*), the Ministry of Industry (*Kementerian Perindustrian*), Ministry of Transportation (*Kementerian Perhubungan*), and the Ministry of Public Works and Housing (*Kementerian Pekerjaan Umum dan Perumahan Rakyat*). The results of this tagging shows that, in 2017, six Indonesian ministries allocated IDR 81.8 trillion (USD 6.1 billion) from the national budget for climate mitigation (PKPPIM 2018, 13)³. Roughly 0.001% of this came from grants received from overseas development assistance (IDR 105.4 billion ~ USD 7.9 million) (Haryanto 2017, 5). The total value of climate change finance from the state budget is likely to be much larger than this, however, as the amount cited does not include finance for adaptation actions, and actions by other ministries e.g. the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (*Kementerian Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi*, Kemendes PDTT), nor the Ministry of Women's Empowerment and Child Protection (*Kementerian Pemberdayaan Perempuan dan Perlindungan Anak*, KPPPA).

Information on financing climate change adaptation is scarce, compared to what is available on mitigation. The Ministry of Finance (*Kementerian Keuangan*, Kemenkeu) began climate change adaptation budget tagging in 2017. In contrast to the six ministries mandated for mitigation, adaptation is mandated across 17 ministries (*Pusat Kebijakan Perubahan Iklim dan Multilateral*, PPKIM 2018), making it a more complicated endeavor to track. As of 2020, the results of budget tagging for climate change adaptation has been published (e.g. Fiscal Policy Agency and UNDP 2019; Rulliadi 2019). Several lessons had been learnt from the process of budget tagging for climate change mitigation to date (PPKIM 2018):

- Identification of climate change activities needs to be based on legally binding documents, like the national action plans for climate change mitigation and adaptation, and Indonesia's Nationally Determined Contribution (NDC)
- Tagging needs to be done at output level
- The national focal points for budget tagging are Bappenas and the Ministry of Environment and Forestry
- Internal coordination within technical ministries is needed for the identification and tagging of activities
- Ministries need capacity building in budget tagging and the actions that are being tagged
- Identification and tagging need to be done more consistently within and across ministries

Indonesia has actively participated in global climate change forums and processes. As one of the three largest forested countries in the tropics, Indonesia has been successful in tapping into international multilateral and bilateral finance for forest-based climate (Silva-Chávez et al. 2015). In 2010, Indonesia signed a letter of intent with Norway, which established an Indonesia-Norway 'Reducing Emissions from Deforestation and forest Degradation, and enhancing forest carbon stocks' (REDD+) partnership potentially worth USD 1 billion⁴. It has gone through two phases ('establishment', and 'transformation') and is poised to enter the last phase ('delivery') of verified emissions reductions (Caldecott et al. 2018).

Indonesia has enacted various laws, built institutions and engaged with a wide range of stakeholders, notably in REDD+ (Indrarto et al. 2012; Korhonen-Kurki et al. 2017). The responsibility of ensuring climate change readiness is shared across various ministries, including Bappenas, the Ministry of Finance and the Ministry of Environment and Forestry. In 2016, Indonesia submitted its forest reference emissions level⁵, as a basis for future results-based payments.

The dynamic domestic landscape of climate policies and finance in Indonesia makes it an

3 Based on verified budgets. USD 1 = IDR 13,381 based on the World Bank official exchange rate in 2017 (<https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=ID>)

4 REDD+ stands for 'reducing emissions from deforestation and forest degradation, fostering conservation, sustainable management of forests, and enhancement of forest carbon stocks.' It is an approach accepted by the UNFCCC to mitigate the effects of climate change.

5 https://redd.unfccc.int/files/frel_submission_by_indonesia_final.pdf

ideal country to study how domestic financial mechanisms can be used for climate finance.

Indonesia is the largest archipelago in the world, home to more than 250 million people, most of whom depend on agriculture. Its 16,000+ islands are vulnerable to climate change effects such as sea-level rise, the increasing intensity and duration of cyclones, and unpredictable seasonal patterns. Additionally, it is one of the largest countries with tropical forests and peatlands, which hold enormous climate change mitigation potential (Murdiyarto et al. 2013). Huge distances between urban areas, the isolation of small islands, the diversity of cultures, and the inequitable distribution of wealth and human resources across the country, all add to the logistical, economic and political complexity of effectively and equitably administering climate finance.

Private sector engagement is going to play an increasingly important role in climate change mitigation and adaptation investment in Indonesia. The government is providing strong support by including several types of projects aligned with climate adaptation and mitigation goals as national strategic projects. This includes the development of waste-to-energy infrastructure, flood embankments and water supply infrastructure (see <https://kppip.go.id>). The involvement of the financial sector will also play a key role in climate finance management and delivery (Tänzler and Maulidia 2013). Bank Indonesia, for example, is establishing regulations on green banking, so as to provide financial, social and environmental sustainability standards that are integrated into investment planning (Tänzler and Maulidia 2013).

Linking climate finance, gender and poverty

Climate finance, gender and poverty are not stand-alone, independent topics. Climate finance can influence both gender equality and poverty (Schalatek 2009). Properly designed and well-executed climate finance mechanisms can assist in addressing imbalances that weaken communities' resilience to climate change impacts, and can help to decrease gender imbalances (Habtezion 2013). With inequalities more significant for marginalized groups, including poor women and men, climate finance mechanisms must target such groups during project planning, implementation, monitoring and evaluation (Habtezion 2013).

The way climate finance mechanisms are conceptualized and designed will have implications on gender equality and poverty reduction, through several pathways (see dotted lines in Figure 1). First, by encouraging or hindering equal access, participation, benefits and control over resources and decisions on how financing is distributed, used, reported and evaluated. Second, by determining the scope of projects/programs that can be financed, which impact women, men, rich and poor differently. Third, some financing mechanisms can indirectly influence how programs and projects are implemented, by determining the way they are reported and evaluated and the kinds of activities that are financed. Conversely, gender and poverty dynamics also influence the way these programs and projects are implemented, potentially carrying over the impacts from the first and second pathways. Fourth, the implementation of these

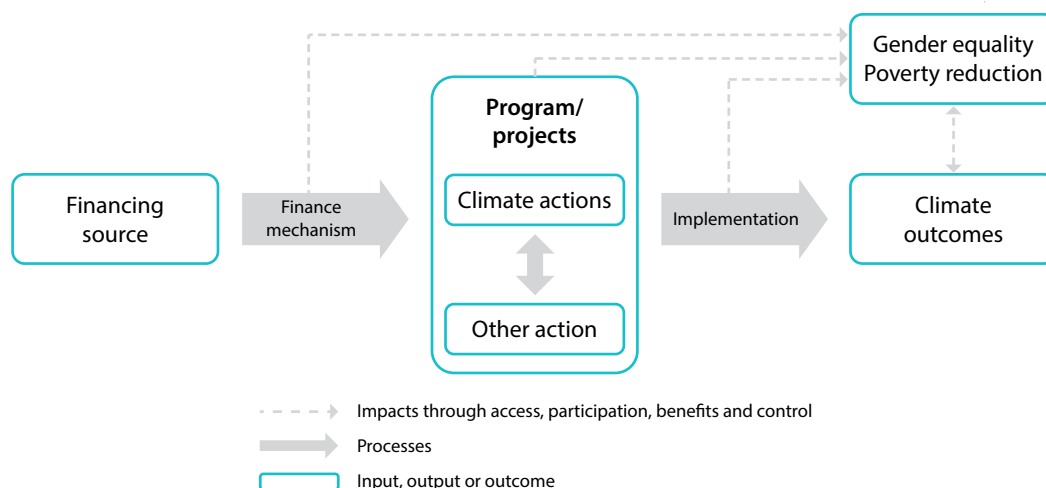


Figure 1. Links between climate finance, gender equality and poverty reduction

financed programs or projects generates climate outcomes (e.g. staying below a 1.5°C increase in global temperatures, or improved climate resilience) which in turn impacts poverty and gender equality. Conversely, poverty and gender inequalities in society impact our capacity to reach these climate outcomes.

Climate finance needs to account for the different adaptive and mitigative capabilities of women and men, and the rich and poor (Schalatek 2009). Women are often disadvantaged due to a lack of market and capital access, unpaid care contributions, a lack of legal protection and ownership rights, and cultural and societal biases. All of these are challenges for women to engage in learning, politics and decision-making processes (Schalatek 2009). Addressing these issues is crucial, given how climate change can amplify existing inequalities (Wong 2016). Climate finance has the potential to widen gender gaps within communities. Importantly, if climate finance does not attend to existing gender gaps or challenge structural inequalities, women's lack of access to land and public participation could be reinforced (Wong 2016).

In Indonesia, gender mainstreaming and poverty reduction are development agendas with strong regulatory support. Poverty reduction has been a constant development objective, enshrined in the 1945 constitution and supported by numerous laws and regulations, including one that aims to accelerate poverty alleviation (*Peraturan Presiden nomor 15 tahun 2010 tentang Percepatan Penanggulangan Kemiskinan* [Perpres 15/2010]). The fourth amendment of the Constitution (in 2002) specifically mentions that, “poor people and neglected children are cared for by the state” (Art. 34, para. 1) and “The State develops a social security system for all people and empowers the weak in line with human dignity” (Art. 34, para. 2). Poverty reduction also features prominently in national development planning and agendas (e.g. *Nawacita*). Gender equality, meanwhile, is operationalized through a series of laws on gender mainstreaming (e.g. *Instruksi Presiden nomor 9 tahun 2000 tentang Pengarasutamaan Gender dalam Pembangunan Nasional* [Inpres 9/2000]), gender-responsive planning and budgeting (*Perencanaan dan Penganggaran Responsif Gender*, PPRG), and its

integration into the national development plans⁶. With respect to climate change, the national climate change adaptation plan requires that all line ministries conduct a gender analysis prior to implementing programs and activities, as well as collect gender-disaggregated data, produce a gender budget statement (GBS), ensure equal access to goods and services, and ensure equal involvement across genders.

Gender continues to be an issue in REDD+ and the forestry sector in general, despite efforts to improve institutional capacities and safeguards (Arwida et al. 2017). Improving climate finance delivery and enhancing stakeholder engagement could facilitate pro-poor, gender-sensitive and contextually suitable programs to be developed (Tänzler and Maulidia 2013). Arwida et al. (2017) listed efforts by civil society organizations, international institutions and the government to mainstream gender in REDD+. They also highlighted gender-related risks in REDD+ implementation in Indonesia at both national and subnational levels. This offers a useful starting point when designing indicators for gender mainstreaming in REDD+ and other climate change mitigation and adaptation actions.

Performance-based budgeting

Performance-based budgeting and gender-responsive planning and budgeting (PPRG) are important tools to ensure that climate change finance in Indonesia is aligned with gender equality and poverty reduction. Indonesia began implementing performance-based budgeting in 2005, based on Law Number 17 of 2003 on State Budget (*Undang-Undang nomor 17 tahun 2003 tentang Keuangan Negara* [UU 17/2003]), Law Number 25 of 2004 on the National Development Planning System (*Undang-Undang Nomor 24 tahun 2004 tentang Sistem Perencanaan Pembangunan Nasional* [UU 25/2004]), and Ministry of Finance Regulation Number 214 of 2017 on Measurement and Evaluation of the Budget Performance of the Implementation of Work Plan and Budget of the Ministry/Agency (*Peraturan Menteri Keuangan Nomor 214/PMK.02/2017 tentang Pengukuran dan Evaluasi Kinerja Anggaran atas Pelaksanaan Rencana Kerja dan Anggaran Kementerian Negara*

⁶ See list of regulations related to gender mainstreaming at <https://mediakita.id/2019/04/sejumlah-beleid-yang-memperkuat-penerapan-pug/> and Mulyaningrum et al. (2015)

Lembaga [PMK 214/2017]). Under a performance-based budgeting approach, funding (input) is linked with outcomes, to provide information on the effectiveness and efficiency of programs and activities. This approach aims to address issues like: (i) unclear links between planning, budgeting, implementation and reporting; and (ii) programs and activities that cannot be used to measure performance of work units in ministries or agencies, nor the achievement of national development targets (Depkeu and Bappenas 2009; PMK 214/2017).

Despite supportive regulatory frameworks for gender mainstreaming, implementation and budgeting have so far been weak (Mulyaningrum et al. 2015; mediakita.id 2019). The Ministry of Finance and UNDP assessed the implementation of performance-based budgeting in climate change-related programs and activities, and their responsiveness to gender equality and poverty reduction (Eschke 2017). They found that many climate-change related programs and activities do not take gender and poverty into consideration, which were retrofitted to outcomes, instead of the reverse. The national action plan for climate change adaptation's guidelines regarding gender were not being properly implemented by line ministries. These findings were also supported by other studies (e.g. BKF 2020). The study by PATTIRO (BKF 2020) also found examples of budget lines that could have been tagged under gender but were not. Theoretically, implementation of performance-based budgeting ensures that performance indicators – e.g. those related to gender equality and poverty reduction – are linked with the programs and activities of ministries, as well as linked to budgets. In practice, however, this has been difficult to implement due to a lack of harmonization between performance indicator and programs (Widodo 2016).

2.2 Results

This section summarizes our findings across the five studied mechanisms. Each sub-section answers one of the three research questions. In addition, a fourth sub-section discusses an underlying structural issue, that of the alignment between the national development agenda and the three Sustainable Development Agendas (SDGs) related to gender equality (SDG5), poverty reduction (SDG1) and climate change (SDG13).

2.2.1 How are gender transformative and pro-poor norms reflected in the design and implementation of the current mechanisms for financing climate change in Indonesia?

Advancing access

How can women and the poor have better access to information and resources?

There are efforts to improve women's access to information and processes around various financial mechanisms, but the effectiveness of these efforts, as well as their extent and scope, are currently unknown. For example, in *Dana Desa* and BLUP3H, we were able to identify individual examples of these efforts, but documentation on where activities are located, and the types of activities and information provided were unavailable. Some actions aim to increase the information available to women about a specific financial mechanism, while others focus on empowerment so that women can be more actively involved in village economy and governance generally. **More systematic monitoring of the effectiveness of these efforts is needed, starting by documenting the location, types of activities, objectives and target audience of each effort.**

Improving access to information about a financial mechanism for the general public may not mean better access to information for women and the poor. At the institutional level, we see improvements in website and other communication products, outreach to potential beneficiaries, and the number and (gender and technical) diversity of staff being recently recruited. These point to institutional learning at a higher level that is focused on delivering better services. This recruitment may also improve monitoring, evaluation and learning capacity in future; more field staff and statisticians are being recruited to capture information more systematically. There is substantially more information available publicly through BLUP3H's website now, compared to when we started research in 2015 for another project. This is useful for those with sufficient (digital) literacy and access to internet. Nevertheless, according to a study by the Center for Research and Development of Post and Information Technology (*Pusat Penelitian dan Pengembangan Penyelenggaraan Pos dan Informatika*) on average, the level of internet access for farmers in Indonesia is still low (7.6%) (databoks.katadata.

co.id 2016). As well as improving its website, BLUP3H conducted field visits in an effort to raise villages' awareness around its program, both directly and through facilitators (according to Interviewee 4), however we do not have data on the frequency of visits, how they were conducted or the participants being engaged during these field visits.

Funding that targets poor people through short-term 'cash for work' programs may improve immediate access to resources, but must also be linked with long-term investments that build human capital. *Dana Desa's* 'cash for work' scheme (*Padat Karya Tunai*, PKT) provides employment to millions of marginalized people in the form of short-term wages for their labor. By targeting the local poor to provide labor to construct physical infrastructure, the scheme provides short-term and visible income flows for villages. The scheme also puts beneficiaries in leadership roles (e.g. as 'experts' or assistants to these experts), albeit prematurely. The result is that village governments are forced to choose between: (a) complying with the scheme and putting unqualified people in positions of leadership which can lead to the construction of poor-quality infrastructure; and (b) producing high quality work under qualified leadership, but not complying with the scheme. **The 'cash for work' scheme has the potential to offer more long-term human development impacts by including capacity building so that the poor can progress beyond providing labor. This could be,** for example, through training beneficiaries in project management and skills (e.g. carpentry, masonry) as part of the program, under the guidance and supervision of qualified on-site trainers and facilitators.

Community-based forestry initiatives – like community plantation forests (*Hutan Tanaman Rakyat*, HTR), community forests (*Hutan Rakyat*, HR), state-owned community forests (*Hutan Kemasyarakatan*, HKM) and village forests (*Hutan Desa*, HD) – are more accessible for communities in general but may not be accessible for women and the poor. Access to these activities assumes several things: (i) that communities, forest farmer groups (*Kelompok Tani Hutan*, KTH) or cooperatives can attain the necessary land titles to allow members to access BLUP3H financing; (ii) that members have good access to financing through their cooperatives/ groups/communities; and (iii) women and the poor have good access to membership in the cooperatives/ groups/

community groups managing communal forests. The process of attaining a village forest title is extremely complicated, time consuming and expensive, and cannot be achieved without external assistance (e.g. from an NGO), and this is only half the battle. Communities holding village forest land titles from the Ministry of Environment and Forestry still need to get land management rights from the provincial government, which has proven difficult to attain (Intarini et al. 2014). Non-timber forest product (NTFP) processing can be accessible to a wider range of beneficiaries, although beneficiaries are most likely to be the companies processing NTFPs, which provide employment to women and the poor.

Advancing participation

How could financial mechanisms create enabling environments for women and the poor to participate in activities and decision-making, during each phase of the program (planning, implementation and evaluation)?

Empowerment activities could advance the participation of the poor and equal participation across genders, but they receive much less funding and attention than development activities. For example, *Dana Desa* was designed to promote women's empowerment and gender equality, by strengthening women's capacity and capabilities so they were able to maximize the benefits of funding. Annual *Dana Desa* priorities always presented development and empowerment as two equally important priorities. Despite this, empowerment activities represented less than 7% of the funds used in 2016.

Villages need support and encouragement to shift funding use from development to empowerment activities. Designing a financial mechanism that balances between development and empowerment is a good base for advancing equal participation across genders. It needs to be matched by activities, outputs and enabling actions to support recipients in implementing this design. Empowerment activities require more skill and support than development activities, but have the potential to directly benefit more women and provide long-term poverty alleviation. Shifting from an infrastructure-based development mindset toward investing in enabling conditions such as building the 'soft' skills of rural communities will require government support and encouragement.

Technical support to help villages better manage their finance is being provided, but it is not sufficient. Village capacity to manage finance is an important determinant on the equity and efficiency of climate action. Large financial mechanisms such as *Dana Desa* support village administrators to align activities with fund objectives in several ways. Social Services (PSD) produces guidance documents on annual funding priorities, targeted at village and district governments to strengthen their capacities to provide basic social services in their area. These guides take advantage of the fact that provision of social services has been a priority of *Dana Desa* since it was established. Guides also help village and district governments to translate the vision of *Dana Desa* into activities. Kemendes PDTT encourages village governments to legalize village community groups, i.e. women groups and interest-based groups, so that these groups can voice their concerns and needs related to the village development, through the *Dana Desa*. Social Services staff interviewed believed that doing this helps the head of village to govern (Int6). At the forefront of empowering villages to manage their own affairs, Kemendes PDTT contracted and trained approximately 40,000 village facilitators (*Pendamping Desa*). Each facilitator assists two to four villages, and their jobs are defined by Peraturan Pemerintah Republik Indonesia No. 47 Tahun 2015.

Nevertheless, the scope and reach of this technical support is limited. There has been a large turnover of facilitators due to low salaries (USD 140/month plus USD 30 in expenses) (Trisno 2019). This amount was insufficient to compensate for the hard conditions and costly transport expenses to reach villages, let alone provide continued services to them. These issues are being addressed by Kemendes PDTT at the time of writing.

Financial mechanisms need to go further in encouraging gender equality at the village level.

In the land-use sector, *Dana Desa* does not clearly encourage and provide guidelines on the use of funds to ensure sustainability (Sutiyono et al. 2018). We find that this is also the case for gender equality – funds can be used to empower women, but there are no specific guidelines or encouragement to do so. In contrast, poverty indicators when calculating budget allocation across provinces and districts. Sutiyono et al. suggest modifying the allocation formula to integrate environmental sustainability; the same suggestion can also be applied for gender equality.

Our interviewees provided the following suggestions to advance women's participation in *Dana Desa*:

- **Improve women's knowledge on *Dana Desa*** through awareness-raising programs, seminars and workshops that aim to build gender capacity (Interviewee 8). Ensuring women's awareness about *Dana Desa* and its potential benefits requires action targeted at women. Interviewee 8, for example, mentioned meetings to raise awareness around *Dana Desa* that specifically invited women from Tojo Una Too, West Sulawesi.
- **Provide more support to villages on how to empower women.** Kemendes PDTT Social Services are preparing guidelines on women's empowerment at village level. Based on the Village law (UU 6/2014), these guidelines are intended to enable women to better access village resources, including the *Dana Desa*. The focus is on village governance, and enabling the community, including women, to voice their needs to the village government so as to address their concerns.
- **Provide more opportunities for women to take leadership roles.** Kemendes PDTT Social Services have been working with PEKKA to facilitate women's participation in village head elections and in the village consultative body (BPD). They also facilitate women to form groups to actively participate in the village-level deliberation forum, *Musdes* (Interviewee 10).

An institution can support gender mainstreaming, espouse principles of equity and aim to reduce poverty generally, but mandates for specific mechanisms within that institution can lead to difficulties in providing services to women and the poor. One example is the ministerial-wide support for gender mainstreaming at the Ministry of Environment and Forestry. Gender equality is embedded in the ministry's vision, and gender mainstreaming has been gaining traction. The effect of this institutional support may have helped BLUP3H in improving its inclusion of gender in its operations and staffing. At the same time, BLUP3H is a financial institution that is mandated to manage the Reforestation Fund, which, in turn, has very specific regulations for fund usage and disbursement. This includes proof of land tenure, in the form of a concession permit or partnership agreement with a state forest enterprise. Individuals or households are eligible for Forest Rehabilitation (*Dana Reboisasi/DR*) funds or any funds coming

from this source (including BLUP3H financing), if they belong to a cooperative or forest farmer group (KTH). These enabling conditions (e.g. clear land tenure, existence of cooperatives/farmer groups, partnership agreement) mostly exist in Java, which has low poverty rates compared to other islands. Likewise, women are not well represented in forest farmer groups and cooperatives.

Financial mechanisms need to examine their financing requirements from a gender and poverty perspective. For example, BLUP3H adopts banking standards and procedures designed for profit-seeking entities. BLUP3H avoids risks by financing recipients that have evidence of clear tenure, technical abilities and financial abilities; this results in creating barriers for the poor and for equal participation across genders (BKF-PKPPIM 2016). As such, by design, this has made engaging women and the poor very difficult. Financing mechanisms adopting for-profit approaches, such as BLUP3H, need to balance their visions as professional financing entities with their non-profit missions, and adjust their procedures and requirements accordingly. This means learning from other successful mission-oriented financial institutions, and from value-based banking (e.g. UNEP 2015; <http://www.gabv.org/>). There are also prevailing social norms that result in higher participation of men compared to women, which the BLUP3H mechanism does not address.

There are currently **limited opportunities for women and the poor to voice their concerns and influence the decision-making process in managing funds.** *Dana Desa* relies on village-level forums to be inclusive, yet most forums do not sufficiently include women and the poor. BLUP3H's Gender Analysis Pathway (GAP) and Gender Budget Statement (GBS) results show that women lack access to the fund, yet BLUP3H perceive that this mechanism is not gender-biased, on the basis that anyone can participate as long as they fulfil the requirements to get financial services (e.g. Sipayung 2017), without further examination of the requirements. There are no specific provisions that take into account poverty status, nor are there targeted efforts to ensure that the poor can participate to access funds. The types of activities supported by the BLUP3H may not be the kinds of activities that are accessible to women and the poor. The result is that currently, BLUP3H beneficiaries are mostly working on activities where women and the poor are

traditionally excluded, e.g. timber postponement credit, or establishment of forest plantations. Activities supported by DAK include a wide variety of services, notably education and health. The inclusiveness of the planning processes at national and regional levels depends on each sectoral ministry and regional government. In determining fund eligibility and allocation amounts, DAK does not explicitly include gender indicators. Poverty indicators are – in principle – indirectly included through the use of fiscal capacity indicators, but these are – in reality – not correlated⁷. Gender indicators are mentioned at the planning stage, when regional governments design proposals for activities funded by DAK-LHK, but these are unlikely being followed up thereafter. The roles of women and men in the use of DAK funds are not clarified across all DAK funding windows, and may be addressed differently by sector. Poverty reduction is an important motivation for the use of DAK funding, but we were unable to find any documentation to suggest that the poor are involved in any aspect of design, planning, implementation or monitoring.

Technical and institutional awareness of gender inequality needs to influence the narrative and discourses within the mechanism. For example, BLUP3H exists in a supportive institutional space that promotes gender mainstreaming and social justice. It has implemented Gender Analysis Pathway (GAP) and Gender Budget Statement (GBS) analyses, which show the gendered-constraints that women face in relation to accessing the benefits and could be considered as efforts to be more gender-aware. Nevertheless, interviews suggest that assumptions on gender are still limited to equating gender equality with equal treatment, without acknowledging existing inequalities. High-level BLUP3H officials interviewed consider the mechanism as gender inclusive, stating that BLUP3H is not a gender-biased mechanism as it is accessible for all, including women, as long they fulfil the requirements to get the credits (e.g. Sipayung 2017); they do not see a need to examine the requirements related to accessing their services. Gender concerns in forestry are largely absent or inadequately addressed, even in the scientific community (see Asher and Varley 2018).

⁷ Based on author analysis of data from PMK 119/PMK.07/2017 on Regional Fiscal Capacity (<http://www.jdih.kemenkeu.go.id/fullText/2017/119-PMK.07-2017Per.pdf>)

Financial support for small businesses, especially women and the poor, requires local presence and regular interaction with staff that not only provide financial monitoring, but also technical assistance in managing forest-based businesses. Lessons can be learned from existing micro-credit programs. For example, the Mekaar micro credit program of the state-owned enterprise PT PNM has more than 4 million female creditors in Indonesia (PNM 2019). It charges high interest rates (e.g. interest rates of 25% per annum⁸ as compared to 8–12% capped for BLUP3H) to cover its high operational costs, which include providing five-day training for, and weekly meetings among, credit recipients. Credit amounts range from IDR 2 to 5 million, with demonstrated impacts in empowering women⁹. To achieve this, the program employs more than 15,000 local facilitators ('account officers') whose role is to be present and reach out to potential creditors (Syarif 2017), compared to a few hundred in BLUP3H. Their non-performing loans rates (0.25%) are exceptionally low (Sebayang 2018). This business model has high operational costs, requires high institutional capacity, and can potentially have significant impacts.

Fundamentally, financial mechanisms need to acknowledge that women and the poor can play a vital role in achieving their objectives. As mentioned above, targeting the poor and women has cost implications. Financial mechanisms catering to the poor and women need intensive facilitation, capacity building, local presence and skilled facilitators. This has implications on both costs and recruitment. To make the necessary investments, financial mechanisms must integrate women and the poor as vital allies in achieving their objectives, and translate this into strategic planning and operational guidance. ICCTF has mainstreamed gender throughout their processes and can provide lessons in the context of project-based funding mechanisms. To some degree, *Dana Desa* has also done so, but the mechanism still struggles to provide the enabling conditions necessary for both village administrators and community members. Neither DAK nor

BLUP3H have included gender in their strategies and procedures. They embrace poverty alleviation objectives, but do not have ways in which the poor can actively contribute to the activities they finance.

Advancing benefits

How can women and the poor better benefit from the activities financed by climate finance mechanisms?

While poverty alleviation is clearly prioritized in all the financial mechanisms, gender equality and climate change have not received commensurate attention. All the financial mechanisms studied have regulatory frameworks that include climate change adaptation and mitigation objectives, but these objectives have not been prioritized in practice. Activities that could advance gender equality receive comparatively less funding than those for poverty alleviation, such as *Dana Desa*'s 'cash for work' program. Gender equality indicators are not included in fund allocation decisions. In contrast, poverty indicators are part of *Dana Desa*'s formula-based allocations. Inclusion of indicators related to gender equality into allocation decisions should also be considered.

Financial mechanisms should encourage activities that are locally adapted and accessible to both genders' abilities and constraints, such as time and social constraints. For example, infrastructure-based development activities may benefit the poor but they do not reduce gender inequalities. *Dana Desa* is strongly influenced by its objectives to reduce poverty and provide benefits to the poor. These poverty reduction measures do not however also ensure gender equality, because the causes of inequities across genders are different as those of poverty. 'Cash for work', for example, tries to alleviate poverty by creating a source of cash income for the poor and jobless. The jobs, however, involve construction-based work that is more accessible to men than women.

Efforts to encourage villages to take more gender-conscious choices for *Dana Desa* are ad-hoc, taking advantage of existing collaborations, programs, projects or staff. Government and non-government institutions are currently collaborating to ensure women can benefit from *Dana Desa*, e.g. through capacity building and awareness-raising activities aimed at village community members and leaders related to gender. These efforts are difficult to document at the national level because they

⁸ Imputed based on <https://www.pnm.co.id/news/pnm-nasabah-mekaar-jadi-4-42-juta-per-akhir-maret-2019>

⁹ Based on impact stories recorded on Instagram (#Mekaar, @pnm_persero). The program also received an award for poverty reduction from the government of Central Lombok in February 2019 (<https://seremonia.kontan.co.id/news/pnm-menerima-penghargaan-dari-pemkab-lombok-tengah-ntb>)

are implemented and coordinated by different government and non-government entities. These collaborative efforts must be better documented, supported and acknowledged, to better leverage on their financing and knowledge.

By overlooking gender and poverty-related constraints to participation in forest-based business and environmental investments, financial mechanisms can reinforce existing exclusion patterns. For example, BLUP3H does not explicitly mention gender in BLUP3H's vision, mission, objectives and principles. Poverty reduction is assumed to be addressed by creating employment in the forestry sector. The result is that almost all beneficiaries of BLUP3H are men. No data exists on the participation of the poor as either direct or indirect beneficiaries. In the case of *Dana Desa*, village law espouses principles that could support gender equality (e.g. Art. 78). At the same time, village law protects the rights of village governments in exercising their values and traditions. The allocation of village funds is based on village discussion forums. In our view, this could pose a potential issue if local traditions and values are not aligned with climate action, gender equality and poverty reduction, notably providing access to women and the poor in decision-making. Depending on the gender and power dynamics of these forums, this could either improve or undermine gender equality and widen the poverty gap.

Some ways to reduce this risk include:

- Acknowledging inequalities as experienced by the poor, and between women and men, and taking account of them in strategies and procedures.
- Taking into consideration the contribution/potential contribution of women and the poor to the objectives of the mechanism.
- Addressing gender and poverty-related constraints on the capacity of individuals and households in terms of their participation in forest-based business and environmental investments.

Several mechanisms want to reduce poverty, but these outcomes are not well documented or evaluated. For example, BLUP3H has taken steps to analyze the gender implications of its activities by implementing Gender Analysis Pathway (GAP) and Gender Budget Statement (GBS). There has been no corresponding attention in terms of understanding the implications of BLUP3H on reducing

poverty and benefiting the poor. At the outset, the requirements to access funds pose administrative, technical and financial burdens that may be well beyond the reach of the poor. Trickle-down effects that may benefit the poor, such as creation of employment from forest-based businesses financed by BLUP3H, are not documented. *Dana Desa* uses aggregate poverty statistics to monitor performance in poverty reduction, which can reflect the effects of short-term cash transfers, but be less adept in monitoring the long-term economic empowerment that leads to sustained poverty reduction. In addition, **benefits to women depend strongly on intra-household power dynamics and negotiations.** The lack of empowerment, participation, access and control that exists in many parts of rural Indonesia may limit direct benefits to women, and could reinforce existing gender inequalities through limiting participation, access to funds, information and support.

Advancing control

How can women and the poor gain more control over the resources and decision-making processes of financial mechanisms?

While the law has included many elements favorable to promoting gender equality and poverty alleviation, implementation still depends on local contexts. One interviewee highlighted that the law emphasizes the role of village decision-making institutions (e.g. *Musyawarah Desa*) and the village head as key elements of governing village functions, including the *Dana Desa*. The social dynamics of these governance elements is therefore even more influential in determining the extent the voices of women and the poor are heard, and their needs and concerns are accommodated, at the village level. Additionally, districts heads have an important role in allocating budgets to villages. These are highly political positions, which may affect allocation decisions. We need to closely examine the underlying 'community equals gender' assumptions that consider that targeting communities implicitly means targeting women. This assumption is very common in development interventions, specifically those dealing with natural resource management and the environment (Mai et al. 2011; Colfer and Minarchek 2013; Arwida et al. 2016). Village-level decision-making processes that include women and the poor will have a better chance of representing the community's interests as a whole, compared to processes that exclude them.

The inclusion of women and the poor in decision making and the utilization of funds should be part of a mechanism's monitoring and evaluation. In BLUP3H, for example, the indicator that is proposed for measuring improvements in gender equality is that within 1 year, 20% of credit agreements with members of forest farmer groups will be signed by women. In one study in Bojonegoro, East Java, 1% of loan recipients for the timber harvest postponement loan for smallholder private forest offered by BLUP3H (1 of 85 sampled respondents) were female (Syamsu et al. 2019). This district had the highest recipient of this type of loan in Indonesia. The same study found that the participation of the single female debtor included in the study was to fulfil the administrative requirement of verifying land ownership, which in this case was owned by the wife. The low (1%) proportion of female loan recipients reflected low (2%) female participation in forest cooperatives (Syamsu et al. 2019). Hence, the proposed gender indicator may not be realistic. And even if achieved, does not indicate shared control over decisions and resources among women and men. It merely indicates that women signed the agreement, possibly without understanding the implications of this agreement on her household's finances and her own labor.

Mechanism-specific insights

ICCTF

Compliance to international donor standards ensures better integration of gender and pro-poor norms; this comes at a high operational cost, but the costs of inequities are arguably much higher. The design of ICCTF was built with assistance from UNDP, using international governance and safeguard standards. As such, we observed comparatively strong monitoring, evaluation and learning processes, and deeper integration of gender equality and poverty reduction into various parts of this mechanism. Quarterly progress reports are published publicly, and annual reports include project profiles and financial information. The Government of Indonesia provides 20% budget support, which is insufficient to cover the 34% indirect institutional costs. ICCTF's funding streams still depend on international and national government grants, which are highly sensitive to political changes (Atmadja et al. 2018). From this 'Innovation Fund' approach, ICCTF needs to expand into being a 'Transformation Fund' that puts in place a business model that generates its own

funds to cover some – if not all – of its operational costs. Although this was already planned in ICCTF's blueprint (ICCTF 2009), we could not find information on progress.

Building stronger partnerships with local governments is essential for leveraging climate finance. This is especially the case if a funding mechanism does not include local governments, which is the case with ICCTF. In our view, this exclusion reduces the opportunities for such funding to leverage existing actions by local governments, and for local governments to learn from innovative projects funded by mechanisms, in terms of integrating gender and poverty in project design and monitoring.

DAK

DAK currently puts limited attention on gender equality. DAK funds are designed to support regional governments to fulfil their duties, as specified in the government's work plan. DAK defers to each technical ministry for setting the tone on gender equality within their work plans. In 2017, DAK funding specific to environment and forestry activities (DAK-LHK) encouraged local governments to consider gender in their DAK funding proposals. We could not find information on how regional governments have responded to this.

The current system to prioritize DAK's forestry allocation to regions focuses on cure but not prevention, by giving funds to areas already experiencing high degradation and with relatively higher institutional or financial management capacity. This is positive for climate change adaptation, but it also needs to balance with the climate change mitigation objective of protecting remaining forests, especially in regions with low financial management and institutional capacity. There is no funding flow that focuses on improving managerial and institutional capacity. Over time, this may widen the capacity gap between areas.

There is potential for DAK-LHK to channel climate change funding, but the fund allocation and monitoring/reporting mechanisms need to be adjusted to align funding to Indonesia's climate change goals. Positive aspects of DAK-LHK are that it has national coverage (which can help with the monitoring of progress towards NDCs and SDGs), it uses the fiscal transfer mechanism (which

is well-integrated into the state budget system), and it is based on proposals from regional governments (putting them in charge of funded activities).

Dana Desa

Villages have little agency over the amount of funding allocated to them. Funding allocation is not based on performance indicators, poverty reduction, climate change or gender equality. There are no built-in systems of incentives or disincentives linked to the amount allocated. The incentive to reduce poverty is not evident as, all else being equal, poor villages receive more, while villages that successfully reduce their poverty rates receive less. Villages performing or managing their funds well, or following the funding priorities decided by Kemendes PDTT do not receive more than those that do poorly. Instead, fund allocations are calculated based on factors out of the immediate control of village governments, such as population size, area, poverty rates and geographic isolation. Introducing an outcome-based allocation or reward system would be a potential way to leverage *Dana Desa* for climate change adaptation/mitigation, gender equality and poverty alleviation goals.

2.2.2 How can financial mechanisms be more effective and efficient in advancing gender equality and poverty reduction?

In climate action, no one should be excluded. Any financial mechanism that unwittingly excludes people based on gender or poverty status will be ineffective, because the scale of action needed requires everyone to be engaged as equals.

CFMs need to consider investing in capacity building for beneficiaries, to ensure men, women and the poor can access funds equally and use them effectively. Funds such as *Dana Desa* need to balance fund allocation between development and empowerment. Empowerment activities are more complex. Shift towards more empowerment activities will need to be supported with technical support and practical guidelines. Provide continued, local support for village leaders so they can manage funds in a way that benefits men and women equally, and provides long-term economic opportunities for the poor.

Use gender equality indicators and poverty alleviation indicators to calculate fund allocations (e.g. DAK) and reward recipients who have shown improvements in advancing gender equality and poverty alleviation publicly through awards, with

prizes (e.g. flexible fiscal allocation), which recipients can use for meeting locally relevant needs aligned with national goals (e.g. *Dana Desa*, DAK).

Suggestions for improvement, by topic:

Concept:

- Integrate gender equality and poverty reduction in vision, mission and implementation.
- If seeking international funding sources, harmonize policies, strategies and procedures with those espoused by international donors, who often prioritize gender equality and poverty reduction principles.

Design and implementation:

Human resources:

- Hire enough skilled people, covering the range of skills necessary to run a financing mechanism that can equally serve women and men and assist the poor.
- Provide training on value-based financing at different levels of the financial mechanism (national to local).
- Conduct an internal evaluation of human and operational resource needs in relation to poverty reduction and gender equality goals, estimate the costs required, and build a business strategy to match.
- Instill a gender-equitable and pro-poor culture throughout the organization.

Regulatory support:

- Review regulations on whether they sufficiently provide guidance, encouragement and support for gender mainstreaming and poverty reduction, and establish learning as part of monitoring and evaluation.
- Review the compliance to, and scope of, existing regulations requiring spousal consent.
- Ensure regulations and agreements are in place to collaborate across ministries, and with different types of actors (e.g. civil society organizations, private sector).

Governance:

- If not yet conducted, perform GAP and GBS analyses, and similar analyses focusing on the poor. Do so regularly, e.g. every 3–5 years.
- Improve the quality of GAP and GBS integration into ministries or agencies to better reflect gender and poverty aspects of programs and projects (i.e. situation analysis, plan, output and outcomes)

- Evaluate if actions recommended by the above analyses have been implemented as part of the next analysis

Fund allocation and distribution:

- Use gender equality and poverty alleviation indicators to calculate fund allocations.
- Reward recipients who have shown improvements in advancing gender equality and poverty alleviation publicly through awards, with prizes (e.g. flexible fiscal allocation), which recipients can use for meeting locally-relevant needs aligned with national goals. Ensure that recipients are aware that additional allocation is 'prize money' for good performance, rather than making it an obscure part of a fiscal transfer.

Fund usage and management:

- Provide continued, local support for village leaders so they can manage funds in a way that benefits men and women equally, and provide long-term economic opportunities for the poor.
- Allocate more funds to empowerment activities, hiring rural facilitators and training them to be effective ambassadors of financial mechanisms that care about gender equality and poverty reduction.

Monitoring, evaluation and learning (MEL)

- Use indicators to monitor outcomes on gender equality (not only women) and poverty reduction; Document and monitor efforts to improve these outcomes.
- Collect gender-disaggregated data and poverty data during the various phases of financing, e.g. proposals, appraisals, agreements, repayments and reporting.
- Use methods that explicitly link MEL with internal strategy and policy-making cycles and procedures to ensure that data is collected, lessons extracted and a course of action is taken based on these lessons.

2.2.3 How can this analysis inform budget formulation and the performance-based budgeting system?

The main obstacle for implementing performance-based budgeting in a way that incorporates gender and pro-poor dimensions is human resources.

These human resources are essential:

- to understand and operationalize gender equality and poverty reduction in budgeting at national and regional levels

- to operate the performance-based budgeting system at ministerial, unit and sub-unit levels
- to generate the data needed to monitor outputs
- to oversee and coordinate performance-based budgeting implementation across ministries
- to link performance-based budgeting processes with gender mainstreaming processes (e.g. GAP, GBS) so that inputs from one can feed into the other. For example, GAP and GBS analyses suggested gender-mainstreaming indicators for BLUP3H, which could be used as indicators for performance-based budgeting.

Performance-based budgeting implementation needs to be accompanied by improved ability of line ministries to monitor and provide evidence around performance related to gender equality, climate change and poverty reduction. We highlight this because we observed that from the two active mechanisms that we studied closely, we could not access the following information, either because the information was not available or was not made public. BLUP3H: the number of trees planted; tree survival rates (annual); carbon emissions avoided through harvest postponement; and gender-segregated data on beneficiaries. *Dana Desa*: Number of men, women and poor community members who participated in the village-level deliberation forum (*MusDes*); gender-segregated data on people who received wages from the 'cash for work' scheme and other *Dana Desa* activities; and data on average wages received per person, compared to minimum wage levels.

The Ministry of Finance, technical ministries and KPPPA should launch a program that identifies and addresses the above human resource gaps, and provide sufficient financial resources, support and monitoring. To start, the Ministry of Finance may want to consider a study to evaluate the implementation of performance-based budgeting in each ministry, and where possible, calculate the potential cost savings that could be gained from proper performance-based budget implementation. This study should be designed for collaborative, cross-ministerial learning, and reward those who have shown effort to conform to performance-based budgeting. Another starting point is strengthening GAP and GBS integration at the level of financial mechanisms, as well as at the ministry level. These analyses and budget statements should align with ministry/agency plans, as well as national development goals (i.e. the National Mid-term Development Plan (RPJMN), *Nawacita* and Indonesia's SDGs) and be used to provide indicators for performance-based budgeting.

Performance-based budgeting can better motivate ministries and government agencies to improve their performance through regular feedback and awarding good performance. Performance-based budgeting needs to go beyond programmatic synchronization and monitoring and evaluation, to become a platform for learning. As we learned from *Dana Desa*, future funding allocations are decided regardless of village and local government performance. Villages are required to report performance upstream (e.g. to regional and national governments) but they receive no feedback in return. Similarly, performance-based budgeting provides good feedback to upstream national-level implementers, but this system does not provide much feedback to regional governments or local stakeholders, other than increased or decreased budget allocation for programs. The information flow needs to also flow downstream as part of a learning system, and be linked not only to budget allocation decisions but also learning from and awarding good performance. The form of the award needs to cater to the needs and desires of those implementing performance-based budgeting.

Strategic planning is a key factor in the successful implementation of the performance-based budgeting system. In our analysis, we underlined the importance of the conceptualization stage for each financial mechanism, in relation to climate finance, gender and poverty issues. We identified implementation issues that have implications for gender equality and poverty reduction that stem from how the mechanism was conceptualized. Learning from this, we highlight that performance-based budgeting could become a more effective champion in advancing gender equality and poverty reduction, if institutions integrate these issues in financial mechanisms' visions, missions and objectives, linking these to inputs, outputs, outcomes and impact indicators through the performance-based budgeting process.

2.2.4 The national development agenda versus Gender equality (SDG5), Poverty reduction (SDG1) and Climate action (SDG13)

All of the financial mechanisms studied must align with the national development agenda. They are operating within various ministries (e.g. Bappenas, MoFin, MoEF, Kemendes), which in turn must show alignment with the national development agenda. The performance-based

budgeting system is designed to reinforce this alignment. During the 2015–2019 presidency, the vision driving the national development agenda is encapsulated as '*Nawacita*'. Many of these *Nawacita* are supportive of poverty reduction and gender equality, however *Nawacita*'s link with climate mitigation and adaptation is more tenuous. A study by UNDP Indonesia (2015) mapped the Sustainable Development Goals (SDGs) against *Nawacita*. SDG13 ("Take urgent action to combat climate change and its impacts") is mapped only to *Nawacita* 7, "Promoting economic independence by developing domestic strategic sectors", which provides no direct links to climate change action. The five main indicators used to monitor *Nawacita* support the monitoring of poverty reduction, but not gender equality or climate action (see Table 2). There is a strong focus on infrastructure and deregulation to encourage private sector investments, notably in strategic national projects¹⁰.

In view of the national development agenda, the effectiveness of each financial mechanism in terms of advancing climate change action and gender equality is still limited. Out of these two objectives, gender equality seems easier to align with the national agenda. The objective of gender equality is supportive of the development agenda, as it strives to ensure men and women can equally make meaningful contributions to the economy. Improvements can be made, as long as there are more institutional innovations and investments that make gender mainstreaming easier to operationalize and monitor by units within ministries. The main issue is the distribution of access to development benefits among genders, rather than the kind of development being pursued. On the other hand, the issue of climate change puts the idea of development into question. What kind of development? What are the trade-offs? There are positive indications that for 2019 and beyond, Indonesia will be adopting a low-carbon development approach. The situation is fluid and will need to be followed more closely.

¹⁰ See <https://kppip.go.id> for more details on the strategic national projects.

Table 2. Linking SDGs and *Nawacita* indicators relating to climate change, gender equality and poverty reduction

SDG	Nawacita (a)	Nawacita indicator (b)
13 Take urgent action to combat climate change and its impacts	N7 Promoting economic independence by developing domestic strategic sectors	No indicator measuring effectiveness of climate action.
5 Achieve gender equality and empower all women and girls	N3 Development of peripheral areas N5 Improve quality of life N6 Increasing productivity and competitiveness N7 Promoting economic independence by developing domestic strategic sectors N9 Strengthening the spirit of “unity in diversity” and social reform	No indicator measuring gender equality because indicators are not segregated by gender
1 End poverty in all its forms everywhere	N3 Development of peripheral areas N5 Improve quality of life N6 Increasing productivity and competitiveness N7 Promoting economic independence by developing domestic strategic sectors	Poverty count reduced; Gini coefficient is reduced; positive economic growth; inflation rates reduced

Note:

(a) Mapped to SDGs based on UNDP Indonesia office (2015)

(b) UNDP Indonesia Country Office (2015), Converging Development Agendas: ‘Nawa Cita’, ‘RPJMN’, and SDGs

2.3 Insights and conclusions

This study aims to understand the possibility of leveraging climate finance for advancing gender equality and poverty reduction, by assessing five different financial mechanisms that are directly or indirectly channeling, or have the potential to channel, climate funding.

2.3.1 Dana Desa

- **Advancing access:** There are efforts to improve women’s access to information and processes related to *Dana Desa*, but the effectiveness of these efforts, their extent and scope are as yet unknown. In terms of poverty reduction, the ‘cash for work’ scheme improves access to resources for the poor, but it needs to set its eyes beyond short-term wages for labor if it is to have lasting impacts in terms of poverty reduction.
- **Advancing participation:** Empowerment activities can advance the participation of the poor and equal participation across genders, but these activities receive much less funds and attention than development activities. If *Dana Desa* is designed to balance between development and empowerment, this needs to be matched by its outputs and use of funds. Villages need support and encouragement to shift funding use from development to empowerment activities. Empowerment activities that target

women and the poor exist, but their scope is limited to improving the provision of social services. Technical support is being provided to help villages better manage *Dana Desa*, but this is not sufficient. *Dana Desa* needs to go further in encouraging gender equality at the village level. Suggested activities include improving women’s knowledge of *Dana Desa* through awareness-raising programs, seminars and workshops that aim to build gender capacity.

- **Advancing benefit:** While poverty alleviation is clearly prioritized in *Dana Desa*, gender equality and climate change have not received commensurate attention. **Infrastructure-based development activities funded by *Dana Desa* may benefit the poor but they do not reduce gender inequalities.** The extent to which *Dana Desa* can support the goals of climate change mitigation and adaptation, and gender equality largely depends on how villages choose to use the funds. Villages and local facilitators need technical support and encouragement to leverage *Dana Desa* funds for climate change and gender equality purposes. Efforts to encourage villages to take more gender-conscious choices for *Dana Desa* are ad-hoc, taking advantage of existing collaborations, programs, projects or staff. These collaborative efforts must be better documented, supported and acknowledged, to better leverage on their

financing and knowledge. Suggested activities include support to villages on how to empower women and provide more opportunities for women to take leadership roles.

- **Advancing control:** While the law has included many elements favorable to promoting gender equality and poverty alleviation, implementation still depends on the district and village contexts. *Dana Desa* gives control over financial resources to village governments, but women and the poor are not well represented in these institutions. *Dana Desa's* effectiveness in terms of channeling climate finance depends on village-level discussions; in practice, decision-making processes are highly dependent on village government, particularly the village head. Villages also have little agency over the amount of *Dana Desa* allocated to them.

2.3.2 BLUP3H:

- **Advancing access:** BLUP3H needs to examine their financing requirements from a gender and poverty perspective. BLUP3H could also consider adding requirements that involve getting consent from, or providing information to, both spouses throughout the process of developing funding proposals, repayments and reporting. BLUP3H is improving access to information about the fund for the general public, and to targeted beneficiaries, but this may not mean better access to information for women and the poor. Community forest-based initiatives – like community plantation forests (HTR), community forests (HR), state-owned community forests (HKm) and village forests (HD) – are intended to be more accessible for the poor, but in practice they may not be.
- **Advancing participation:** There is ministerial-wide support (from Ministry of Environment and Forestry) for gender mainstreaming. The institution espouses principles that include equity, and aim to reduce poverty, but the limits to BLUP3H's mandates have led to difficulties in providing service access to women and the poor. In practice, women and the poor are not the target beneficiaries of BLUP3H. There are currently limited opportunities for women and the poor to voice their concerns and influence decision-making in managing the fund. Technical and institutional awareness of gender inequality needs to influence the narrative and discourses within the mechanism. Providing financial services that target the poor and women requires intensive facilitation,

capacity building, local presence and skilled facilitators. This has implications on both costs and recruitment. Financial support for small businesses, especially those run by women and the poor, requires local presence and regular interaction with staff that not only provide financial monitoring, but also technical assistance in managing forest-based businesses.

- **Advancing benefit:** BLUP3H could consider offering targeted support for types of activities that do not require large financial capital or land ownership, e.g. small off-farm businesses focusing on forest product post-harvest processing and trading. These are within scope of work mandated to BLUP3H. Fundamentally, BLUP3H needs to acknowledge that women and the poor can play a vital role in land rehabilitation and building forest-based businesses. The design of BLUP3H is not influenced by equality objectives; hence benefits are not gender-equal. By overlooking gender and poverty-related constraints on participation in forest-based business and environmental investments, this financial mechanism could be reinforcing existing exclusion patterns. BLUP3H aims to reduce poverty and create employment; these outcomes, however, are not documented, and there are no evaluations related to poverty reduction. Although households in general may benefit from the income generated by the forestry activities funded by BLUP3H, benefits to women depend strongly upon intra-household power dynamics and negotiations.
- **Advancing control:** BLUP3H should consider other possible indicators for measuring performance related to gender mainstreaming.

2.3.3 ICCTF, DAK and BPD LH

- **ICCTF:** Compliance to international donor standards ensures better integration of gender and pro-poor norms, but comes at a high operational cost. ICCTF needs to build stronger partnerships with local governments, especially when project proponents are non-governmental.
- **DAK:** DAK currently pays limited attention to gender equality. DAK finances action that impacts women and the poor, but opportunities for them to voice their concerns are few. There is potential for DAK-LHK to channel climate change funding, but the fund allocation, monitoring and reporting mechanisms need to be adjusted to align funding to Indonesia's climate change goals.

3 Climate projects at the subnational level

3.1 Introduction

In this chapter, we look at project implementation at site level. The two pilot projects focused on in this study were selected based on PATTIRO's study that assessed gender-responsive budgeting across five ministries, including the Ministry of Public Works and Housing (*Kementerian Pekerjaan Umum dan Perumahan Rakyat*, KPUPR), Ministry of Environment and Forestry (KLHK), Ministry of Agriculture (Kementan), Ministry of Transportation (Kemenhub), and Ministry of Energy and Mineral Resources (KESDM). The PATTIRO study sought to understand the system for managing state budget-derived climate finance directed towards climate change mitigation and adaptation project activities, which have been a national priority since 2015 (for mitigation) and 2018 (for adaptation).

We studied two climate projects funded through the state budget (APBN): (i) an agroforestry project under the Ministry of Environment and Forest (MoEF), tagged as a climate mitigation project; and (ii) an artesian well project under the Ministry of Energy and Mineral Resources (MoEMR), tagged as a climate adaptation project. These projects were also expected to achieve gender equality objectives. Projects were chosen based on following criteria:

- They were in line with gender-responsive budgeting priorities related to community service, and contributed to reducing the national emissions reduction target;
- They fell under national priority programs tagged by delivery ministries in KRISNA as climate change mitigation or adaptation programs;
- They had been identified in a previous study (PATTIRO 2020) as having gender-responsive potential (Liwanti et al. 2020).

The climate budget tagging system has been in implementation since 2016–2018. Outputs of national climate change adaptation and mitigation plans must: be in line with national development

priorities; achieve SDGs; achieve minimum community service standards; and achieve national development goals. PATTIRO's study focused on the performance-based budgeting system, which was intended to strengthen the climate finance system (known between 2016 and 2017 as the ADIK system (*Arsitektur dan Informasi Kinerja*, Architecture and Performance Information), and replaced by KRISNA in 2018). Using the current system, budget items are tagged as: (i) infrastructure; (ii) South-South and Triangular Cooperation (SSTC); (iii) gender responsive; (iv) climate change mitigation; (v) climate change adaptation; (vi) education; and (vii) health.

3.2 General site descriptions

3.2.1 Agroforestry program

Based on the recommendation of Serayu Opak Progo BPDASHL in Yogyakarta, we selected agroforestry program sites located in the regency of Banjarnegara, West Java (see Figure 2). Three villages under the program here represent different geographies: Site 1 represents a disaster-prone area (landslides); Site 2 represents a water catchment (*daerah tangkapan air*) and recharge zone (*daerah imbuh*); whereas Site 3 represents a riverside area (*sempadan sungai*). Community livelihoods in the three study villages are dominated by farming, followed by contract farming. Using the 2014–2018 Village Development Index (*Indeks Desa Membangun*, IDM)¹¹, Site 1 was categorized as an 'underdeveloped village' (*desa tertinggal*) but in 2019 this changed to a 'developing village' (*desa berkembang*). Site 2 and Site 3 maintained their categories of 'developing village' until 2019 (see Table 3).

¹¹ The Village Development Index combines indices of social resilience, economic resilience and village ecological resilience. None of these indicators explicitly focus on or include gender. The index is more focused on general matters: social conditions (education infrastructure and social relations), environmental conditions (disaster response and potential disasters), and economic conditions (village-owned enterprises, trade and access to credit).

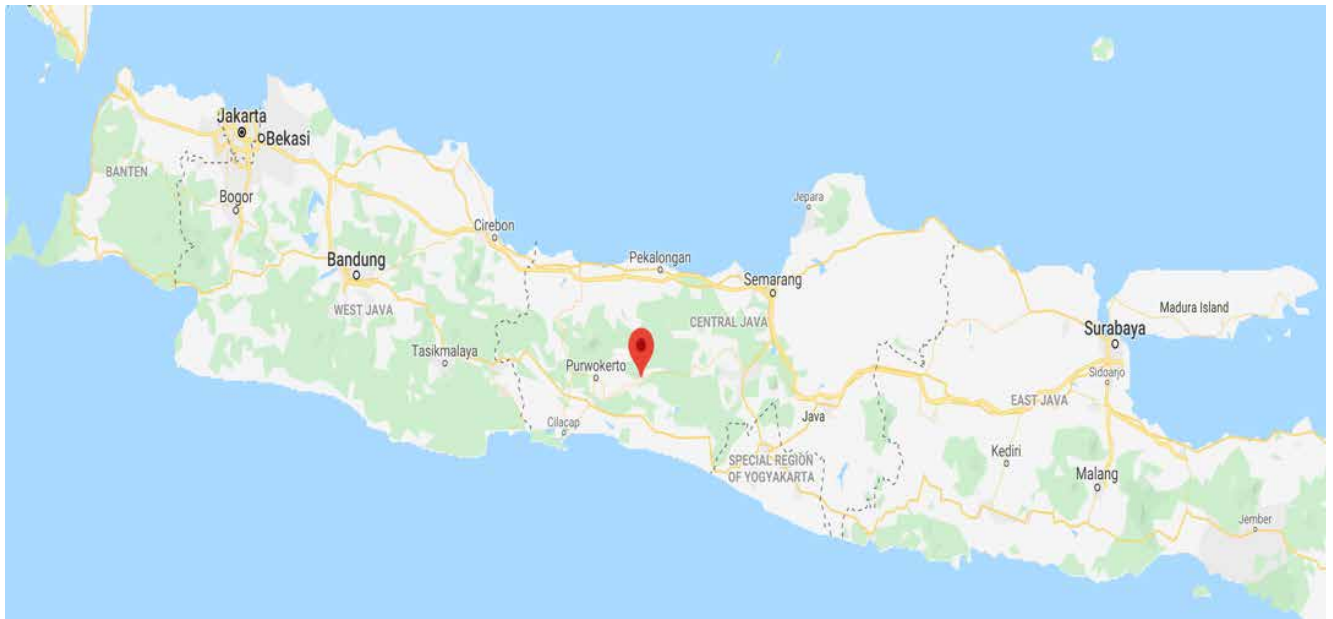


Figure 2. Location of Banjarnegara Regency, West Java

Table 3. Profiles of the villages studied under the agroforestry intervention

Description	Site 1	Site 2	Site 3
Total population (people)	7968	1718	2395
Total number of households (HH)	2215	348	670
Total village area (ha)	1168	567	301
Households living poverty (HH)	1030 (registered in 2017)	138 (registered in 2019)	362 (registered in 2018)
Livelihoods			
Farmers (women; men)	3020 (950; 2070)	1049 (520; 529)	620 (N/A; N/A)
Contract farmers (women; men)	475 (125; 350)	9 (72; 67)	139 (N/A; N/A)
Mobile vendors (women; men)	94 (72; 22)	26 (11; 15)	16 (N/A; N/A)
Other	132	459	16

3.2.2 Artesian well program

The artesian well program in the district of Sukamulia, East Lombok was selected as Site 4, on the basis of a recommendation by the Geology Agency in Bandung (see Figure 3). The artesian well, constructed there in 2018, was reported to have had an impact on the local community.

Most of the local community in this site are of Sasak origin, with Islam dominating as a religion. In 2014, the village was registered as 'underdeveloped' (*desa tertinggal*) but in 2018, this changed status to 'developing village' (*desa berkembang*). In 2019, the village received IDR

1,039,238,000 of *Dana Desa* funding (Kemendes, n.d.). The village population stands at 4,449, with 19% of this population working as farmers (Kemendes, n.d.). Water sources in this village vary depending on use: agriculture relies upon technical irrigation, with water sourced from Mount Rinjani, while water for daily consumption is sourced from individual wells that are $\pm 7\text{--}10$ m deep, as well as the local river.

Agriculture activities in the area are dominated by rice paddies in the rainy season, and tobacco farming in the dry season. Table 3 provides a profile of the village under the artesian well intervention.

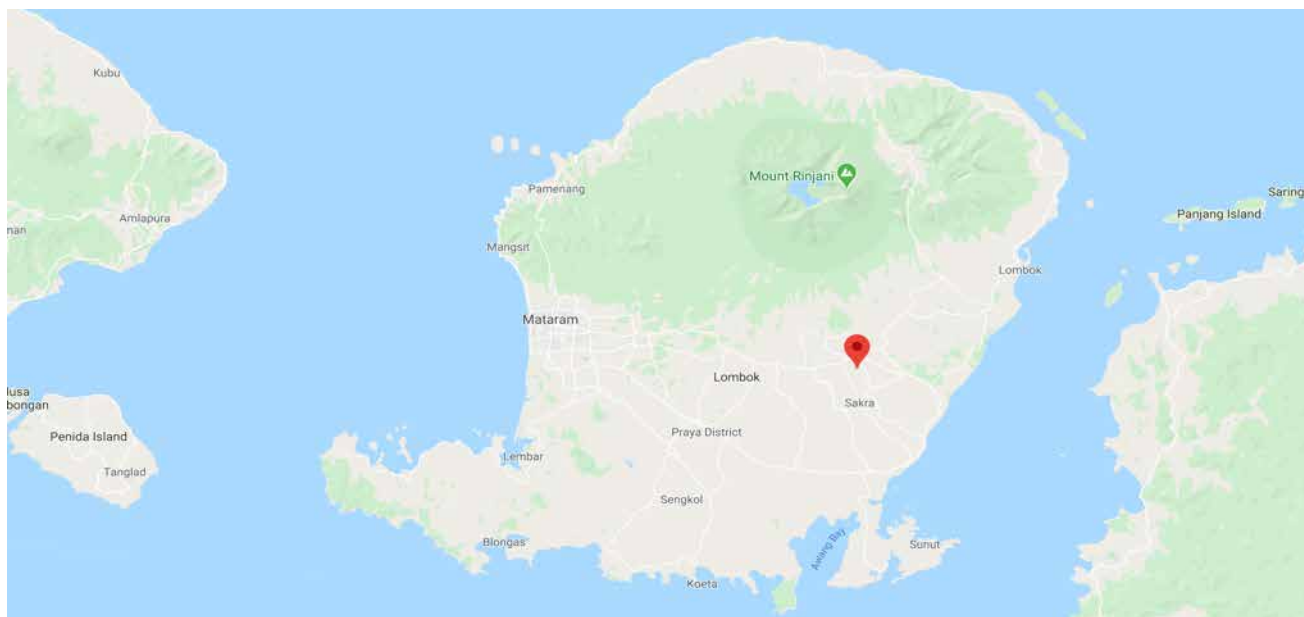


Figure 3. Location of Sukamulia on Lombok Island

Table 4. Profile of the village studied under the artesian well intervention

Description	Site 4
Total population (people)	4449
Total number of households (HH)	1449
Total village area (ha)	195
Households living in poverty (HH)	323
Livelihoods	
Farmers (women; men)	848 (395; 453)
Contract farmers (women; men)	340 (194; 146)
Entrepreneurs (women; men)	367 (88; 279)
Agricultural produce	Rice (rainy season); tobacco, maize, chili, soy bean (dry season)

3.3 Approaches

3.3.1 Research process

Our approach aimed to investigate how state budget-derived funding was disbursed for national priority programs on gender-responsive climate change mitigation and adaptation. This involved compiling climate change indicators from subnational program interventions that involved both women and men, and that contributed to gender transformative change. This research process is illustrated in Figure 4.

Project refinement and preliminary research: A baseline data review was undertaken on relevant

topics, including climate finance and gender, looking at the concepts of gender transformative change (GTC), budget tagging, gender budget statement (GBS) and gender analysis pathway (GAP), and national documents from the two relevant ministries (e.g. work plans and budgets). Initial results were presented in a project inception workshop. Based on input from all stakeholders, we designed the research and developed tools for field data collection like interview guides, as well as a coding system to extract data from interview notes. Between March and July 2019, UNDP, PATTIRO, the Ministry of Environment and Forestry Gender Task Force, the Ministry of Energy and Mineral Resources, and the Ministry of Finance were all consulted with regards to potential projects sites.

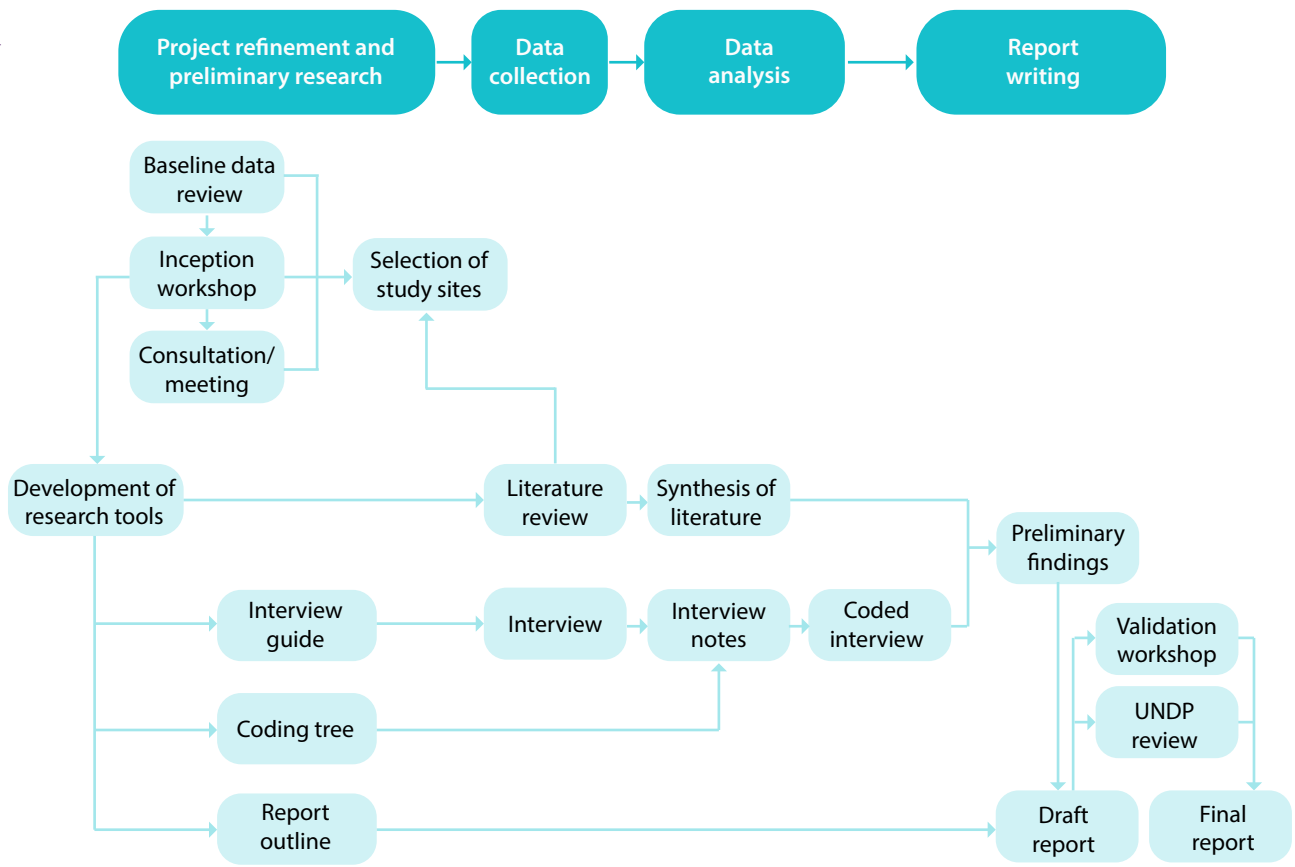


Figure 4. Research process

Data collection: Data was collected through a desk review and field data collection, in the form of key informant interviews and focus group discussions (see Annex 7 and 8 for mitigation data; and Annex 9 and 10 for adaptation data). The desk review looked at different sources of information (websites, presentations, spreadsheets, social media), including formal and informal publications (reports, journal articles, info briefs, working papers).

Field questionnaires consisted of questions on the climate change mitigation and adaptation interventions, as well as the disbursement of climate change budget from national to grassroots level. We also looked into GTC and GAP processes, through focus group discussions with separate groups for men and women in each village (see Annex 11 and 12 for GTC; and Annex 13 and 14 for GAP). In total, 21 key informant interviews and 8 focus discussion groups were held.

Key national actors at two ministries (the Ministry of Environment and Forestry, and the Ministry of Energy and Mineral Resources)

were crucial in providing information at an early stage, in particular related to: the disbursement of state budget from national to subnational level; the identification of potential project sites; implementation of priority programs on the ground; and relevant actors involved in these programs. Key subnational actors came from the Ministry of Environment and Forestry (Serayu Opak Progo BPDASHL in Yogyakarta, and the Forestry and Plantation Agency in Banjarnegara). Meeting with these key actors took place between July and November 2019, with 12 respondents in total. The agroforestry program-focused field survey was conducted from 12–20 December 2019; with the artesian well program-focused survey taking place between 5–9 February 2020, involving 63 respondents (men and women) through key informant interviews and focus group discussions. For confidentiality reasons, we list only acronyms relating to respondent information; references are made to interview specifics (e.g. MIT-AGR-CJPTR-KII-FEM001 refers to Mitigation – Intervention – Village name – Key Informant Interview – Female Interviewee Number 1), instead of providing the names of respondents.

Data analysis: Information from the desk reviews was compiled for data analysis, while in field data collection, both key informant interviews and focus group discussions were recorded in excel format for further data analysis. Qualitative data analysis was undertaken on the data collected from the field.

Report-writing: Due to Covid-19 outbreaks, a draft report was presented to relevant stakeholders via a virtual validation workshop, in August 2020. This report was also shared with participants to allow further opportunity to comment and input. The initial report has since been revised to consider feedback from workshop participants.

3.3.2 Theoretical frameworks

The framework used to understand the role of gender within national priority programs to address climate change and adaptive capacity is elaborated further in Figure 5. This framework combines theoretical frameworks like Gender Analysis Pathway (GAP) and Gender Transformative Change (GTC) (Hillenbrand et al. 2015). The framework illustrates a pathway (from left to right), through which the state budget does or does not allocate for combined themes (climate change mitigation and adaptation program and gender responsive). Using GAP and GTC as tools, we address the following questions: Are gender assessments taking place at subnational level to

find out if a program is addressing climate change or increasing adaptive capacity? Does the program categorize as gender-blind, gender-aware or gender-transformative, and does it contribute to poverty alleviation and gender responsiveness?

Gender blind: Gender-blind finance mechanisms are those ignoring gender norms in their design, implementation and learning processes. These can intentionally or unintentionally ignore gender-related constraints on women’s capabilities and agency (Kabeer 2010).

Gender aware (sensitive or responsive): A gender-aware intervention acknowledges these constraints based on informed gender analysis, and designs its programs to avoid intensifying existing barriers (Kabeer 2010). For example, a gender-sensitive intervention requires effort to improve women’s access to income.

Gender responsive: Gender responsiveness refers to outcomes that reflect an understanding of gender roles and inequalities, and which make an effort to encourage equal participation and equal and fair distribution of benefits. Gender responsiveness is accomplished through gender analysis and gender inclusiveness (UNDP 2019). A gender-responsive intervention requires prior consultation with women on the ground before an intervention is designed which responds to their needs.

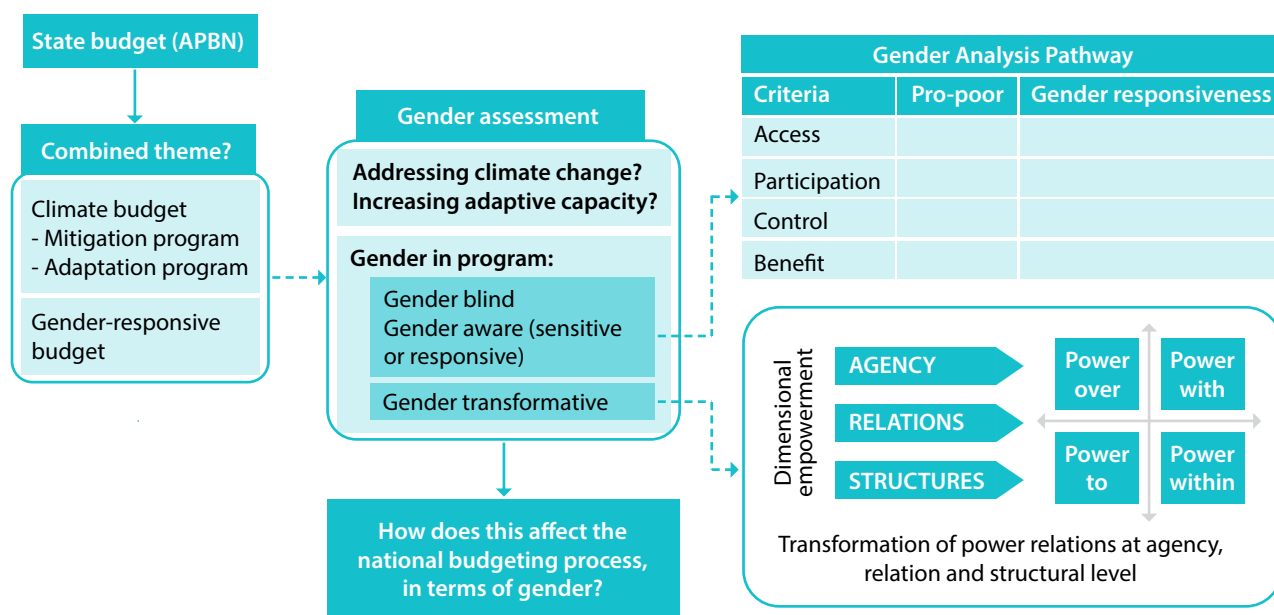


Figure 5. Overall framework: Gender and pro-poor assessment of climate finance/budget processes at national and subnational levels

Gender Transformative Change (GTC): GTC aims to move beyond women’s individual self-improvement toward a transformation of the power dynamics and structures that serve to reinforce gender inequalities. Gender and development literature (Kabeer 2005; Fisher et al. 2007; Alkire et al 2013; Doss 2013) highlights the importance of measuring gender transformative change, by examining changes in three broad domains of empowerment:

- *Agency:* individual and collective capacities (knowledge and skills), attitudes, critical reflection, assets, actions and access to services.
- *Relations:* the expectations and cooperative or negotiation dynamics that are embedded within relationships between people, in the home, market, community, groups and organizations.
- *Structures:* the informal and formal rules and norms that govern collective, individual and institutional practices.

Indicators of GTC are developed using four critical dimensions of power (power over, power to, power within, power with), and across three domains (agency, relations and structures). Analysis of GTC indicators assesses both change at the individual level (agency), and change at relational and social structure (norms) level (Hillenbrand et al. 2015).

3.3.3 Research methods

We adopted the GTC framework from Hillenbrand et al. (2015) and integrated this into our approach (see Figure 6).

GTC-focused questionnaires were developed differently for the mitigation and adaptation interventions. The mitigation program-focused questionnaires were designed to look at impacts of

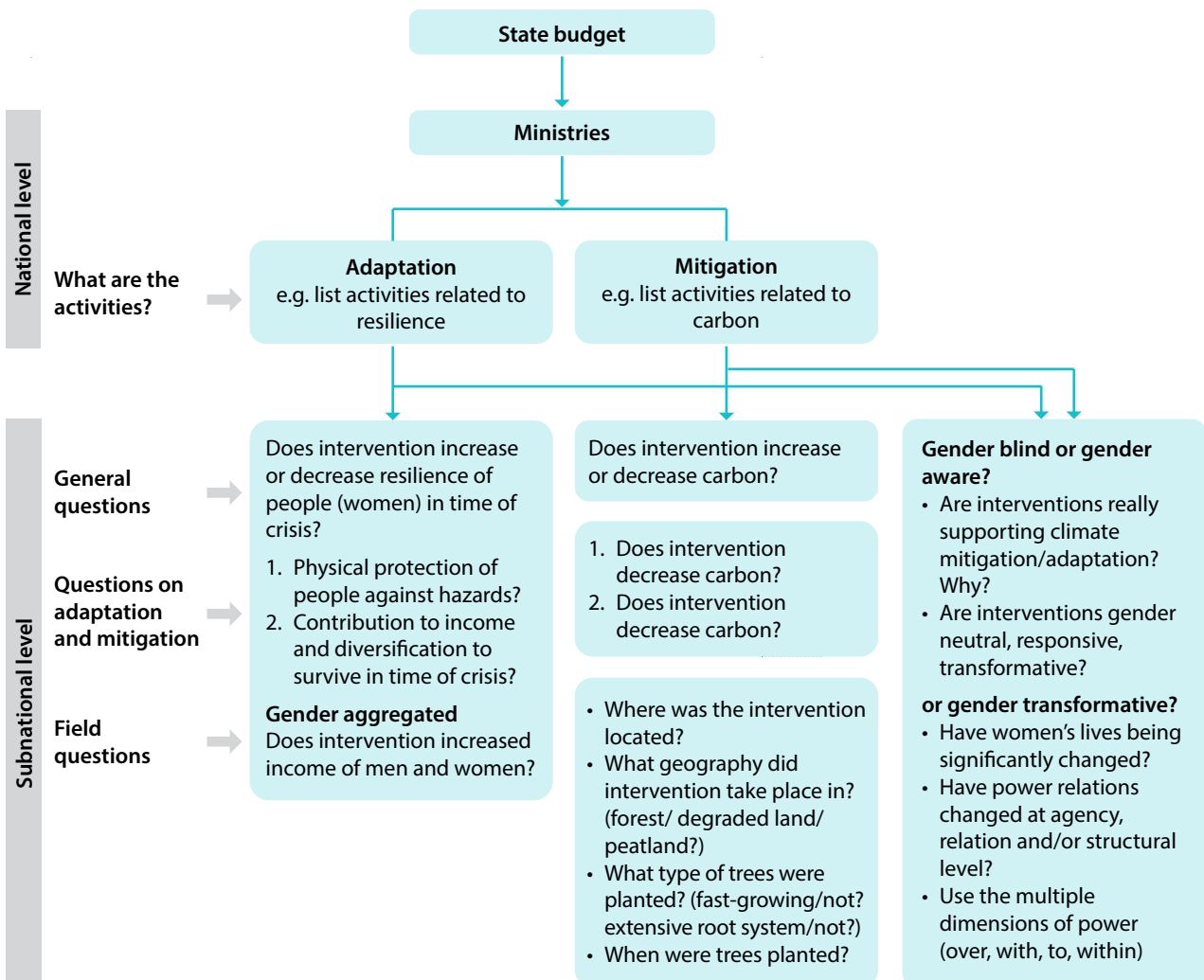


Figure 6. Framework for developing guidance aimed at projects contributing to long-term gender transformative change

the intervention that were gender-responsive and thus contributing to gender transformative change; adaptation program-focused questionnaires, meanwhile, were designed to understand the gender context at site level. These questionnaire differences were due to the length of interventions being implemented in the various study sites.

3.4 Selected sites and interventions

3.4.1 National level

Directorate General of Watershed Management and Forest Protection (BPDASHL)

At a national level, according to its 2019 work plan, BPDASHL received IDR 1,134,570,788,000 (approximately USD 78 million¹²) of state budget contributions between 2016 and 2018 for activities relating to ‘Forest rehabilitation and reclamation, land rehabilitation, watershed planning, and water damage control’ (see Table 5).

A total budget of IDR 306,916,500,000 (approximately USD 21 million) was allocated for ‘Rehabilitation of forest and critical lands in disaster-prone watersheds/post-disaster revegetation’. From this amount, the subnational body Serayu Opak Progo BPDASHL received IDR 7,200 million (approximately USD 500,000) to prioritize the agroforestry program as part of this forest and critical land rehabilitation objective (see Table 5). We selected to study this agroforestry program through sites under Serayu Opak Progo BPDASHL located in Banjarnegara, Central Java. The selection process involved the Ministry of Environment and Forestry (specifically the gender focal point of its planning office) and the head of Serayu Opak Progo BPDASHL from the beginning of the process.

In 2019, the amount of state budget allocated to BPDASHL (IDR 3,512,913,670,000, approximately USD 242 million) was higher than the budget allocation given to the Directorate General of the Ministry of Environment

Table 5. Summary of state budget allocations for priority BPDASHL outputs between 2016 and 2018

Year	Activity	Output	State budget allocation (IDR/USD)	Criteria for gender-responsive climate budget tagging
2016	5409: Forest rehabilitation and reclamation, land rehabilitation, watershed planning, and water damage control	003: Rehabilitation of critical lands inside forest management units (KPH) and watershed areas	IDR 452,678,875,000 / USD 31,219,232	1-3*
2017		001. Degraded land rehabilitation	IDR 374,975,413,000 / USD 25,860,373	1-3*
2018		001. Rehabilitation of forest and critical lands in disaster-prone watersheds /post-disaster revegetation (agroforestry program)	IDR 306,916,500,000 / USD 21,166,655	N/A
		Total	IDR 1,134,570,788,000 / USD 78,246,261	

Note:

- *1. Assignment of national development priorities and achievement of Sustainable Development Goals (SDGs);
- 2. Community service based on achieving Community Service Standards
- 3. Achievement of vision and mission of national development

Source: Summary of state budget tagged for climate change action between 2016 and 2018, Ministry of Finance

¹² Based on 2020 exchange rate of 1 USD = IDR 14,500

and Forestry (according to the Ministry of Environment and Forestry 2019 work plan). This amount was distributed across 33 provinces in Indonesia. In 2017, the Serayu Opak Progo BPDASHL received IDR 42,382,724,221 (approximately USD 2.9 million) of this total, with around IDR 7.4 billion being directed towards land rehabilitation and the agroforestry program. At subnational level, around IDR 7.2 billion allocated to Serayu Opak Progo BPDASHL for agroforestry interventions (Table 6); the agroforestry program was implemented in 45 villages within the watershed, using around 25 ha in each village, with a budget allocation of IDR 160 million per village (~ USD 11,000).

Geology Agency, Ministry of Energy and Mineral Resources

The artesian well program, targeting 500 locations in Indonesia, is one of the national priority programs under the Ministry of Energy and Mineral Resources's Geology Agency, as stated in their 2015–2020 work plan (personal communication with the Planning and Coordination Office, Ministry of Energy and Mineral Resources 2019). This ministry has responsibility 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. At a national level, the Geology Agency budget allocation for its artesian well project has

increased significantly from IDR 139,061,242,000 (approximately USD 9.5 million) in 2017, to IDR 274,296,095,000, approximately USD 18.8 million) in 2018 (see Table 7).

The artesian well project was initially identified as a climate change mitigation program in the state budget tagging system (2016–2017), but it has since been retagged to be a climate change adaptation program in 2018. However, this program has not yet been tagged into the KRISNA budget system as a combined theme (both climate change and gender-responsive). The Ministry of Energy and Mineral Resources has not yet started to develop the GAP and GBS for the artesian well program, a requirement for gender-responsive climate change budget tagging in the KRISNA system. In 2019, the Ministry of Energy and Mineral Resources received artesian well construction proposals from 5,000 villages in water-scarce areas throughout Indonesia. These proposals are evaluated subnationally, before well locations are proposed to the national-level Ministry of Energy and Mineral Resources in Jakarta.

Several stages are required in order to construct the wells, including initial geological and geophysical surveys (to check groundwater content), mobilization of drilling equipment and land clearing. Each village, or 4,000 people, receive well packages that include storage tanks and 24-hour generators that pump 5 liters per second on average. An example well design can be seen in Annex 6. Villagers can also override the generator to self-pump, increasing water flow.

Different ministries (Ministry of Energy and Mineral Resources, Ministry of Public Works and Housing) have differing focuses, in terms of determining what

Table 6. Budget allocation to the Serayu Opak Progo BPDASHL agroforestry program

Directorate	Activities	Output	Location	Budget	Notes
Watershed Management and Forest Protection Agency (BPDASHL)	5409. Forest rehabilitation and reclamation, land rehabilitation, watershed planning, and water damage control	001. Rehabilitation of forest and critical lands in disaster-prone watersheds/post-disaster revegetation (agroforestry program)	Serayu Opak Progo watershed, Central Java	IDR 7,200 million USD 496,551	IDR 160 million/ USD 11,000 allocated per village (45 villages in total, using 25 ha per village)

Source: Serayu Opak Progo BPDASHL 2017 work plan

Table 7. State budget allocation to the Geology Agency between 2016 and 2018

Unit	Activity	Output	State budget 2016 (mitigation) (IDR/USD)		State budget 2017 (mitigation) (IDR/USD)		State budget 2018 (adaptation) (IDR/USD)
			Budgeted	Actual	Budgeted	Actual	Budgeted
Geology Agency	1924. Research, environmental geology and groundwater services	001 Drilling/ artesian groundwater wells	130,973,155,000/ 9,032,631	103,474,412,000/ 7,136,166	139,061,242,000/ 9,590,430	125,729,438,000/ 8,670,996	
	1924. Research, investigation, engineering and groundwater services, engineering geology and environmental geology	001 Exploration and clean water services in difficult areas (to be given to local governments)					274,296,095,000/ 18,916,972
		004 Providing groundwater drills for emergencies					7 billion/ 482,758

Source: Summary of state budget tagged for climate change action between 2016 and 2018, Ministry of Finance

locations take priority. For the time being the Ministry of Energy and Mineral Resources can only provide data on locations with drilled wells, which PAMSIMAS (Community Based Water Supply and Sanitation, *Penyediaan Air Minum dan Sanitasi Berbasis Masyarakat*)¹³ then followed up. For the Ministry of Energy and Mineral Resources, priority locations are those which that lack water, whereas for PAMSIMAS, priority areas are those where there is significant groundwater but it has been contaminated with poly bacteria.

3.4.2 Subnational level

In both interventions (agroforestry and artesian well programs), data was collected at village level through key informant interviews and focus group discussions. A summary of community/farmer group members participating in this study is presented in Table 8.

Agroforestry programs

The Serayu Opak Progo Watershed Management Agency (*Balai Pengelolaan Daerah Aliran Sungai*, BPDAS) has been implementing the agroforestry program in the Serayu Opak Progo watershed since 2015, however the program was not implemented in three villages examined in this study until 2017. We did not select agroforestry program sites implemented in 2015 as these sites were not recommended by the Serayu Opak Progo BPDAS, considering access, time and resources. A summary of the agroforestry intervention sites studied can be seen in Table 9. The dominant land tenure system was that of individual land ownership outside of state forest area. Under this intervention, the local government provides seedlings and assists to sustain and monitor the program. It is anticipated that farmer groups will see positive impacts from this intervention, including improved land productivity, increased livelihoods, and reduced landslides and floods.

Artesian well program

In 2018, the Geology Agency of the Ministry of Energy and Mineral Resources built eight artesian

13 PAMSIMAS is a program implemented by the Government of Indonesia with World Bank support. It is implemented in rural and suburban areas.

Table 8. Number of key informant interviews and focus group discussions at each site

Intervention	Village	Key informant interviews		FGD	
		Men	Women	Men	Women
Agroforestry	Site 1	3	2	6	5
	Site 2	4	2	5	5
	Site 3	3	2	4	4
Artesian Well	Site 4	3	2	7	6
	Total	13	8	22	20

Table 9. Summary of the three agroforestry intervention village sites

Description	Site 1	Site 2	Site 3
Beneficiaries	100 households	58 households	110 households
Area of agroforestry	25 ha	15 ha	20 ha
Land status prior to the intervention	Individual land plots of critical importance	Water catchment area	Bordering the river
Agroforestry species planted under the scheme	Albazia (<i>sengon</i>)	Eucalyptus	Albazia (<i>sengon</i>)
	Burflower tree (<i>jabon</i>)	Orange tree (<i>jeruk Keprok</i>)	Avocado (<i>alpukat</i>)
	Nutmeg (<i>pala</i>)		Football fruit (<i>pucung</i>)
	Roseapple (<i>jambu citra</i>)		Aren (sugar palm)
	Maize (<i>jagung</i>)		Guava (<i>jambu kristal</i>)

wells in dry areas in Lombok, including our study sites in the district of Sukamulia, East Lombok. Wells were built by Geology Agency consultants, without the involvement of the local community on site. Average water depth varied, but some wells are shallow (80–100 m). In the planning process, the Geology Agency and their consultants coordinated with local agencies (e.g. the regency-level Public Works and Housing Agency, *Dinas Pekerjaan Umum dan Perumahan Rakyat*) and village officials to help identify potential locations for the artesian wells. Local women were not involved in the planning process, but they were considered to be one of the beneficiaries of the intervention. After construction of the artesian wells was complete, the Geology Agency handed over the wells to the Regent (*Bupati*) during their inauguration; they would then be given to the village directly by the Regent. Prior to well construction, Site 4 had been drought-prone for the past five years. Many households had to buy drinking water for household consumption, as existing pumped water wells/shallow wells couldn't be used for drinking. Water for domestic use was obtained from the river or shallow wells (built by

community members). The constructed artesian well was built on an individual plot of land belonging to the village head, but accessible to all villagers. The artesian well has, to date, been limited to use for drinking water, however some villagers have used it to access water for bathing also.

3.5 Results

3.5.1 Description of finance flows from national to site level

State budget disbursement varies depending on the type of intervention. A bottom up approach was implemented for mitigation and adaptation programs, in which requests were made to access the budget (according to interviews with officials from the Ministry of Energy and Mineral Resources and BPDASHL in 2019). For mitigation program (agroforestry), the flow of money was straightforward. Funds were transferred to BPDASHL at subnational level, and from there would be distributed to each of farmer group's bank accounts. The farmers would then spend the

funds on planting supplies (stacks and fertilizer), seedlings, as well as payments for planting. In this case, there was a subnational entity which became the intermediary between the national and the grassroots levels.

The adaptation program (artesian well) had a different scheme. The village head of Site 4 took the initiative to request government support after assessing the suitability of *Dana Desa* for artesian well construction; high construction costs coupled with other development priorities, lead to the village head's decision to find other financial support for the construction of a well. The *Dana Desa* was then used for other village priorities, including provision of livestock for the community as a way to improve livelihoods. There are now 35 livestock in the village which are managed collectively by community members. This group also makes monthly contributions towards the fuel costs of the artesian well.

The village head secured financial support for the artesian well construction by using his connections with a relative of a member of the People's Representative Council of Indonesia (*Dewan Perwakilan Rakyat*, DPR), Mr Kortubi, who then passed this request onto the Ministry of Energy and Mineral Resources. The village's need for clean water coincided with the national-level adaptation

program of the Ministry of Energy and Mineral Resources, which enabled the community to get support for artesian well construction. Interviews with the local community revealed their knowledge of the finance process behind the artesian well project. Most of them were of the understanding that the artesian well had been funded by Mr Kortubi through the Council of Representative's Aspiration Fund (*Dana Aspirasi*). Only a few knew the role he played in transmitting the village head's request to the related technical ministry, the Ministry of Energy and Mineral Resources. This Ministry, through its Geology Agency, gave 100% authority for construction to a subcontracting company (personal communication with officials from Geology Agency 2019). The cost for building the artesian wells varied depending on location, e.g. costing around IDR 350 million per well in Java Island and around IDR 450–650 million per well in western and eastern part of Indonesia. In 2019, the ministry increased its target from 500 to 600 artesian wells across Indonesia. No extension workers or subnational government entities took part directly during or after construction of the artesian well. The Public Works and Housing Agency and the Regent were merely kept informed about the program and invited to the inauguration event of the artesian well. The financial flow behind the artesian well intervention can be seen in Figure 7 below.

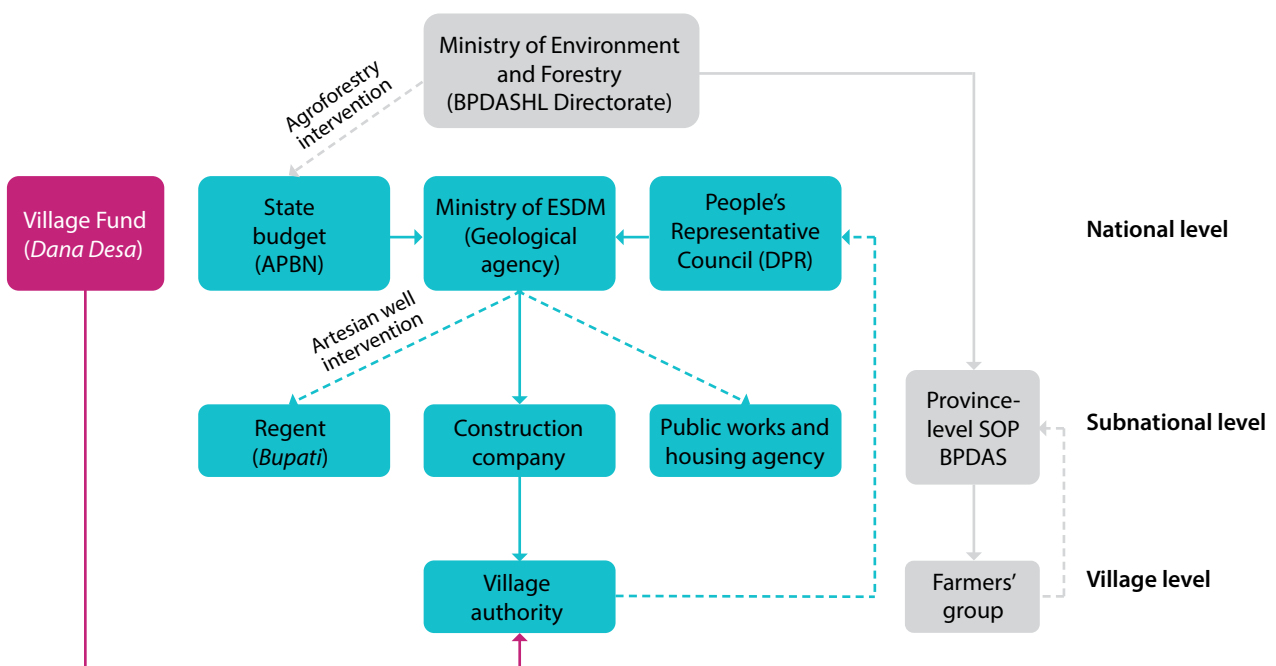


Figure 7. Comparison of financial mechanisms behind the agroforestry and artesian well interventions

3.5.2 Intervention activities and links to climate mitigation and/or adaptation

This section describes findings from the three studied villages under the agroforestry program, starting with a history of the targeted land and agroforestry interventions on the sites. Information on total land size as well as number of beneficiaries is also given, followed by respondents' perceptions on the impacts of the agroforestry interventions.

Agroforestry program

Site 1 (CJPTR)

In Site 1, the agroforestry intervention aimed to tackle disasters such as landslides, which were often experienced by the village. Agriculture is the predominant livelihood, which includes the farming of crops and livestock. A total of 25 ha of farmland, involving 104 households, was targeted. This land was unproductive, barren and lacking in clean water during the dry season. Farmers expected their income would increase through the planting of fruit trees like rose apple. The program was planned to last three years, starting with planting (2017), before a replanting phase (2018) and tree maintenance (2019). The Serayu Opak Progo BPDAS distributed several tree seedlings of rose apple (*jambu citra*); Chinese Albizia (*sencong*) and burflower tree (*jabon*), which were planted alongside farmer's maize and chili pepper crops. Farmers also received wages for trees planted. Albizia can be sold for IDR 300,000–600,000/m³ after 6–7 years of growth, while jabon can be sold at IDR 800,000/m³ after 5 years of growth. Rose apple fruit fetches IDR 10,000/kg during the rainy season which increases to IDR 15,000/kg during the dry season. In addition, tree roots are necessary for absorbing and storing water.

Findings from key informant interviews and focus group discussions revealed that the local community experienced fewer landslides after the trees were planted. Although most of the trees had not yet matured, the local community believed that the agroforestry program would bring positive economic impacts, since Albizia and Jabon wood can be sold and used as a building material, while leaves can be utilized as fodder; rose apple fruit can also be sold and consumed personally.

Site 2 (CJSUK)

In Site 2, the agroforestry program took place on land near some water springs; as such black sugar palm, known for its ability to absorb and store large amounts of water, was chosen as one of the species to be planted. Besides sugar palm, other tree species including Albizia, avocado, football fruit (*pucung*) and guava were also planted, with the aim of deriving economic benefits for the farmers. Prior to the program, several individual trees and crops had already been planted on the farmers' lands, yet there were insufficient numbers to retain the soil. In the water catchment area, the program prioritized areas with steep terrain. Landslides occurred frequently, decreasing land size and wiping out land borders. Three year after the agroforestry intervention, landslide events had decreased, but a significant increase in water supply had not yet been seen. Based on the key informant interviews, respondents realized the potential economic benefits of the program. The trees also provided other resources, including firewood, fodder, fruit and building materials. Interviewees also acknowledged the role of the trees in preventing landslides.

The farmer group leader explained that prior to receiving funds, the group developed a proposal and budget plan and submitted a request for the plant species to Serayu Opak Progo BPDAS in Yogyakarta. They got approval for the requested plants, but the funds transferred to them did not match the exact amount they had requested. For the agroforestry program in Site 2, the farmer group received around IDR 50 million. This money was used to purchase seedlings as well as to support implementation. Each of the beneficiaries in the farmer group received seedlings and money, but the amount received differed according to land size.

Site 3 (CJKAS)

In Site 3, the agroforestry intervention took place in a riverbank location. Potato, carrot and cabbage were the main commodities planted and the chosen tree species were eucalyptus and orange tree (*jeruk keprok* 55). Participants received seedlings and also wages for planting. The farmers' group leader explained that prior to the program, they planted vegetable plants for subsistence. However, as the riverbank was

prone to erosion, the agroforestry intervention was introduced to decrease the impact of this. The local community, who owned the land along the riverbank, participated in the program.

Most farmers in this village saw little benefit from the program. As any shade-giving trees blocked the sunlight needed for crops, farmers preferred to have only a few trees (with downward-hanging leaves) on their land, planting them only at the edges of their individual land plots. The chosen hardwood species, Eucalyptus, produces low quality timber. Similarly, when the trees grew tall, the farmers preferred to cut them and left the spot where they previously stood empty. The orange tree that was initially assumed to produce good quality fruit produced small and sour-tasting fruits, which are impossible to sell. Surprisingly, climate change has had little or no impact on farmers in this village. Longer dry seasons have not affected the farmers, who did not even realize that this could cause harvest failure or water scarcity. This was

because most of the farmers owned water pumps, so during the dry season, harvested crops were still abundant.

In Site 3, gender rules meant that women were expected to take care of trees and land. Similarly, in Site 1 and 2, women generally don't participate in decision-making meetings. Most of the decisions around the agroforestry intervention were therefore made by men. Information around the agroforestry intervention targeted the head of the household, the majority of which were men; as such capacity building sessions were only attended by men. As a result, women took decisions to uproot trees that were disturbing the growth of their crops due to their lack of agroforestry knowledge; knowledge which was supposed to be obtained during capacity building sessions. This decision could have negative consequences for the women themselves, their families, and perhaps others in the community, bringing them into a maladaptive stage¹⁴ (e.g. landslides/loss of assets, erosion) (see Figure 8).

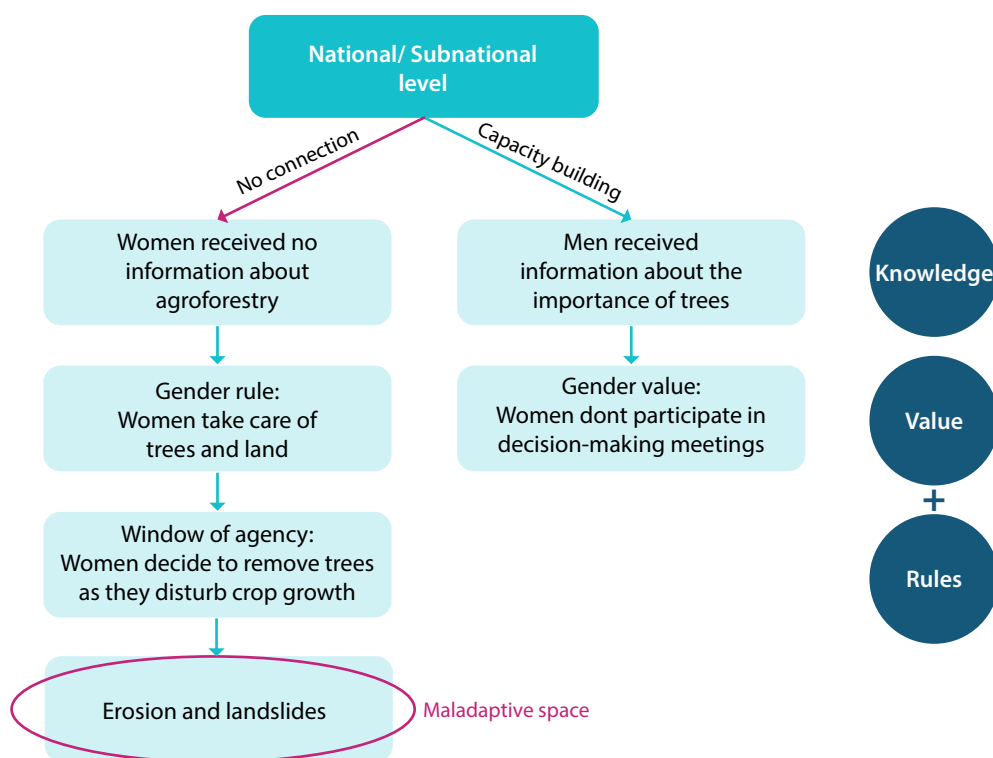


Figure 8. The impact of information flows from national to grassroots level

14 Maladaptation is defined as a “practices or policies that damage resources, narrow future options, worsen the problem for vulnerable populations or pass on responsibility for solution to future generations” (UNEP 2019)

Artesian well program

Findings from Site 4 revealed that an extreme drought that lasted for eight months in 2019 decreased the availability of clean water for the local community living there. This resulted in an increase in spending on bottled water, particularly to meet the need of water for drinking and cooking. During this period, most of the individually-owned (shallow) wells dried up and the local community struggled to find water for sanitation purposes (i.e. showering and washing clothes/dishes). Community members became more dependent on the mosque's water source (as it had a deeper well) or on individuals who still had water in their wells. Others got creative and took their laundry to a local tourist attraction to have a brief holiday whilst washing their clothes there.

Mount Rinjani has used as a water source by people living in and around the mountain for a long time, mostly to irrigate fields. Traditionally, a village's crops fields are connected with streams that run directly from it. However, an increase in population combined with a decrease in water availability leaves local people facing water scarcity. To avoid conflict over water resources between villages, the local government has taken over water distribution from Mount Rinjani based on a timeline approach, i.e. the water supply is directed to each village two to three times a month. However, farmers with more money can get water channeled directly to their fields by paying the water gate keeper.

Climate change has worsened climate variability. All respondents had experienced uneven rainfall patterns, with heavy rain falling in certain areas of the district but not in the village. Droughts have also worsened over the past three years. Yet, the impact of these climate changes on agriculture can vary depending on the specific situation. Despite the failure of several crops like maize and chili, tobacco crops endured the drought. Paddy on the other hand experienced a shift in the planting season; rice used to be harvested every February, but in January rice crops were only just being planted. The dry season and its lack of water did not really affect food security in the village, however. Two of our respondents described the way in which most farmers save some agricultural produce for personal consumption. Some of farmers also diversify their agricultural produce by planting soybean, maize and chili along with rice.

The climate change adaptation intervention was carried out in 2018. According to our respondents, the Ministry of Energy and Mineral Resources sent staff to conduct a field survey in order to check the suitability of the area for the adaptation program. Some of the village community, in particular the sub-hamlet heads, were tasked with finding an appropriate location for the well, which in the end was built on 50 m² of the village head's land. No community members participated in the construction process as work was completed by the contracting company personnel. At present, the well has been provided with a manual pump and no distribution pipework. Five houses located close to the artesian well have set up their own individual pipelines to this water source; other households collect water manually with containers.

The village head has assigned a community member to be responsible for the day-to-day technical operation of the well. It takes at least three hours for this person to operate the pump, wait for the storage tank to fill and then to switch off the pump. The well maintenance budget is also handled by the village head, however, some groups also make contributions for using the well, to cover fuel costs; the cattle farmers' group contributed IDR ±10,000/month; while five houses with a pipeline also contribute monthly. The local community who collect water manually don't have to make contributions for the maintenance and operation of the artesian well. All community members, regardless of gender and social status, are welcome to collect and use well water. No formal rules apply to its use, but informal community relationships built on trust and cooperation govern water distribution and uses: this means that community members are expected to pay fuel costs when using the water for personal events, and to only use the water for consumption during dry season, or to help contribute to fuel costs.

After the construction of the artesian well, many community members decreased or even stopped their spending on bottled water. The construction of the artesian well provided more water source options for the local community. Some would use the well water for both consumption (cooking and drinking) and sanitation (cleaning-related activities), especially those with pipes connected to their houses. Others use the well only for water for consumption (see Table 10). Interviews and focus group discussions revealed that the artesian well program was well received by all community members. Improvements are still needed, however, especially in terms of its management; these

Table 10. Sources of consumption, sanitation and agricultural water

	Consumption (drinking and cooking)	Sanitation (showering and cleaning)	Agriculture
Before	Bottled water	Shallow wells, river water, other sources	Irrigation
After	Artesian well	Shallow wells, artesian well	Irrigation

improvements include providing distribution pipes to all households, as well as establishing a formal contribution process to collect contributions from all users. There is also a plan to manage the artesian well through a village-owned water company (*Perusahaan Air Minum Desa*, PAMDES).

3.5.3 Assessing gender analysis pathway (GAP) indicators in the two programs

Agroforestry program

Gender analysis pathway indicators were assessed based upon the perceptions of both men and women during interviews and group discussions in the three villages. A summary of the results of this analysis can be found in Table 11. We can see from Table 11 that aspects of participation, benefit, access and control were perceived by most respondents (men and women) to have increased, although numbers varied. In Site 3, women's participation in agriculture was perceived to be the same as prior to the agroforestry intervention; both genders take an active role in farming. Men and women in Site 3 also perceived the intervention to be of less benefit than the other villages; the agroforestry intervention in Site 3 resulted in positive environmental impacts but no economic benefits.

This is quite understandable, as many Site 3 respondents did not see the benefit of trees planted in their fields due to competition with their main crops (vegetables), and because the fruit anticipated did not materialize (due to soil and temperature conditions). That said, they did acknowledge the environmental benefits of the trees in terms of preventing erosion and landslides.

Unlike Site 3, men and women at Site 1 and Site 2 gave higher scores in terms of the increase in livelihoods and other benefits, as land at those two sites was prone to landslides prior to the intervention. The species chosen also provided product diversification (i.e. timber and fruit as well as individual crops) for the farmers involved.

The rate of women's decision-making control is similar in each village. Only few of respondents in each village perceived women's decision-making control to be increasing. Others perceived no improvement in women's decision making; at a group level, decision-making processes were still dominated by men and at household level, men and women had different arenas of decision making which remained the same after the agroforestry intervention.

The farmers' groups in our study sites were dominated by men, and thus in most cases, decisions about agroforestry species were made by them. Yet, in Site 1, one woman indirectly influenced the decision on tree species through a discussion with her husband at home. The husband then brought this matter to the group meeting. In Site 3, respondents admitted that even though agriculture is considered joint work, only men were involved in the decision about what species of trees to plant. One male respondent stated that, "women were not involved in selecting tree species as they have limited knowledge on that."

In all of our study sites, both men and women have different roles when it comes to land management. While most of the women attend to family matters first, before assisting their husbands on their plots later, the men focus on managing the land and other subsistence activities. There was also gender division in regard to agriculture activities. Men were involved in all stages of farming activities, from land preparation to selling produce. On the other hand, women focused on small activities, such as planting, care and maintenance, as well as harvesting. In some cases, women also played a role in produce selling. But, in Site 3, we observed that even elderly women harvested and cleared the land to make way for the next crops. This evidence supports a statement from one of our respondents who said, "women also do heavy work in the field". Many women in Site 2 also lead on farming activities when their husbands leave the village to look for alternative

Table 11. Perceptions of men and women regarding gender analysis pathway criteria, in three villages under the agroforestry program

Village	Gender analysis pathway indicators	Increased		No change		Don't know	
		Women	Men	Women	Men	Women	Men
Site 1	Participation	7	7	2	0	0	0
	Access to IT	6	1	1	8	0	0
	Access to land	6	1	1	8	0	0
	Benefit (economic and environment)	7	9	0	0	0	0
	Control over decision making	0	7	7	2	0	0
	Conflict	0	0	7	9	0	0
Site 2	Participation	0	5	7	5	0	0
	Access to IT	0	2	7	7	0	1
	Access to land	5	9	2	1	0	0
	Benefit (economic and environment)	7	10	0	0	0	0
	Control over decision making	0	1	7	9	0	0
	Conflict	0	0	7	10	0	0
Site 3	Participation	5	1	1	6	0	0
	Access to IT	5	6	1	1	0	0
	Access to land	4	7	2	0	0	0
	Benefit (economic and environment)	6	7	0	0	0	0
	Control over decision making	4	5	2	2	0	0
	Conflict	0	0	5	7	1	0

work. Most of the time, the women bring their children along to the field, as there is no one looking after the children at home.

As many of the farmer group members were men, they were the ones who received agroforestry-related training. Yet women, who frequently worked in care and maintenance of crops, did not receive the same training. Result from our focus group discussions with women revealed that it was a challenge for a couple (husband and wife) to attend the same training; as one woman put it, “someone needs to stay at home to do the domestic work, and that should be the woman.” This explains why the participation of women in the training sessions was limited.

Some of our female respondents run small businesses (online businesses, mobile vendors, selling staple commodities) to get additional income for the family. They regarded their positive contribution to the family's income as meeting a need; as one of the women in Site 2 said, “relying on farming alone is not enough for the family, we have to have another option (job) to survive.”

Artesian well program

A summary of the results of assessing the gender analysis pathway criteria under the artesian well program is presented in Table 12; this is based upon the perceptions of men and women during interviews and group discussions in the East Lombok village, Site 4.

It is quite challenging to see any change in terms of women's participation, control and benefits gained from the artesian well intervention. The local community was not involved in the construction of the artesian well. Few community members (who were men) were also involved in initial planning in terms of looking for the ideal location for the artesian well. Project design saw community members only as the beneficiaries of the artesian well. The increase in men and women's access to technology and information was not due to the influence of the intervention.

Women dominate domestic activities, including cooking, bathing the children, washing the clothes

Table 12. Different perceptions of men and women regarding gender analysis pathway criteria, in a village under the artesian well program

Gender analysis pathway criteria	Increased		No change		Decreased	
	Women	Men	Women	Men	Women	Men
Participation	0	1	8	1	0	8
Access to information and technology	7	10	1	0	0	0
Benefit (economic and environment)	0	0	8	10	0	0
Control over decision making	0	1	8	9	0	0
Conflict	0	0	2	1	6	9

and cleaning the house. All of these activities require access to clean water and therefore, some of our respondents highlighted that women were the most vulnerable group to the extreme drought.

Water collection was a male-dominated activity, especially when a house was located far from the location of the artesian well. Most of our respondents explained that this domination was due to the fact that water was considered to be heavy. The impact of the program on women's workloads was not homogenous. Those with a husband or children could have water collected by them, thus decreasing the women's workload. However, widows and single women had to collect the water themselves. Nevertheless, a decrease in workload does not always lead to less vulnerability. By relying on other family members to collect the water, women become highly dependent on the presence of a husband at home.

There were some women-focused collective activities at Site 4: the Family Empowerment Program (*Pemberdayaan Kesejahteraan Keluarga*, PKK); the Family Planning Services Integrated Health Post (*Pos Pelayanan Keluarga Berencana – Kesehatan Terpadu*, known locally as *Posyandu*); a rotating saving and credit association (known locally as *arisan*); a women's farmer group (*kelompok tani wanita*); these activities allowed women to gather and interact with each other. Some women were also invited to the village planning meeting, although mostly as passive listeners.

3.5.4 Gender transformative change analysis indicators as applied to the two studied programs

With regards to gender transformative change (GTC), field data was collected using set of indicators developed by CARE (see Table 13). Information on each indicator was collected based on domain

empowerment (agency, relation and structural) and power dimension (power over, power to, power with and power within). The overall findings on these indicators are available in Annex 11 and 12. In this report, we presented only indicators which relate directly to the intervention.

Agroforestry intervention examples relating to GTC indicators:

Agency¹⁵

3. Income derived is intended for the family's general needs. In some cases, women became the financial manager and saved the money earned.
10. The agroforestry program did not contribute to any increases in confidence or welfare for either gender.
11. According to focus group discussions with men in one village, the program could contribute to women's autonomy (i.e. the state of being financially independent) when trees start producing fruits. The agroforestry program contributed to community autonomy in general as it increased their livelihoods. For women specifically, the FGD revealed that the program could contribute to women's autonomy when trees start producing fruits. For Site 3 specifically, no income was expected from the agroforestry program.
14. Most women in the three villages were not involved in agroforestry-related decision making. That said, women in one village highlighted that at that time husbands discussed agroforestry species with their wives and the women used this opportunity

¹⁵ Individual and collective capacities (knowledge and skills), attitudes, critical reflection, assets, actions and access to services.

to request certain species. Yet, the focus group discussion with a men's group in Site 2 revealed that tree species chosen for the agroforestry program were requested by men.

Women usually agreed with any decision made. Women who attended the forum also agreed on decisions made, and stayed silent throughout the meeting.

Table 13. Gender Transformative Change indicators, as applied to the agroforestry and artesian well interventions

Domains of power	Indicator	Agency		Relation		Structure		
		AF	AW	AF	AW	AF	AW	
Power over	Income:							
	1. <i>Gender wage differentials</i>						x	
	Labor or workload:							
	2. <i>Changes in time use in selected activities, particularly greater sharing by household members of unpaid housework and childcare</i>				x			
	Assets:							
	3. <i>Ability to claim the output and income produced by the asset</i>	x	x					
	4. <i>Proportion of women to men with access to those assets (physical, social, economic) that are key to resilience</i>				x	x		
5. <i>Agroforestry products that are key to resilience</i>				x				
6. <i>Gendered rules governing access to productive assets and markets</i>						x	x	
Power to	Agenda:							
	7. <i>Increased rate of participation in community's organizations</i>				x			
	Knowledges, skills and awareness:							
8. <i>Extent of training or networking among local women, as compared to men</i>						x		
9. <i>Systemic acceptance of women's entitlement and inclusion</i>						x		
Power within	Internal and psychological resources:							
	10. <i>Self-esteem, self-efficacy and psychological well-being</i>	x						
	11. <i>Assertiveness and autonomy</i>	x						
	12. <i>Perceived ability to change things collectively in the community</i>				x			
13. <i>Perceived group accomplishments</i>						x	x	
Power with	Collective agency and action:							
	14. <i>Women's perception that their interests are represented</i>	x						
	15. <i>Perceived group accomplishments and future expected accomplishments</i>	x						
	16. <i>Group cohesion, trust and inclusivity</i>				x			
	17. <i>Effectiveness of group leadership</i>				x	x		
	18. <i>Evolution of group rules and law</i>				x			
	19. <i>Questions, complaints and requests from women at village council (grievance mechanism)</i>						x	x
	20. <i>Expansion of group ambitions; actions initiated by groups</i>				x			
21. <i>Diversity of representation and leadership</i>						x		

Notes: AF (Agroforestry program), AW (Artesian well program)

15. The agroforestry program was coordinated by the farmers' groups, but implementation was carried out individually.

Relation¹⁶

2. For a few respondents, there was a slight change in the amount of time spent by wives in the family plot after the agroforestry program was implemented; more trees made for more maintenance.
3. Men and women have the same access to any agroforestry products derived from the planted trees. Respondents said that any income derived would be given to the women; as one man said, "I don't want to deal with my wife's request for money. It's confusing so I just let my wife manage all the money for the family."
4. The trees can help decrease landslides and erosion. Fruit trees (for Site 1 and Site 2) can also derive economic benefit.
7. Women rarely join trainings or meetings as they are busy with domestic work, "we have to prepare food for the family. If we join that kind of activity, there would be nobody cooking for the children and my husband." Women only participated during the agroforestry implementation.
12. In one village, both men and women were involved in the implementation of the agroforestry program. The program was carried out on degraded lands owned by some of the farmers. As such, both men and women were making efforts to maintain the results achieved during the program. In the other village, the farmers' group leader was driving improvements, actively encouraging farmers to plant trees, and find out about conservation and what the farmers can do.
16. There was no increase in terms of group value, as implementation was undertaken individually. The farmers' groups only distributed and facilitated the support and resources provided by the government.
17. Group leadership was perceived as effective by most respondents in all three villages. Through the farmers' groups, farmers received valuable knowledge on agroforestry.
18. There were no rules or sanctions imposed as part of this program. The critical element was is to plant the seedlings provided.

16 The expectations and cooperative or negotiation dynamics embedded within relationships between people in the home, market, community and groups and organizations.

Structure¹⁷

1. In the agroforestry program, payment differed by gender, with men receiving higher payments than women. This was said to be because men do 'heavier' work than women (e.g. activities such as ploughing, hoeing, fertilizing).
5. There are no explicit gender-based rules with regards to access to agroforestry produce.
8. No training was provided for women as part of the agroforestry program.
9. Women's involvement in the program was related to the specific plot of land they owned. If their land met the agroforestry program criteria, they became a target beneficiary under the program.
13. Implementation of the agroforestry program was undertaken individually. but, the collective achievement of each individual could be seen as a group achievement.
19. Ideally, any complaint or question would be addressed directly to the farmers' group leader, however if a technical problem occurred, farmers tried to find a solution themselves.

Artesian well intervention examples for GTC indicators:

Agency¹⁸

3. All people in the village can collect water, regardless of gender, however men dominate in water collection.
20. There is a plan to change management of the artesian well to a village-owned water company (PAMDES) where water will be managed under the village government with a water pipe distribution system installed.

Relation¹⁹

4. This is equal between men and women. Although for houses far from the artesian well, men collect the water.
21. Someone is assigned to look after the artesian well, switching the pump on and off. Contributions were made to cover fuel costs.
17. Improvements are required in terms of managing the artesian well: one person was

17 The informal and formal rules and norms that govern collective, individual and institutional practices

18 Individual and collective capacities (knowledge and skills), attitudes, critical reflection, assets, actions and access to services.

19 The expectations and cooperative or negotiation dynamics embedded within relationships between people in the home, market, community and groups and organizations.

insufficient to handle the day-to-day technical operations of the well; and budget is required for the maintenance of the well.

Structure²⁰

6. There are no gendered rules regarding access to water.
13. The artesian well is considered to be an achievement of the village.
19. Women can talk to the village head in relation to artesian well, whenever there's a problem with it.

3.6 Insights and conclusions

3.6.1 How does state budget for climate change action contribute to mitigation and adaptation activities at subnational level, and how does this link to gender?

State budget has been allocated to climate change adaptation and mitigation programs since 2016 and 2018 respectively. Gender issues were also taken into account in budget and program planning, and were introduced as part of combined theme ('climate change-gender') in the KRISNA budget system. The agroforestry program has been correctly tagged as climate mitigation since 2016, when the national database system was established by the Directorate General of Budget, Ministry of Finance. The artesian well program, which was initially tagged under climate mitigation in 2016–2017, has since been retagged under the category of climate adaptation.

Findings showed that climate change adaptation and mitigation budget flows differed, depending on the technical ministries involved. While budget for the agroforestry program was transferred from the national level to Serayu Opak Progo BPDASHL at subnational level, funds for the artesian well program were transferred directly to the contracted company responsible for construction.

Results at local level, however, show that both initiatives need to consider their mitigation *and* adaptation co-benefits, even if the way they are tagged infers they only address one of these (i.e. climate adaptation or mitigation).

In regard to gender, in 2017 and 2018, the agroforestry program had not yet utilized the gender-responsive budget (GRB), i.e. state budget specifically allocated for gender-responsive activities. No gender analysis or gender analysis pathways (GAP) were found for this program; these were a prerequisite for further development of a gender budget statement (GBS) related to a specific program. The data provided at national level – such as the Ministry of Environment and Forestry work plan, KLHK gender analysis pathways and the agroforestry technical design and report – revealed no analysis on gender impact, specifically for the agroforestry project. The work plan only described the general program of each directorate every year, without incorporating any analysis on gender. Furthermore, gender analysis pathways documents of the Directorate General of BPDASHL in 2017 and 2018 showed only gender assessments (access, participation, control and benefit) for another program, Community Seed Nurseries (*Kebun Bibit Rakyat*, KBR). The technical design of the agroforestry program also lacked information on social and gender impacts. In the state budget for BPDASHL priority outputs during 2016–2018 (see Table 5), the agroforestry program fell under Activity 5409 ('Forest rehabilitation and reclamation, land rehabilitation, watershed planning, and water damage control') and Output 001 ('Rehabilitation of forest and critical lands in disaster-prone watersheds/post-disaster revegetation (agroforestry program)'). This activity did not meet the criteria for gender-responsive climate change budget tagging. Based on the monitoring and evaluation report of Serayu Opak Progo BPDAS, the initial design of the agroforestry program focused only on environmental impacts, with brief analysis of the social and economic aspects of the local community.

Similar to agroforestry program, data provided at a national level for the artesian well program did not include a gender analysis document. The artesian well program prioritized areas which had no or limited access to water or areas that had been drought-prone for many years. In the Ministry of Energy and Mineral Resources 2015–2019 work plan, one of the target strategies was to increase the quality of information and services of its Geology Agency. Providing clean water through groundwater drilling (at 500 locations in five years across 28 provinces in Indonesia) has become one of its performance indicators. Similar to PDASHL, the work plan only described the general program of

²⁰ The informal and formal rules and norms that govern collective, individual and institutional practices

each directorate every year, without incorporating any analysis on gender. The only available gender analysis pathway documents at the Ministry of Energy and Mineral Resources, which showed gender assessments (access, participation, control and benefit), were for an ‘Oil and Gas Network’ (*Jaringan Minyak dan Gas Bumi, Jargas*) program in 2018, under the Directorate General of Oil and Gas. Neither the Ministry and Agency Work Plan and Budget (*Rencana Kerja dan Anggaran Kementerian dan Lembaga*) nor other documents (e.g. Detailed Working Paper 2016–2018 (*Rincian Kertas Kerja Satuan Kerja 2016–2018*)) had any information relating to social and gender impact. In the Geology Agency’s state budget allocation in 2016–2018 (see Table 7), the output of drilling artesian groundwater wells was included as a mitigation program under the activity ‘Research and environmental geology and groundwater services’ (2016–2017), before it was changed to the output ‘Exploration and clean water services in difficult areas, to be given to local governments’ as an adaptation activity under ‘Research, investigation, engineering and groundwater services, engineering geology and environmental geology’ (2018).

To sum up, neither the agroforestry nor the artesian well intervention had yet met the criteria of gender-responsive climate change budget tagging, which is a requirement for interventions to be recorded as gender-responsive in current system (KRISNA).

3.6.2 How can sectoral pilot projects be better designed for gender-responsive climate change action that contributes to gender transformative change?

Using our framework, the results of this study from national to subnational level reveal some lessons that can potentially be used to guide the design of sector pilot projects for gender-responsive climate change actions that contribute to gender transformative change. Design, planning, implementation and monitoring of such projects will be needed to ensure the sustainability of projects.

Design and planning

Both the agroforestry and artesian well programs were in line with the criteria of the overarching climate mitigation and adaptation strategy. Agroforestry activities were carried out on previously unproductive lands prone to landslides and erosion – lands which would otherwise release

more carbon than sequester; this means activities provided both mitigation and adaptation benefits. The design included the selection of tree species by BPDASHL together with the farmers contributed to carbon absorption, but also to soil retention, thus decreasing disaster events such as erosion, landslides and flooding. Likewise, the artesian well was able to support the local community during 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.

However, no gender analysis was found in the design of either program. Based on the monitoring and evaluation report of Serayu Opak Progo BPDAS, the initial design of the agroforestry program focused only on environmental impacts, with brief analysis of social and economic aspects of the local community. This was similar for the artesian well program design, which covered technical information with no analysis undertaken on gender. That said, it is important to note that in 2019 the agroforestry program had been tagged into the combined ‘climate change and gender-responsive budget’ category by BPDASHL. This indicates that the agroforestry program is attempting to integrate gender within the program.

Learning from this study, planning for adaptation and mitigation programs is critically important to guide implementation. Planning should therefore be carried out in a more careful manner.

Implementation

The implementation stage differs between the two interventions. In the agroforestry program, implementation was undertaken by provincial and district-level forestry agencies (Serayu Opak Progo BPDASHL and the District Forestry Agency). The farmers’ groups, as the main beneficiary, were involved from the point of planning, during the site identification by Serayu Opak Progo BPDAS. Each village’s farmers’ group was assisted in planning, implementation, monitoring and evaluation. Serayu Opak Progo BPDAS proposed the selected agroforestry sites to the Ministry of Environment and Forestry in Jakarta, in coordination with the district-level Forestry Agency. In the artesian well program, implementation was undertaken by a contractor. Prior to implementation, the Geology Agency of the Ministry of Energy and Mineral Resources engaged the regency-level Public Works Agency (PT. Cipta Karya) to identify sites for



Women are covering the ground with black sheet as weed prevention on agroforestry site at Kasimpar Village, Central Java. Photo by Nining Liswanti/CIFOR

the artesian well; they were also invited to the inauguration when the well had been constructed. There was no direct communication between the Ministry of Energy and Mineral Resources, and the regency-level Public Works Agency, except for coordination and information. Although the Ministry of Public Works and Housing also has artesian wells programs in East Lombok, there is no synergy among them, as they have different priorities for determining their locations.

Findings from the two interventions reveal different insights that are important to consider in future implementation of programs, including women's increased workloads, vulnerability and lack of involvement. Without clear design planning, interventions can lead to 'maladaptation'. Below we describe some key findings from the agroforestry and artesian well interventions:

a. Agroforestry intervention

Study findings showed that the intervention increased women's workloads, particularly in unproductive areas or areas with just a few trees before the intervention. In a context where the workload of women is already high due to their traditional responsibilities for productive and reproductive tasks, both at the household level and on the land, increasing their workloads affect women's vulnerability (e.g. can cause health problems). This is particularly problematic when

tree plantations do not directly improve women's income or provide them secure access to resources and decision-making processes. This may be the result of the initial design of the agroforestry intervention, in which national and subnational governments did not consider the impact on women's workloads.

The study revealed interesting linkages between gender integration, positive climate change outcomes and the sustainability of interventions. In the agroforestry program sites, capacity building sessions were conducted to increase farmer group members agroforestry-related knowledge and capacity. However, interview results revealed that women were not part of this capacity building program, despite their practical responsibilities for tree care and maintenance. The capacity building sessions, which provided information about the long-term role of trees to enhance the resilience of farm plots by improving soil fertility, water infiltration and by protecting the soil from erosion, did not reach women. Study results show that many of the women did not really understand the intended long-term outcomes of the agroforestry intervention; they were only aware of workload and short-term inconveniences and the trade-offs of having additional trees in their fields. This could explain why many of them decided not to keep the trees in their fields, which in the face of increasing climate variability and climate change will result in higher risks in terms of erosion and landslides. Even



A farmer is clearing weeds in his garden at Padamara village, East Lombok.
Photo by Aghnia Dima Rochmawati/UNDP

though the initial objectives of the intervention were to increase the adaptive capacity of the community, the lack of women's integration in the program and particularly in the capacity building sessions jeopardized adaptive outcomes, and could result in maladaptive pathways in the future.

b. Artesian well intervention

In the Lombok region, households' water supply and collection falls under the responsibility of men, especially when houses are located far from the artesian well, as the task is considered to be too heavy for women. Findings show that well water is not only used for drinking but also for domestic activities including cooking, bathing the children, washing clothes and cleaning the house; activities which fall under the responsibility of women. In general, the intervention increased the availability of water and reduced women's vulnerability, which was seen as being high prior to the intervention, particularly during the dry season. The impact of the program on women's workloads was not homogenous, however. For those having a husband or juvenile children, water could be collected by them and thus women's workloads decreased; while widowers and single women had to collect the water themselves. A decrease in workload does not always lead to less vulnerability, however. By relying on other family members to collect water, women become highly dependent on the presence of those family members in the home.

Monitoring and evaluation

In the artesian well intervention, monitoring was not undertaken by either of the two agencies involved (the Ministry of Energy and Mineral Resources, and the Ministry of Public Works and Housing), rather by the local government (i.e. the Regent, *Bupati*), upon completion of the wells when they become an asset of the regency. The Regent did not however have budget to maintain the wells; as such, this became the responsibility of the village. The Ministry of Energy and Mineral Resources believed that the Ministry of Public Works and Housing (through PT CIPTA KARYA and PAMSIMAS) would continue to support by providing water distribution pipes at Site 4. Unfortunately, the Ministry of Public Works and Housing's priority of increasing the number of wells constructed, does not include Site 4.

Based on the results, the village leader and certain community members living close to the well get direct access to the well water using pipes, have taken the initiative to monitor the well so it can be used for longer, both by them and by other community members in this village. Women have no direct involvement in monitoring the well, but women living near the well have helped to control water consumption by community members; for example, they rebuke community members who take water using a drum or large container. If the person persists, they ask them to pay for

maintaining the well. Monitoring of the well, which done collectively by community members, is very important to ensure its long-term sustainability.

Similar to the artesian well, the agroforestry intervention did not integrate gender into its designed monitoring activities. To date, monitoring has been undertaken across the province by Serayu Opak Progo BPDASHL, and by the farmers' group on site. During the initial design, Serayu Opak Progo BPDASHL formulated a series of activities, from planning to monitoring activities, beginning a year after the program was implemented. This monitoring and evaluation phase, which has not yet taken a gender perspective, aimed to determine the extent and progress of rehabilitation through the agroforestry intervention, in terms of the physical aspects of plants and institutions. Monitoring activities are carried out to measure the progress of plants, including planting area and plant growth. These monitoring and evaluation results are used to inform future tree maintenance.

At site level, the farmers' group leaders, supported by the extension workers, played a direct role in the monitoring of the program. This monitoring activity aimed to check the condition of the planted trees. In Site 1 specifically, substitute plants were provided for farmers to replace dead plants. However, most farmers involved in this intervention were strongly committed to keeping plants alive in order to protect their land from future landslide disasters, so they were already invested in maintaining and monitoring the condition of plants. In Site 2, the farmers' group leader and members agreed between themselves to take care of the trees given, or else they would not be given any future support, for instance when free seedlings or other planting-related activities were provided, in future. As such, farmers were committed to maintaining their trees, as well as seeking new seedlings to replace dead trees. Unlike the first two sites, monitoring activities at Site 3 were carried out by the leader of the farmer's group. Based on study results, some of the women participants considered the trees to have negative impacts on their agricultural crops, because the root system had destroyed their crops, so some of them removed the trees. These dead agroforestry trees were not being reported to the group leader or being replaced. With this knowledge, extension workers have made efforts to increase awareness on the importance of protecting land from disasters. This situation has become a dilemma for farmers who own only riverside-bordering land.

Gender has not yet become a focus for monitoring activities. UN Women (2019) highlight several aspects that need to be integrated so that M&E programs can take a gender perspective. Among these are: (i) ensuring that program benefits reach targeted stakeholders; and (ii) checking whether women and other vulnerable groups suffer any negative effects as a result of the program. Integrating gender into monitoring and evaluation activities also means identifying whether gender concerns were addressed in all previous phases of the program.

The sustainability of each intervention

Without aiming to analyze the sustainability of interventions, which goes beyond the scope and timelines of this study, our results show some gender and climate change-related aspects to sustainability, which might be important to highlight in this report.

Artesian well intervention. The case of artesian well intervention shows how combining and synergizing different financing mechanisms and streams is key at the local level. It shows also how leveraging stakeholder leadership and community social capital at the local level matter, for the sustainability of actions. Even though financing came from different streams, local actors, if equipped with the capabilities and the social capital needed, can create synergies between different programs. In this specific example, different nationally-derived financing schemes (i.e. state budget (APBN) and *Dana Desa*) were running in parallel. From a national-level perspective, their well-thought out and combined implementation at local level synergized two opportunities in a way that helped to increase the community's adaptive capacity during a crisis. The community used finance provided through the *Dana Desa* program to purchase livestock, which was not an activity included under state budget financing; while state budget funds were used to make water available for the purchased livestock through the artesian well. The study revealed that the animals were less affected by droughts the following year, and they played a safety net role for the farmers, who sold them after their remaining agricultural assets were destroyed by droughts. This also generated vital funds to maintain the artesian well, as farmers who sold their livestock contributed to the maintenance of the well (around IDR 10,000 per month), making the community less dependent on follow-up funds for well maintenance.

Agroforestry intervention. Findings showed that women are often excluded from decision-making in climate change mitigation and adaptation programs. In the case of the agroforestry program, the exclusion of women from decision-making processes and capacity building activities resulted in unsustainable outcomes. As mentioned earlier, women, who have responsibility for taking care of trees in the fields, were not made aware of the time frames of the intervention, neither were they well informed on the use of trees and their long-term conservation benefits in terms of adaptation. Because women were not involved from the beginning, in the design phase, and later also in the capacity and sensibilization sessions, they perceived solely the short-term problems caused by having trees in their fields (e.g. the impact of roots on the soil, the increase in workload initially to maintain the trees). The result was that the trees were not prioritized by the women, and many women removed them from their fields. Here we show a clear example of how the intervention's adaptation and mitigation objectives cannot be reached, and how sustainability is jeopardized by a lack of gender integration. An additional aspect affecting sustainability is the lack of a market strategy for the agroforestry products from the planted trees; this could further incentivize farmers in the short term.

3.6.3 Gender transformative change (GTC) and gender-responsive budgeting (GRB)

While focusing on national-level budgeting is a good start, efforts need to be mainstreamed across scales and sectors of intervention. The study shows that beside the effort invested in 'gender-responsive budget and climate change' budget tagging at the national level, there are many important challenges at the local level that needs to be addressed in order to attain gender transformative change at a local level. We summarize those as follows:

With no gender analysis pathway in the initial budget and program design, and field evidence highlighting a lack of women's empowerment, both the agroforestry and artesian well programs are shown to be gender blind. Because of the little attention given to gender in these programs, and because of the very short scope of this study, our conclusions on gender transformative pathways need to be tested and adapted in a large-scale study that covers several locations, to reflect Indonesia's rich cultural and ecological variations.

Despite the limited number of sites and time spent in the field, this study revealed important lessons on gender aspects to be considered for positive outcomes in future. To improve immediate and intermediate results, which can be stepping stones for longer term changes in gender relations, we identified the following gender domains from which indicators can be drawn to monitor and evaluate immediate and intermediate gender outcomes. These can be included in any GRB process at national, regional and local level:

- a. **The first set of indicators to include in a gender-responsive budget relate to income, workload and access to information.** Results shows that, women's independence in terms of income, their equal rights to resources at household and community levels, and their access to and use of information, technology and services, are all key indicators of change. One of the most important aspects coming out of this study as having an important impact on women, is the degree to which women decide and control the allocation of their labor and changes to the amount of time they spend on selected activities, particularly when this comes to unpaid work or activities which don't generate direct income for women, but increase their workloads.
- b. **The second set of indicators relate to identifying resilience assets to be generated through a vulnerability and adaptive capacity analysis.** These tools determine the most important assets, including physical, financial, social, natural and human, for resilience, both at scale and in specific contexts. Once those assets are determined, it is important to build indicators into the gender-responsive budget that will inform the distribution and shifts in terms of access and control over those assets over time; including the proportion of women and men from different ethnicities, age and social class.
- c. **The third set of indicators relate to assessing how power relations are shifting over time,** including shifts in participation in decision-making processes, information and control over the agenda, involvement in local and communal decision-making processes, ability and negotiation capacity and space, including renegotiating rights, assets (land), and market-based decision-making processes. The indicators on participation need to go above the number of participants to capture real and active participation from women in terms of influencing the agenda of activities.

4 General conclusions and recommendations

Performance-based budgeting

We recommend that the Ministry of Finance, in collaboration with Ministry of Women's Empowerment and Child Protection, launches a program that identifies and addresses the above human resource gaps, as well as provides sufficient financial and political support to delivery ministries to address those gaps. Performance-based budgeting needs to go beyond programmatic synchronization and monitoring and evaluation, to become a platform for learning and rewarding good performance. Performance-based budgeting can become a more effective tool for advancing gender equality and poverty reduction when institutions integrate gender and poverty issues in a mechanism or project's vision and mission; linking objectives to input, output, outcome and impact indicators in the performance-based budgeting process.

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 dis-aggregated 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 equitably. 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.

Recommendations for 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 KRISNA 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 in relation to Indonesia's climate budget, gender-responsive budget, and the process of preparing Gender Analysis Pathway (GAP) and Gender Budget Statement (GBS) documents.

5 Suggestions for gender indicators

5.1 Indicators for advancing gender equality and poverty alleviation

We adapted Hillenbrand et al.'s Gender Analysis Pathway (GAP) and Gender Transformative Change (GTC) conceptual framework (2015)

and applied it to the agroforestry and artesian well interventions. Table 14 summarizes the indicators which were relevant for the two studies. Based on the results of the study, we developed a set of questions to guide practitioners in the use of gender indicators.

Table 14. Indicators for advancing gender equality and poverty alleviation

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. AW: women saw a decrease in workload, as water collection was undertaken by men (children, elderly relatives, husbands), with the exception of widows and single women.	Are intervention-related activities changing work repartition at the household or community levels? 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?

Continued on next page

Table 14. Continued

Indicator	Examples from the study	Questions to address the indicator in future interventions
	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?
Knowledge, skills and awareness	Indicator 7: Extent of training or networking among local women, compared to men	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. 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.	Did the intervention increase the participation of women in local institutions or organizations? 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. Indicator 11: Assertiveness and autonomy AF: the program could contribute to women's financial autonomy when trees start producing fruits. 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. 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 did the intervention influence the self-esteem and wellbeing of women? What about conflicts? To what extent was the intervention able to create autonomy for women? To what extent was the intervention able to create collective and social coherence in the community? 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?

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Table 14. Continued

Indicator	Examples from the study	Questions to address the indicator in future 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?
Indicator 16: Group cohesion, trust and inclusivity	AF: There was no increase in group value, as implementation was done individually. The farmers' group only distributed government-provided resources.	How do the intervention influence the social capital and the inclusiveness in the community?
Indicator 17: Effectiveness of group leadership	AF: The group leadership was perceived as effective by most of our respondents in all three villages. Through the farmers' group, farmers receive valuable knowledge on agroforestry.	What are the leadership qualities that made the intervention more gender equal?
Indicator 18: Evolution of group rules and law	No rules and sanctions are imposed in either program	Did the intervention affect the rules and values in the community? Are the new rules more inclusive?
Indicator 19: Questions, complaints and requests from women to the village council (grievance mechanism)	In both interventions, traditional structures (i.e. the village heads) are responsible for grievance mechanisms. In some AF sites, women complained, via their husbands, about trees disturbing their activities in their fields and increasing their workloads.	Is there a grievance mechanism to address conflict? Have women access to those mechanisms? What happens when women complain?
Indicator 20: Expansion of group ambitions; actions initiated by the groups	AW: There is a plan to change management of the artesian well to a village-owned water company (PAMDES) under the village government. It is not clear if the integration of women will be improved.	What plans and initiatives are being initiated by local groups? Were any of these initiated through the intervention?
Indicator 21: Diversity of representation and leadership	In general, women are involved in local government leadership structures, however not in the design and implementation of both interventions studied.	Who is represented in the leadership structure and who is not (including gender, class, age, ethnical group)?

Note: AF = Agroforestry; AW =Artesian well

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Annexes

Annex 1 Description of the research process

The process undertaken for research into national-level climate finance mechanisms is illustrated in Figure A1.

Project refinement and preliminary research: We presented initial ideas of the research to potential stakeholders and solicited their input during a project inception meeting. We also conducted a preliminary desk review on climate finance, gender and poverty topics, as well as on the five studied financial mechanisms. At this stage, we outlined the research design and built a common data collection instrument, to guide data collection through the literature review and interviews, and become the foundations of the coding system by which data would be extracted from interview notes. This data collection instrument also provided the structure of the report outline. We identified key aspects of a full policy cycle as they

relate to the five financial mechanisms studied. We consulted UNDP on the research design and methods during an inception workshop held in Jakarta, Indonesia on 19 June 2019, and at a meeting in Bogor, Indonesia on 29 July 2019.

Data collection: Data was collected through two approaches: a literature review and key informant interviews. Both methods used a common data collection instrument to structure the data collection process. We collected literature from government regulations, publications by related institutions (websites, press releases, strategic planning, budgets, presentations, social media channels), scientific papers (peer and non-peer reviewed journal articles, theses, dissertations, working papers), and mass media (newspapers, magazines, blogs). We created a group library in Zotero, a bibliography software, to compile all

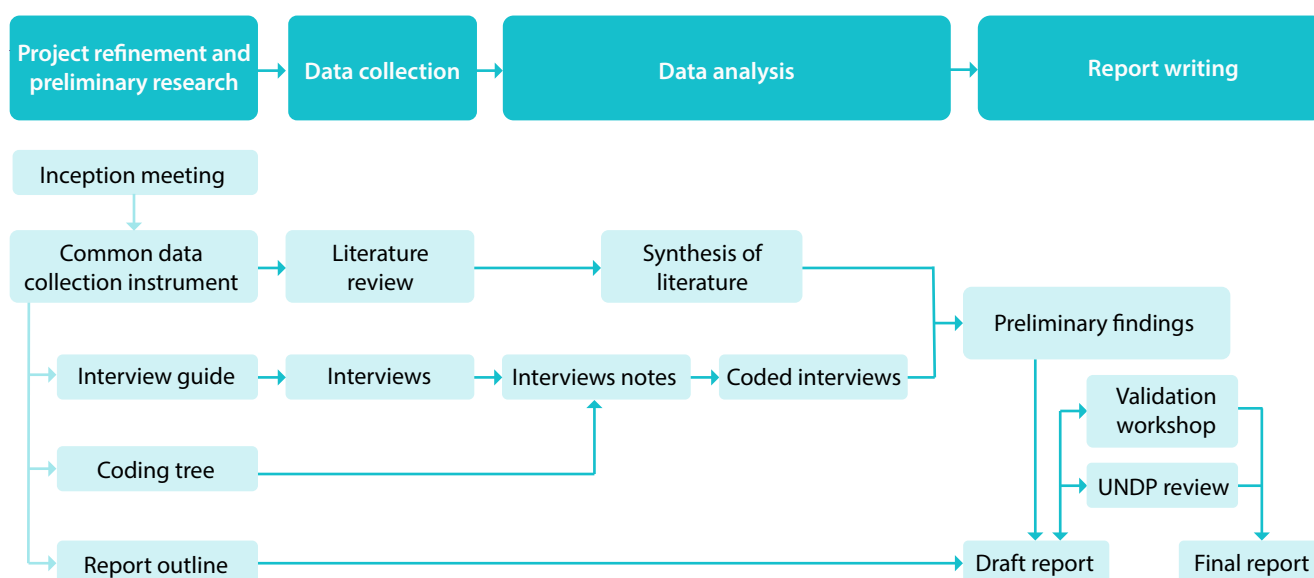


Figure A1. Process taken for research into national-level climate finance mechanisms

literature and made it accessible to all project team members. The Zotero library will be made available to UNDP and FTA, and will be archived by CIFOR for public use after the research project is finalized. Data was collected on the influence of climate change, gender and poverty on different aspects and stages of the five financial mechanisms, including: 1) conceptualization (e.g. vision, mission, goals, background); 2) design and implementation (governance, actors and roles, fund allocation, fund distribution, fund use and management); and 3) monitoring, reporting, evaluation and learning mechanisms and results.

Key respondents for Dana Desa, BLUP3H, and BPDH were selected, in consultation with UNDP. We identified relevant actors and their roles in each mechanism, the type of information they could provide, and how this information related to our research questions. We sent twenty-one requests for interviews to ministries and agencies staff, civil society and non-government organizations (NGOs), as well as authors and reviewers of relevant publications. From July to September 2019, we conducted in-depth interviews with 23 respondents on 10 interview occasions (see Annex 2). Due to confidentiality issues we only list the interviewees' institutional affiliation. The interviews faced substantial delays because they fell during a period of governmental transition. In this report, references are made to the interview occasions (e.g. Interview number 9), rather than a specific respondent. In collecting data related to implementation challenges, we

asked stakeholders for their perceptions on how these financial mechanisms were implemented at the national level. Information on financial mechanisms' implementation at the subnational level were taken from the literature published by the government, mass media and academics. Note that for DAK and ICCTF, we only use data from the literature. As our focus was national, we did not conduct interviews with respondents at sub-national level.

Data analysis: Information from the literature and interviews were compiled together to prepare the data for analysis. All interview notes were coded using NVIVO, a qualitative data analysis (QDA) software that attaches codes to words, sentences or paragraphs from field notes. Through the coding process, we categorized interview notes into themes and patterns, by identifying similarities and differences in the opinions and perceptions of interviewees. We also used a triangulation technique that facilitated the validation of data, through cross verification using different interviewees, a process in which we analyzed and interpreted underlying interview themes as a complementary source to the data gathered from the literature review.

Report-writing: The draft report was presented to stakeholders during a workshop conducted on 5 November, and was shared with participants on 12 November for further comments and input. We revised the draft report based on the results of this workshop.

Annex 2 List of interviews to inform the study on national-level climate finance mechanisms (2019)

Organization	Interviewee work unit
Ministry of Women Empowerment and Child Protection (KPPPA)	<ol style="list-style-type: none"> 1. Sub-Section for Gender Facilitation in Infrastructure 2. Section for Gender Equality in Environment 3. Sub-Section for Gender Monitoring and Evaluation in Environment
Directorate for Utilization of Natural Resources and Appropriate Technology; Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT)	<ol style="list-style-type: none"> 1. Sub-Directorate for Forest, Agriculture and Mining Resources 2. Sub-Directorate for Environment 3. Sub-Directorate for Water Resources, Land and Maritime Affairs
Directorate General of Fiscal Balance, Ministry of Finance	<ol style="list-style-type: none"> 1. Sub-Directorate for Village Funds, Special Autonomy, and the Special Funds of Yogyakarta Special Region
Public Service Agency – Center for Forest Development Financing (BLUP3H)	<ol style="list-style-type: none"> 1. Sub-Section for revenue sharing and Sharia analysis
Fiscal Policy Agency – Center for Policy on Multilateral and Climate Change Financing (BKF-PKPPIM); Ministry of Finance	<ol style="list-style-type: none"> 1. Division for Fiscal Policy on Climate Change 2. Sub-Department: Transportation and other sectors 3. Department of Transportation and other sectors 4. Department of Transportation and other sectors
Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT)	<ol style="list-style-type: none"> 1. Division for Basic Social Services
Circle for Agrarian and Rural Reform (KARSA)	<ol style="list-style-type: none"> 1. Independent researcher
Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT)	<ol style="list-style-type: none"> 1. Sub Directorate of Village 2. Community Development 3. Civil Society Working Group 4. Village Community Empowerment, participatory planning section
Ministry of Environment and Forestry (KLHK)	<ol style="list-style-type: none"> 1. Domestic Cooperation and Grants Division 2. Planning Bureau 3. Planning Bureau
Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT)	<ol style="list-style-type: none"> 1. Basic Social Services Division

Annex 3 Analytical framework

Figure A3 outlines the role of gender in financial mechanisms. This framework combines sources including international gender scholars, Indonesia’s gender analysis pathway (GAP) and the Gender Responsive Budgeting and Planning (PPRG) manual. The framework illustrates a pathway (from left to right) through which financial mechanisms could contribute to transforming gender inequalities, and how gender-transformative climate finance could contribute to reducing gender inequalities.

In gender assessments, programs are typically categorized as being: 1) gender-blind, 2) gender-aware (sensitive or responsive) and 3) gender transformative. A gender-blind intervention is one that ignores gender norms in its design, implementation and learning processes. It could intentionally or unintentionally ignore gender-related constraints on women’s capability for agency (Kabeer 2005). A gender-aware intervention acknowledges these constraints based on informed gender-analysis, and designs its program to avoid intensifying existing barriers (Kabeer 2005).

We describe how each financial mechanism is influenced by gender norms and use the above categories to guide the research. **Our aim is not to classify each mechanism into one of the three categories,** but rather to understand what aspects of each financial mechanism are gender-blind,

gender-aware or gender-transformative. We do not differentiate between gender-sensitive and gender-aware, as these terms were used interchangeably, particularly in the Indonesia context.

Gender is a social construct, not a personal characteristic. It is a social relation, a multi-faceted phenomenon based on core structures that relate to the social hierarchy (Ridgeway and Correll 2004; Pederson et al. 2015). Gender is not a simple, binary categorical variable; it is more than sex-disaggregated data (Kabeer and Subrahmanian 1996). Gender-transformative approaches aim to move beyond individual self-improvement among women and toward transforming the power dynamics and structures that serve to reinforce gender inequalities. As defined by the CGIAR Research Program on Aquatic Agricultural Systems, a gender-transformative approach to development goes beyond the “symptoms” of gender inequality, to address “the social norms, attitudes, behaviors and social systems that underlie them” (Hillenbrand et al. 2015). This approach entails engaging groups in critically examining, challenging and questioning gender norms and power relations that underlie visible gender gaps (Ridgeway and Correll 2004; Colfer and Minarchek 2013; Fletcher 2015; Djoudi et al. 2016; Clendenning et al. 2019). The gender assessment framework in Figure 22 illustrates how we identified existing gender inequalities.

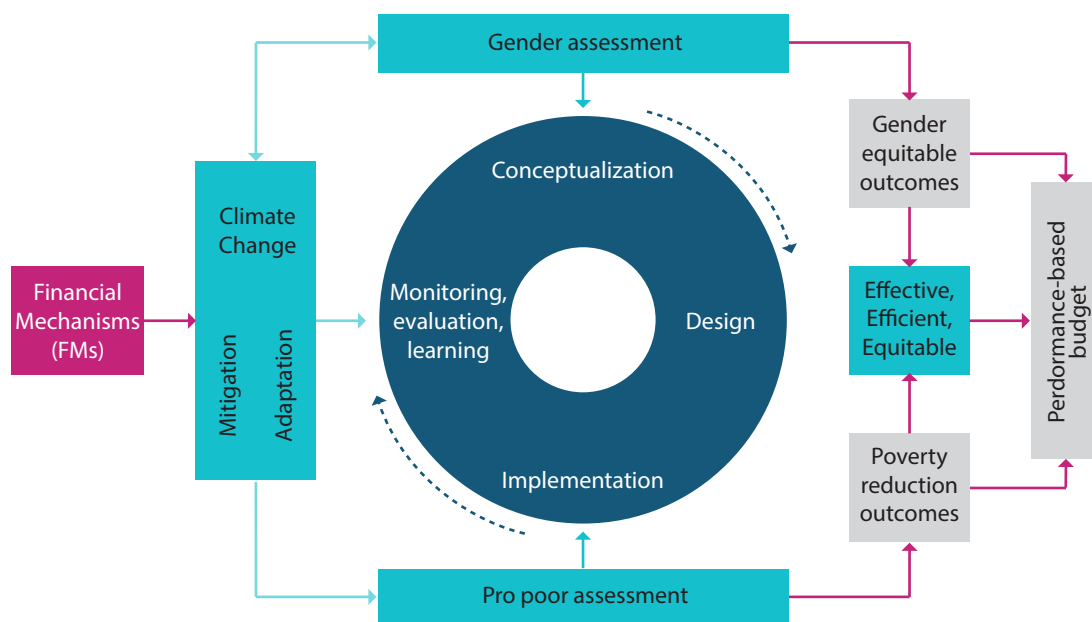


Figure A3. General framework for gender and pro-poor assessments of the financial mechanisms

Annex 4 Gender and pro-poor analysis of national-level climate finance mechanisms

The gender and pro-poor study was conducted in two steps.

In **Step 1**, we aimed to answer the following research question:

Research question 1

How are gender transformative and pro-poor norms reflected in the design and implementation of the current mechanisms for financing climate change in Indonesia?

- 1.1 To what extent do gender and pro-poor norms influence the **conceptualization** of the financial mechanism?
- 1.2 How have gender and pro-poor norms influenced the **design and implementation** of the financial mechanism?

Step 1 identified the following aspects of the financial mechanism:

- Conceptualization: history or motivation for its establishment, vision, mission and objectives.
- Design and implementation
 - Governance
 - Fund allocation
 - Fund usage and management
 - Monitoring, evaluation and learning
 - Resources
 - Regulatory support

We developed a simple influence matrix to guide our data collection and analysis (see Annex 5, Influence matrix).

Three of the financial mechanisms (Dana Desa, BLUP3H and DAK) were not climate specific. For these financial mechanisms, we also searched for background information on the extent to which the financial mechanism could be used to distribute or channel climate finance. We looked for information that could confirm or deny the following statement:

- The kind of actions that can legally be supported by the mechanism include actions that can reduce GHG emissions, avoid future emissions, sequester GHGs, serve as GHG stock, or improve human or institutional resiliency and readiness to climate variability or natural disasters. Conversely, the

mechanism has no prohibitions that prevent it from supporting climate action.

In **Step 2**, we answered the following research question, based on information gathered in Step 1:

Research question 2

How can financial mechanisms be more effective and efficient in advancing gender equality and poverty reduction?

- 2.1 Advancing access: How can women and the poor have better access to information about the financial mechanisms and their resources?
- 2.2 Advancing participation: How can financial mechanisms create enabling environments for women and the poor to participate in activities and decision-making, during each phase of the program (planning, implementation and evaluation)?
- 2.3 Advancing benefits: How can women and the poor better benefit from the activities financed by the studied financial mechanisms?
- 2.4 Advancing control: How can women and the poor gain more control over the resources and decision-making processes of the financial mechanisms?

We used the indicators developed by BKF-PKPPIM (2016) to guide our analysis (see Table A4).

Research question 3

How can this analysis inform the budget formulation and Performance-based Budget system?

Sub-questions:

- 3.1 How can the findings of this study inform the design of Performance-based Budgeting system (PBK)?
- 3.2 Based on the study findings, what recommendations can be offered on performance indicators for climate finance mechanisms that promote gender equality and poverty reduction efforts?

Table A4. Pro-poor and gender-responsiveness indicators

Criteria	Pro-poor indicator	Gender-responsive indicator
Access	Poor people (men and women) have access to the activity	Men and women have equal access to the activity
Participation	Poor people (men and women) can participate in each phase of the program (planning, implementation and evaluation stages)	Men and women can participate in each phase of the program (planning, implementation and evaluation stages)
Control	Poor people (men and women) have the power to be involved in decision-making processes related to the activity	Men and women have the power to be involved in decision-making processes related to the activity
Benefits	<ul style="list-style-type: none"> • Employment/income-generating activities • Access to capital • Human skills development • Improved access to information and technology • Basic needs are met (health, nutrition, education, clean water) 	<ul style="list-style-type: none"> • Reduced domestic workload of women and girls • Women and girls as beneficiaries of the activity • Employment/income-generating activities • Access to capital • Human skills development • Improved access to information and technology

Note that a more in-depth study was conducted on *Dana Desa* and BLUP3H, due to their importance, both in terms of the size and scope of funding (*Dana Desa*) and the potential lessons on different modes of providing climate finance (BLUP3H). We also took into account the fact that numerous publications exist on the subject of DAK and ICCTF's effectiveness and efficiency, but that there was a lack of data on BPDH because the mechanism is not yet fully operational. For DAK, we drew heavily from a publication by the Fiscal Policy Agency (*Badan Kebijakan Fiskal*, BKF; Suwakhyo et al. 2012).

In this study, we did not measure financial effectiveness and efficiency, as this requires quantitative data that was not available or was inaccessible to the public. This includes financial data on the costs of doing business for these

various mechanisms, as well as achievements on gender equality and poverty reduction outcomes. Instead, we characterized the factors that improve the likelihood of effective and efficient use of financing, using publicly available indicators. For example, knowing the importance of regulation and institutional documents in legitimizing and empowering action, we analyze key sections (e.g. principles, vision, mission) to see if climate change adaptation and mitigation, gender equality and poverty reduction are reflected explicitly or implicitly. We also analyzed how gender equality and poverty reduction are reflected in a financial mechanism's design, including key stakeholders' level of knowledge on these topics, and the extent to which they are reflected in the structures and practices influencing financial flow (e.g. fund allocation, distribution, management, usage, monitoring and evaluation).

Annex 5 Influence matrix

Q 1.1 To what extent do gender and pro-poor norms influence the conceptualization of this financial mechanism?

- Are gender and pro-poor/poverty mentioned in the financial mechanism's vision, mission and goals/objectives? (Y/N)
- How is gender/poverty mentioned in relation to:

Items	Statement in literature [published by the institution, currently valid]	Climate Change		Gender		Poverty	
		Y/N	How?	Y/N	How?	Y/N	How
Principles							
Vision							
Mission							
Goals/ Objectives							

Q 1.2 How have gender and pro-poor norms influenced the design and implementation of the financial mechanism?

- Did gender and pro-poor norms influence the overall governance, funding allocation, funding distribution, funding management and use, reporting, monitoring and evaluation and learning system? If so, how?

	[Methodological notes – Examples of data to be collected]	Gender*	Pro-poor*
Governance system	e.g. Institutional structures, regulations that have influence on the way the financial mechanism will provide financial services across genders and to the poor		
Human resources	e.g. Level of knowledge in gender mainstreaming/ poverty reduction among individuals governing the financial mechanism; availability of staff to coordinate/monitor/implement gender mainstreaming/ poverty reduction measures		
Fund allocation and distribution	e.g. Considerations related to gender/poverty that are built into the fund allocation system; the types of data, information or principles on gender/poverty that are used to base fund allocation decisions		
Fund distribution	e.g. Ways that funds are distributed that can help or hinder both genders from benefiting from the services of this mechanism equally/the poor to get out of poverty		
Fund management and utilization	e.g. Consideration of the needs and constraints posed by poverty and prevailing gender norms within the way the fund is managed and used; decision-making power of different genders and the poor; the voices and participation of both genders and the poor in the way funds are used at different levels		
Monitoring, evaluation and learning	e.g. Formal and informal monitoring and evaluation systems that allow data on the performance of the mechanism to be gathered; indications that the mechanism is improving over time, based on data gathered from monitoring, or input from staff, beneficiaries or other stakeholders; availability of data segregated by gender or poverty level		

* Note: Use the following indicators for gender and pro-poor:

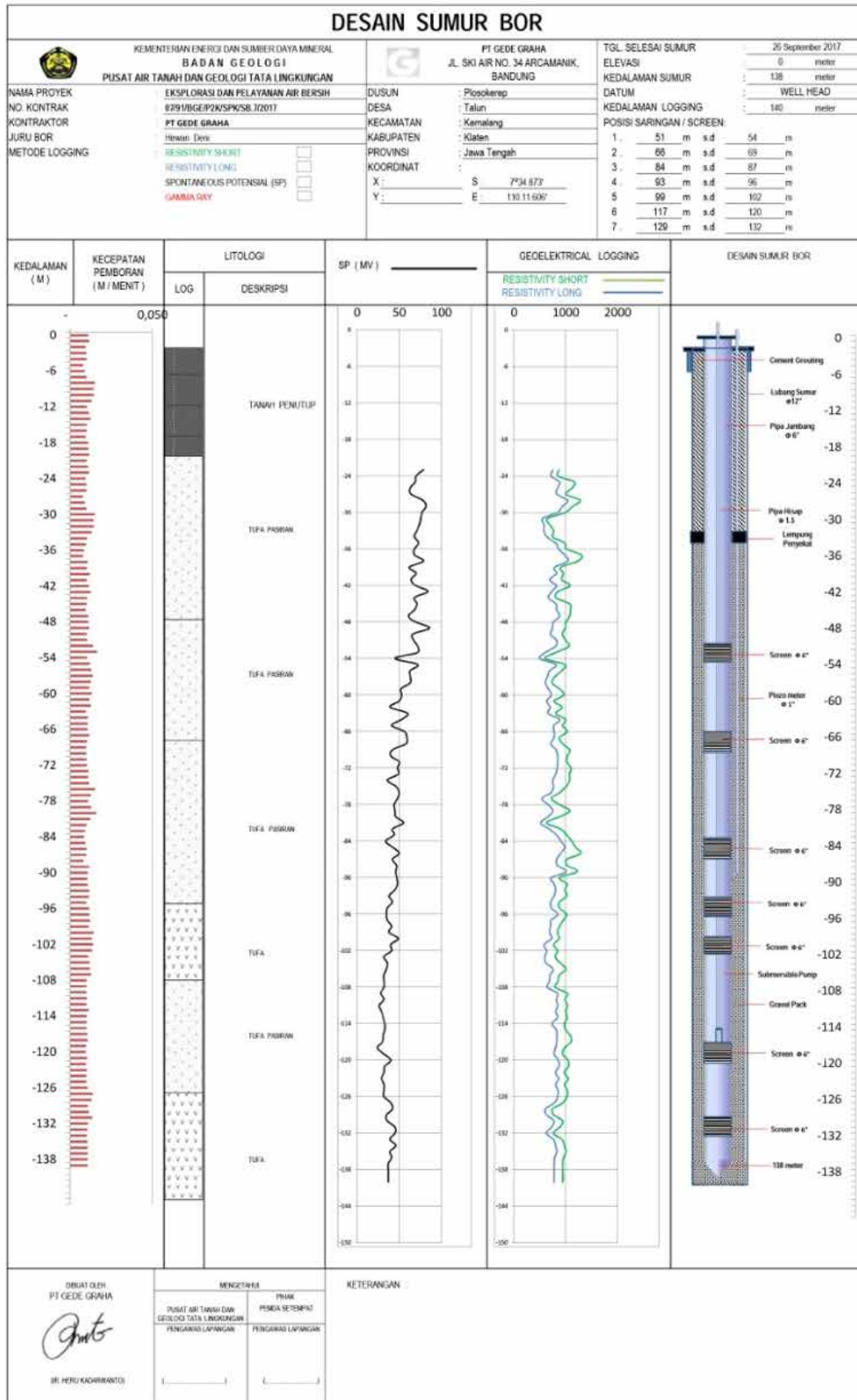
Gender mainstreaming:

- *Gender blind*: does not consider gender inequalities, by knowingly or unknowingly ignoring the gender-related constraints on women's capacity for agency.
- *Gender aware (sensitive-responsive)*: designs its goals and activities on the basis of well-informed analysis of the existing gender division of roles and responsibilities in particular contexts.
- *Gender transformative*: goes further by seeking to challenge given constraints – although the deep-rooted character of these constraints means that transformation is unlikely to be a one-off event but a gradual and evolving process (Kabeer 2010, 108).

Pro-poor indicators

- The poor themselves can directly influence the setting of policy priorities and target the specific causal issues that they have identified
- Aims to assist the poor to make the best use their limited assets by improving their productivity and economic opportunities
- Addresses the gender balance in society and the need to create income-earning opportunities for both men and women, as well as youth generally
- Targets the poor and vulnerable groups
- Targets sectors in which the poor are employed or engaged, and aims to remove constraints (e.g. poor credit availability, weak extension services, unnecessary bureaucracy for micro/small-business formation, inefficiency and poor governance standards), and create an investment- and employment-generating environment for the private sector
- Targets the provision of more efficient/equitable levels of basic services including water, sanitation, communications and transport infrastructure, and power supplies, as well as health and education, in areas where the poor live (urban or rural)
- Aims to maintain competitive prices for the products that the poor produce, and for the essentials which they need to purchase; this means ensuring a competitive external exchange rate, a progressive domestic tax structure, removing distortions in domestic prices caused by subsidies disproportionately benefiting the non-poor, and liberalizing local markets for outputs produced by the poor.

Annex 6 Artesian well design of the Geology Agency, Ministry of Energy and Mineral Resources (KESDM)



Annex 7 Key informant interview questionnaire: Climate change mitigation (agroforestry program)

GUIDELINES FOR IN-DEPTH KEY INFORMANT INTERVIEWS AT VILLAGE LEVEL

A study on the development of climate change mitigation indicators that contribute to gender transformative change at a pilot site

Date/time	:
Interviewer	:
Time of interview	:

Province	:
Regency	:
District	:
Village	:
Name/age	:
Gender	:

These guidelines aim to provide suggestions on how to do an interview with a key informant at village or community level. Please use other tools to interview a key informant at national and subnational level.

The objective of this key informant interview is to gather information and experience, at individual or community level, on the implementation and results of the agroforestry program. Interviews can be conducted individually. All questions are open-ended and the interviewer should have an ability to probe respondents' knowledge, information and experience in relation to a specific matter. This interview should be done in accordance with the respondent's available time. Please allow the respondent time to decide the best time for the interview. This flexibility is important so as to allow for the interviewee to be more comfortable during the interview process.

Interview Consent

Please introduce yourself as an interviewer and mention the following statement: We're doing an interview using a questionnaire developed by CIFOR. We're doing a research project on "leveraging climate change for gender equality and poverty reduction". This interview will contribute to the development of climate change adaptation and mitigation indicators, to contribute to gender transformation on the ground. The interview will take around one hour. We will use this information for our research. Your identity will not be revealed, and your responses will be treated as anonymous.

Are you willing to be interviewed?

- Yes
- No

1. GENERAL INFORMATION

- 1.1 Informant's role in the village/community (e.g. village head)
- 1.2 Informant's role in forest management (e.g. community forest management committee)
- 1.3 Marital status (single, married, widowed)
- 1.4 Highest level of education
- 1.5 Income
- 1.6 Land size and tree species planted under the agroforestry program
- 1.7 Knowledge about the funding for the program: Do you know who funded the program? Where did you get that information?
 - a. From the extension worker
 - b. Neighbor
 - c. Meeting held by the project
 - d. Other
- 1.8 How was the money used by the local community?

2. CLIMATE CHANGE INTERVENTION

Assessment of the agroforestry intervention as a climate change mitigation project

- This activity is aimed at gathering information about the agroforestry program as a means of reducing carbon emissions from the forestry sector in Serayu Opak Progo Watershed.
 - The purpose of this interview is to discuss the agroforestry program and its benefits. Our focus is on the transformation of certain aspects, before and after the agroforestry project.
 - Detailed information will be requested in relation to the agroforestry project, including history of land use, tree species chosen, knowledge on climate change and community's role (both men and women) in this project.
- 2.1 Ask the informant to tell the story about the agroforestry project. You can use the following questions:
 - 2.1.1 Who was involved in the project implementation?
 - 2.1.2 What was the objective of the project? (planting trees to decrease landslides, planting trees as an alternative income for farmers)
 - 2.1.3 In what year did the project start?
 - 2.1.4 When were the trees planted?
 - 2.1.5 Where did you obtain the seedlings?
 - 2.1.6 How did you plant the trees? By mixing tree species, or by planting only one species per plot?
 - 2.1.7 What kind of tree species were chosen? Were those fast-growing species or slow-growing species? Did the trees have strong root systems?
 - 2.1.8 Who was involved in choosing the tree species for the agroforestry project? What was the role of women in this matter?
 - 2.1.9 How did the tree species preferred by men and women differ?
 - 2.2 Please ask the informant to tell the history of the land used for agroforestry project. You can use the following questions:
 - 2.2.1 Where was the agroforestry project located? (primary forest, secondary forest, community garden, steep terrain without trees, steep terrain with trees)
 - 2.2.2 What was the prior condition of this land?
 - 2.2.3 Who were the owners of the land which was used for the agroforestry project?
 - 2.2.4 How did you prepare the land for the agroforestry project?
 - 2.3 Dig into the key informant's knowledge on climate change. You can use the following questions:
 - 2.3.1 Have you heard about climate change? Can you please explain it?
 - 2.3.2 Have you experienced longer dry/rainy seasons in the last two years?

2.4 Dig into the key informant's knowledge on actors who supported the project. You can use the following questions:

2.4.1 What kind of support was given in this project?

2.4.2 What were the benefits of this project?

3. INFORMATION ON GENDER-BASED PARTICIPATION

Gender-based question

- We will look in more detail at any changes in the participation, access, benefits and control, of women and men, before and after the agroforestry project.
- These questions should be asked to men and women separately.
- Put the result into the table below.

Indicator	Increased	Decreased	Stayed the same	Don't know	Notes
Women participation in the intervention (participation in decision making and participation in artesian well management)					
Access to information and technology					
Access to land					
Agroforestry benefits					
Other: Conflict					

3.1 Participation

3.1.1 Find out about women's involvement in the project. You can use the following questions

- What were the roles of men and women in project implementation? (e.g. did women only take part in product harvesting, or did they also play a role in plant maintenance, planting, harvesting and product selling?)

3.2 Access

3.2.1 Has women's access to information increased? (climate change, deforestation, etc.)

3.2.2 Has women's access to technology increased?

3.2.3 Look for any information about local rules on land access. You can use the following questions:

- Are there any rules that govern access to land?
- Do women have rights to own land in this village? In what way?

3.2.4 Are there any local rules that govern community (also women's) access to forest/tree products?

3.3 Benefit

3.3.1 Find out about the benefits of the agroforestry project in terms of household income or other household needs. You can use the following questions:

- Do the agroforestry products increase household income?
- Is this agroforestry income your main household income or additional income for the household?
- Have the agroforestry products been utilized for other household uses, like firewood, family consumption or building materials?

3.3.2 Find out about the benefits and management of the agroforestry for women specifically. You can use the following questions:

- a. Do women perceive the agroforestry trees to be important? What are the benefits of the agroforestry trees?
- b. Do men share the income from the trees with their wives?
- c. Are women able to make independent decisions over the use of money derived from the trees?

3.4 Control

3.4.1 Find out about any changes in participation between men and women in terms of household or community decision making. You can use the following questions:

- a. Are women able to make independent decisions regarding land management?
- b. Did women take part in the decision making about the tree species for the agroforestry project?

Annex 8 Focus group discussion (FGD) questionnaire: Climate change mitigation (agroforestry project)

GUIDELINES FOR FOCUS GROUP DISCUSSION ACTIVITIES AT VILLAGE LEVEL

A study on the development of climate change adaptation indicators that contribute to gender transformative change at a pilot site

Date/time	:
Interviewer	:
Time of interview	:

Province	:
Regency	:
District	:
Village	:
Group	:
Name	:
1.	
2.	
3.	
4.	
5.	

FGD consent

My name is [facilitator's name] and I am here with my coworker [name]. We are researchers from the Center for International Forestry Research (CIFOR) and we will guide this focus group discussion.

The aim of this research is to understand the impact of gender responsive climate change programs funded by state budget, one of which has been conducted here in this area. This information will be used to inform the government both at regional and national level to encourage an increase in the budget allocated for the program. This research also aims to provide a guideline for gender responsive climate change programs at subnational level and lesson learned to inform other similar programs.

We have obtained a research permit from _____ and we will conduct [number] _____ FGD(s) in [number] _____ village(s).

Your participation is voluntary and we hope that all participants can freely express their opinions as well as respect other different views. We hope to have full participation from all of you, but you are also allowed to leave the discussion under certain conditions. You can refuse to answer the question or ask questions of us.

Your identity will not be revealed, and your responses will be treated as anonymous. All answers from this discussion will be kept and analyzed without violating your privacy. We will give our number to all of you and you can call us if you need any further information after the discussion. Before we proceed, we will be happy to answer any questions you may have now.

1. INFORMATION ON GENDER-BASED PARTICIPATION

Gender-based question

- We will look in more detail at changes in the participation, access, benefits and control, of women and men before and after the agroforestry project.
- These questions should be asked to men and women separately.
- Put the results in the table below.

Indicator	Increased	Decreased	Stayed the same	Don't know	Notes
Women participation in the intervention (participation in decision making and participation in artesian well management)					
Access to information and technology					
Access to land					
Agroforestry benefits					
Other: Conflict					

1.1 Participation

- 1.1.1 Find out information about women's involvement in the project. You can use the following questions:
- What were the roles of men and women in project implementation? (e.g. did women only take part in product harvesting, or did they also play a role in plant maintenance, planting, harvesting and product selling?)
 - Was there any difference in the level of participation between women and men in the project? (e.g. women only participated in the implementation, whereas men participated in all stages of the project, from planning to evaluation?)

1.2 Access

- 1.2.1 Has women's access to information increased? (climate change, deforestation, etc.)
- 1.2.2 Has women's access to technology increased?
- 1.2.3 Look for any information about local rules on land access. You can use the following questions:
- Are there any rules that govern access to land?
 - Do women have rights to own land in this village? In what way?
- 1.2.4 Are there any local rules that govern community (also women's) access to forest/tree products?

1.3 Benefit

- 1.3.1 Find out about the benefits of agroforestry project in terms of household income or other household needs. You can use the following questions:
- Do the agroforestry products increase household income?
 - Is the agroforestry income seen as the main income or additional income for the household?
 - Have the agroforestry products been utilized for other household uses, such as firewood, family consumption or building materials?
- 1.3.2 Find out about the benefits and management of the agroforestry for women specifically. You can use the following questions:
- Do women perceive the agroforestry trees to be important? What are the benefits of the agroforestry trees?
 - Do men share the income from the trees with their wives?
 - Are the women able to make independent decisions over the uses of money derived from the trees?

1.4 Control

1.4.1 Find out about any change in participation between men and women in household or community decision making. You can use the following questions:

- a. Are the women able to make independent decisions about land management?
- b. Did women take part in the decision making about tree species for the agroforestry project?

2. GENDER TRANSFORMATIVE CHANGE INDICATORS

- This activity is intended to collect information on any gender-transformative changes that have occurred as a result of the agroforestry program.
- We will look in detail at gender transformative change indicators relating to power dimensions (power over, power with, power to, power within) and domain empowerment (agency, relations, structures)

POWER OVER

Indicators	Domain empowerment
a. Income and labor	<p>Agency:</p> <ul style="list-style-type: none"> • Do women have the ability to make large and small purchases independently? • Do women evaluate their economic contribution positively? • Do women have the capacity to negotiate in markets, especially negotiating prices? <p>Relations:</p> <ul style="list-style-type: none"> • Do men/women have control over income generated through other household productive activities? • Do men/women have control over labor allocation? • Have men/women seen any changes in time use in selected activities? e.g. greater sharing of unpaid housework or childcare, among household members? • Do men/women negotiate together within the marketplace, household or village? • Were the tasks women were involved in as part of this project completed independently or in a group? <p>If women's involvement in the project was more group-based than individual, please ask the following questions:</p> <ul style="list-style-type: none"> • Did the women's group(s) help each other or work independently? • Did involvement of the women's group(s) in this project help strengthen the institutions? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any gender wage differentials? • Are there any cultural restrictions in terms of the nature of women's (and men's) professions? • Is there any recognition of the equal value of care work and subsistence work? • Is there any representation and remuneration at different levels of the value chain, disaggregated by sex? • Are men/women in leadership positions in economic collectives, cooperatives?

Indicators	Domain empowerment
b. Control over assets	<p>Agency:</p> <ul style="list-style-type: none"> • Are men/women able to claim the outputs and income produced by the asset? <p>Relations:</p> <ul style="list-style-type: none"> • What is the proportion of women to men, in terms of access to those assets (physical, social, economic) that are key to resiliency? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any gender rules governing access to productive assets and markets? • What are the de facto rights to inherit assets from others, through sale, gift or inheritance?
c. Control over one's mobility and body	<p>Agency:</p> <ul style="list-style-type: none"> • Are men/women able to go out alone; freedom of movement? • Are women able to visit friends, family and associates? <p>Relations:</p> <ul style="list-style-type: none"> • Are the attitudes and practices of boys toward girls respectful (i.e. are they discouraged from harassment, etc)? <p>Structures:</p> <ul style="list-style-type: none"> • How does the mobility of women within and outside their place of residence compare to that of men? • What are the attitudes toward women's freedom of movement?
d. Control over the agenda	<p>Agency:</p> <ul style="list-style-type: none"> • Does the activity build awareness around the main local public service decision makers? • Are men/women willing to be involved in communal decision making? • Are men/women comfortable speaking out in public? <p>Relations:</p> <ul style="list-style-type: none"> • Are there any support networks among female officials, entrepreneurs, leaders, etc? • How much do men/women influence community decision-making processes? • Has there been any increase in terms of participation in community organizations? <p>Structures:</p> <ul style="list-style-type: none"> • Are women represented among service providers and traditionally male-dominated committees (e.g. extension services)? • Are women perceived to be capable in public positions or decisions? • Are women accepted when public speaking?
POWER WITH	
Indicators	Domain empowerment
Collective agency and action	<p>Agency:</p> <ul style="list-style-type: none"> • Do women perceive their interests to be represented? • Does this activity support the group to achieve its current and future objectives? • Does the activity create any expansion of group ambitions; actions initiated by groups? • Do men/women participate in political matters (protests, campaigning)? <p>Relations:</p> <ul style="list-style-type: none"> • Has there been any improvement in the group's 'value' e.g. cohesion, trust and inclusivity? • Is representation and leadership diverse? • Is the group's leadership effective? • Has there been any evolution of group rules and law? <p>Structures:</p> <ul style="list-style-type: none"> • Are men/women able to influence local and social political bodies? • Are there any rules governing membership for men/women in communal organizations? • Has the group become more visible in the community? • Are there any grievance mechanisms where the questions, complaints and requests of women are discussed by the village council?

POWER TO

Indicators	Domain empowerment
Knowledge and skills, awareness and conscientization (Capacity, skills and awareness)	<p>Agency:</p> <ul style="list-style-type: none"> • Has any knowledge of cultural, legal and political processes been gained? • Do men/women feel confident in communicating? • Are women literate and do they have access to a broad range of educational options? • Are women aware of their rights and do they practice those rights? <p>Relations:</p> <ul style="list-style-type: none"> • Are men/women committed to educating their daughters? • Do other family members support women in the completion of domestic chores, so that women are able to exercise their rights outside of the home? • Have any gaps reduced in men's and women's livelihoods and entrepreneurial and business skills? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any sex differences in access to information and services (such as extension services) or education? • Does the activity provide the same level of training or networking for local women, compared to men? • Is there any systemic acceptance of women's entitlement and inclusion?

POWER WITHIN

Indicators	Domain empowerment
Internal and psychological resources	<p>Agency:</p> <ul style="list-style-type: none"> • Has the activity contributed to any changes in your life? e.g. self-esteem, self-efficacy and psychological well-being? • Has there been any improvement in your assertiveness and autonomy? • Do men/women feel appreciated in the household, i.e. do they have a sense of self-worth? <p>Relations:</p> <ul style="list-style-type: none"> • Has the activity contributed anything to you in terms of supportive household relations and domestic support for exercising rights? • Has the activity contributed to a collective awareness of injustice and potential for mobilization? • Do men/women have the ability to change things collectively in the community? <p>Structures:</p> <ul style="list-style-type: none"> • Is there any level of interaction or sociability between people from different social groups? • Is the activity perceived as a group accomplishment?

Continued on next page

Report from the FGD process

Data

Name of facilitator

Time: (start/finish)

Note taker:

Village/district:

Discussion group:
(Men/women/old/young)

Notes

The most difficult discussion topic (i.e. the one that takes the longest time and participants' energy)?

How does the group reach a consensus (difficult/easy)? Explain.

Do participants understand their rights? Explain.

Write the most interesting quote from the discussion.

Are there any unexpected findings?

Is there any spontaneous discussion which is still relevant to the FGD topic during break time or after the FGD ends?

Any prominent problem(s) or interesting observations arising from the FGD process?

Annex 9 Key informant interview questionnaire: Climate change adaptation (artesian well program)

GUIDELINES FOR IN-DEPTH KEY INFORMANT INTERVIEWS AT VILLAGE LEVEL

A study on the development of climate change adaptation indicators that contribute to gender transformative change at a pilot site

Date/time	:
Interviewer	:
Time of interview	:

Province	:
Regency	:
District	:
Village	:
Name/age	:
Gender	:

These guidelines aim to provide suggestions on how to do an interview with a key informant at village or community level. Please use other tools to interview a key informant at national or subnational level.

The objective of the key informant interview is to gather information and experience, at individual or community level, on the implementation and results of the agroforestry program. Interviews can be conducted individually. All questions are open-ended and the interviewer should be able to probe respondents' knowledge, information and experience in specific matters.

This interview should be completed according to the time availability of the respondent. Please allow the respondent some time to decide the best time for the interview. This flexibility is important so as to allow for the interviewee to be more comfortable during the interview process.

Interview consent

Please introduce yourself as an interviewer and mention the following statement: We're doing an interview using a questionnaire developed by CIFOR. We're doing a research project on "leveraging climate change for gender equality and poverty reduction". This interview will contribute to the development of climate change adaptation and mitigation indicators that contribute to gender transformation on the ground. The interview will take around one hour. We will use this information for our research. Your identity will not be revealed, and your responses will be treated as anonymous.

Are you willing to be interviewed?

- Yes
- No

1. GENERAL INFORMATION

- 1.1 Role in the village (e.g. village head) and role in the village association
- 1.2 Marital status (single, married, widowed)
- 1.3 Highest level of education
- 1.4 Income
- 1.5 Knowledge about the funding for the program: do you know who funded the program? Where did you get that information?
 - a. From the extension worker
 - b. Neighbor
 - c. Project meeting
 - d. Other?
- 1.6 How was the money used by the local community?

2. CLIMATE CHANGE INTERVENTION

Assessment of the artesian well project as a climate change adaptation initiative

- This activity is aimed at gathering information about the artesian well project as a means of increasing the community's adaptive capacity to face climate change.
 - The purpose of this interview is to discuss the artesian well project and its benefits. Our focus is on the transformation of certain aspects, before and after the project.
 - Detailed information will be asked in relation to the artesian well project, including climate hazards and the adaptive capacity of local people, local knowledge on climate change, and community participation (both men and women) in the project.
- 2.1 Ask the informant to tell the story of the artesian well project. You can use the following questions:
 - 2.1.1 How were decisions about the intervention made? Were decisions made only by the village head and few men, or was a representative of women involved?
 - 2.1.2 If women had money, would they prefer to spend it on something else (maternity, domestic needs) or would they still choose to build the well?
 - 2.1.3 When did the intervention start?
 - 2.1.4 What was the objective of the intervention?
 - 2.1.5 Where did you get water before? (probe: what happened to the water source? Was it diminished by climate (drought) or was it due to other causes, for example, providing water for a hotel, etc?)
 - 2.1.6 How is water managed?
 - 2.2 Ask the informant about their perception of climate hazards. You can use the following questions:
 - 2.2.1 Do you experience extreme weather such as prolonged droughts/flooding as a result of changes in rain pattern?
 - 2.2.2 Which group/s suffer more from these hazards? Why?
 - 2.2.3 How do you cope with this?
 - a. By using other sources of water (natural capital)
 - b. By getting help from others (social capital)
 - c. By moving to other places (physical capital)
 - d. By buying water using money borrowed from someone (financial capital)
 - e. By practicing traditional rituals (human capital)

Note: understanding on the local community's customs or traditions in facing climate change could help predict past climate conditions in the region. E.g. if they traditionally ask for rain, the climate in the region might be dry.
 - 2.3 Dig into key informants' knowledge on climate change. You can use the following questions:
 - 2.3.1 Have you ever heard about climate change?

- 2.3.2 Have you experienced any changes in rain patterns/droughts over the past five years? (probe: What has the rain pattern and frequency been? Did it used to be more wet or dry? Has the region experienced intense rain over a short period of time, etc.?)
- 2.3.3 Have you seen any change in the landscape? For instance, the numbers of wildlife decreasing or many trees dying.
- 2.4 Dig into key informants' knowledge on actors who supported the project. You can use the following questions:
- 2.4.1 What support did you get from the intervention?
- 2.4.2 What benefits do you get from the intervention?
- 2.5 Ask about the adaptive capacity of the local community. You can use the following questions:
- 2.5.1 Did the intervention help the local community to adapt to droughts better? Who in the family adapted better, and why?
- 2.5.2 Did the intervention take into account the needs of more vulnerable groups and different economic conditions (social classes) in the community?
- 2.5.3 Did all of the people who would be impacted by the intervention, agreed to the decision?
- 2.6 Food security
- 2.6.1 Where did you used to get water for agriculture?
- 2.6.2 Have you experienced food/water scarcity because of droughts?
- 2.6.3 In the past 5-10 years, what have the impacts of drought been on the water used for agriculture?
- 2.6.4 How do you cope with that? Changing practice (looking for suitable species), changing occupation from farming to something else, borrowing money from others, etc.

3. INFORMATION ON GENDER-BASED PARTICIPATION

Gender-based questions

- We will look in more detail at any changes in participation, access, benefits and control, of women and men, before and after the agroforestry project.
- These questions should be asked to men and women separately.
- Put the results in the table below.

Indicator	Increased	Decreased	Stayed the same	Don't know	Notes
Women participation in the intervention (participation in decision making and participation in artesian well management)					
Access to information and technology					
Access to land and water					
Benefit of the artesian well in terms of the income/ decrease in spending					
Other: Conflict Vulnerable group condition (women and children)					

3.1 Participation

- 3.1.1 Find out about women's involvement in the project. You can use the following questions:
- What work was done by men and women during project?
 - Are there any differences in terms of women's and men's participation at certain stages of the project? (e.g. men involved in all stages of the project from planning to evaluation whereas women only involved during implementation)

3.2 Access

- 3.2.1 Do women/men have access to information? What kind of information do men and women seek out?
- 3.2.2 Do women have access to technology? What do they use the technology for?
- 3.2.3 Are there any local rules which govern land and water access?
- How is water distributed from the well?
If the water is manually distributed (without pipe)
 - Is there any schedule for water collection? Are women/men able to collect water at any time?
 - If the water is distributed by pipe
 - How many households own a pipe? Why?
 - Who provides the pipeline?
 - Are there any problems in distributing the water?
 - Is any budget provided for pipe maintenance? Who provides the budget?
 - Are there any problems with the artesian well water? (e.g. a need to dig deeper, insufficient water, etc.)

3.3 Benefits

- 3.3.1 Find out about the benefits of artesian well in terms of household income or spending. You can use the following questions:
- Does the artesian well water increase income/decrease spending on certain things?
 - What do you use the water for? Domestic purposes (clean water and sanitation); irrigation; cattle?
 - If the water from artesian well was intended only for specific uses, does everyone obey the rules? Are there sanctions?
- 3.3.2 Find out about the benefits of artesian well for women specifically. You can use the following questions:
- Do women perceive the artesian well to be useful? What kind of benefits are obtained from the artesian well?
 - Is any income derived from the well? And do men share the income with women?

3.4 Control

- 3.4.1 Find out about any changes in participation between men and women in household or community decision making. You can use the following questions:
- Do women make independent decisions on spending money?
 - Do women make independent decisions over the water management?
 - Did women participate in decision making about the artesian well?

3.5 Health and water quality

- 3.5.1 Find out about health and the water quality of the artesian well. If the water quality is bad, it can be assumed that the community could adapt to climate change, but have to increase their spending on public health. You can use the following questions:
- What was the water quality like before the project? What is the quality of water from the artesian well?
 - Does the water increase quality of life and health? If yes, why? If no, what are the problems? (e.g. the water makes people sick, etc)
 - Which vulnerable groups are most impacted by the water quality? Why?

Annex 10 Focus group discussion (FGD) questionnaire: Climate change adaptation (artesian well project)

GUIDELINES FOR FOCUS GROUP DISCUSSION ACTIVITIES AT VILLAGE LEVEL

A study on the development of climate change adaptation indicators that contribute to gender transformative change at a pilot site

Date/time	:
Interviewer	:
Time of interview	:

Province	:
Regency	:
District	:
Village	:
Group	:
Name	:
1.	
2.	
3.	
4.	
5.	

FGD consent

My name is [facilitator's name] and I am here with my coworker [name]. We are researchers from the Center for International Forestry Research (CIFOR) and we will guide this focus group discussion.

The aim of this research is to understand the impact of gender responsive climate change programs funded by state budget, one of which has been conducted here in this area. This information will be used to inform the government both at regional and national level, to encourage an increase in the budget allocated for the program. This research also aims to provide guidelines for gender responsive climate change programs at subnational level and lesson learned to inform other similar programs.

We have obtained a research permit from _____ and we will conduct [number] _____ FGD(s) in [number] _____ village(s)

Your participation is voluntary and we hope that all participants can freely express their opinions as well as respect others' views. We hope to have full participation from all of you, but you are also allowed to leave the discussion under certain conditions. You can refuse to answer questions and ask questions of us.

Your identity will not be revealed, and your responses will be treated as anonymous. All answers from this discussion will be kept and analyzed without violating your privacy. We will give our number to all of you and you can call us if you need any further information after the discussion. Before we proceed, we will be happy to answer any questions you may have now.

1. GENDER-BASED QUESTIONS

- We will look in more detail at changes in the participation, access, benefits and control, of women and men, before and after the artesian well project.
- These questions should be asked to men and women separately.
- Put the results in the table below.

Indicator	Increased	Decreased	Stayed the same	Don't know	Notes
Women participation in the intervention (participation in decision making and participation in artesian well management)					
Access to information and technology					
Access to land and water					
Benefits of the artesian well in terms of income/ decreased spending					
Other: Conflict Vulnerable group condition (women and children)					

1.1 Participation

- 1.1.1 Women's participation in the intervention
- What tasks were done by men and women during the project?
 - Was there any difference in terms of women's and men's participation at certain stages of the program? (e.g. men involved in all stages of the project from planning to evaluation, whereas women only involved during implementation)

1.2 Access

- 1.2.1 Do women/men have access to information? What kind of information do men and women seek out?
- 1.2.2 Do women have access to technology? What do they use the technology for?
- 1.2.3 Are there any local rules which govern land and water access?
- How is water distributed from the well?
If the water is manually distributed (without pipe)
 - Is there any schedule for water collection? Are women/men able to collect water at any time?
 If water is distributed by pipe
 - How many households own a pipe? Why?
 - Who provides the pipeline?
 - Are there any problems in distributing the water?
 - Is any budget provided for pipe maintenance? Who provides the budget?
 - Are there any problems with the artesian well water? (e.g. a need to dig deeper, insufficient water, etc.)
 - Can women own land here?

1.3 Benefit

- 1.3.1 Benefits of the project in terms of household income/other benefits
- Can the water from the artesian well increase the income/decrease the spending on certain things?

- b. What do you use the water for? Domestic purposes (clean water and sanitation), irrigation, cattle?
 - c. If artesian well water was intended only for specific uses, does everyone obey the rules? Are there sanctions?
- 1.3.2 Benefits of the project for women
- a. Do women perceive the artesian well to be useful? What kind of benefits are obtained from the artesian well?
 - b. Is any income derived from the well? And do men share this income with women?

1.4 Control

1.4.1 Women in decision making

- a. Are women able to make independent decisions on spending the well water-derived income?
- b. Are women able to make independent decisions about water management?
- c. Did women participate in decision making about the artesian well?

1.5 Health and water quality

1.5.1 Information about health and water quality

- a. What was the water quality like before? And what is the quality of water from the artesian well like?
- b. Does the water increase quality of life and health? If yes, why? If no, what are the problems? (e.g. the water makes people sick, etc)
- c. Which vulnerable groups are most impacted by the water quality? Why?

2. GENDER TRANSFORMATIVE CHANGE INDICATORS¹

- This activity is intended to collect information on any gender-transformative changes that have occurred as a result of the artesian well program.
- We will look in detail at gender transformative change indicators relating to power dimensions (power over, power with, power to, power within) and domain empowerment (agency, relations, structures)

¹ It is important to distinguish between programs using a 'gender transformative' approach and those that use more conventional 'gender accommodating' approaches (which tend to focus on women's empowerment). Programs focused on empowering women often "increase women's ability to achieve specific changes in their behavior or access ... [but] do not necessarily change the social order that gives rise to women's disadvantage" (Greene and Levack 2010, 5). While these 'gender accommodating' programs "merely acknowledge or mention gender norms and roles" (Barker 2007), 'gender transformative' programs directly work to change the social order, or the underlying factors that give rise to disparities among men and women (Greene and Levack 2010, 5).

POWER OVER

Indicators	Domain empowerment
a. Income and labor ²	<p>Agency:</p> <ul style="list-style-type: none"> • Are women able to make large and small purchase independently? • Do women evaluate their economic contribution positively? • Are women able to negotiate in markets, especially in terms of negotiating prices? <p>Relations:</p> <ul style="list-style-type: none"> • Do men/women control the income generated through other household productive activities? • Do men/women control labor allocation? • Have men/women seen any changes in time use in selected activities? e.g. greater sharing of unpaid housework or childcare, among household members? • Do men/women negotiate together within the marketplace, household or village? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any gender-based wage differentials? • Are there any cultural restrictions on the nature of women's (and men's) professions? • Is there any recognition of the equal value of care work and subsistence work? • Is there any representation and remuneration at different levels of the value chain, disaggregated by sex? • Are men/women in leadership roles in economic collectives, cooperatives?
b. Control over assets	<p>Agency</p> <ul style="list-style-type: none"> • Are men/women able to claim the outputs and income produced by the asset? <p>Relations:</p> <ul style="list-style-type: none"> • What is the proportion of women to men with access to those assets (physical, social, economic) that are key to resiliency? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any gender rules governing access to productive assets and markets? • What are the de facto rights to inherit assets from others via sale, gift or inheritance?
c. Control over one's mobility and body	<p>Agency:</p> <ul style="list-style-type: none"> • Are men/women able to go out alone; do they have freedom of movement? • Are women able to visit friends, family and associates? <p>Relations:</p> <ul style="list-style-type: none"> • Are attitudes and practices of boys toward girls respectful (i.e. are they discouraged from harassment, etc)? <p>Structures:</p> <ul style="list-style-type: none"> • How does the mobility of women within and outside their place of residence compare to that of men? • What are the attitudes toward women's freedom of movement?
d. Control over the agenda	<p>Agency:</p> <ul style="list-style-type: none"> • Does the activity build awareness of the main local public service decision makers? • Are men/women willing to be involved in communal decision making? • Are men/women comfortable speaking out in public? <p>Relations:</p> <ul style="list-style-type: none"> • Are there any support networks for female officials, entrepreneurs, leaders, etc.? • How much do men/women influence community decision-making processes? • Has there been any increase in participation in community organizations? <p>Structures:</p> <ul style="list-style-type: none"> • Are women represented among service providers and traditionally male-dominated committees (e.g. extension services)? • Are women perceived to be capable in public positions or decisions? • Are women accepted when public speaking?

2 The time and effort provided by household members (https://fbe.unimelb.edu.au/__data/assets/pdf_file/0009/805995/759.pdf)

POWER WITH

Indicators	Domain empowerment
Collective agency and action	<p>Agency:</p> <ul style="list-style-type: none"> • Do women perceive their interests to be represented? • Does this activity support the group to achieve its current and future objectives? • Does this activity expand the group's ambitions; have any actions been initiated by the group? • Do men/women participate in political matters (protests, campaigning)? <p>Relations:</p> <ul style="list-style-type: none"> • Has there been any improvement in terms of group 'value' e.g. cohesion, trust and inclusivity? • Is representation and leadership diverse? • Is group leadership effective? • Has there been any evolution of group rules and law? <p>Structures:</p> <ul style="list-style-type: none"> • Are men/women able to influence local and social political bodies? • Are there any rules governing membership for men/women in communal organizations? • Has the group become more visible in the community? • Are there any grievance mechanisms where the questions, complaints and requests of women are discussed by the village council?

POWER TO

Indicators	Domain empowerment
Knowledge and skills, awareness and conscientization (Capacity, skills and awareness)	<p>Agency:</p> <ul style="list-style-type: none"> • Has any knowledge of cultural, legal and political processes been gained? • Do men/women feel confident in communicating? • Are women literate and do they have access to a broad range of educational options? • Are women aware of their rights and do they practice those rights? <p>Relations:</p> <ul style="list-style-type: none"> • Are men/women committed to educating their daughters? • Do other family members support women in the completion of domestic chores, so that women are able to exercise their rights outside of the home? • Have any gaps reduced in men's and women's livelihoods and entrepreneurial and business skills? <p>Structures:</p> <ul style="list-style-type: none"> • Are there any sex differences in access to information and services (such as extension services) or education? • Does the activity provide the same level of training or networking for local women, compared to men? • Is there any systemic acceptance of women's entitlement and inclusion?

Continued on next page

POWER WITHIN

Indicators	Domain empowerment
Internal and psychological resources	<p>Agency:</p> <ul style="list-style-type: none"> • Has the activity contributed to any changes in your life? e.g. self-esteem, self-efficacy and psychological well-being? • Has there been any improvement in your assertiveness and autonomy? • Do men/women feel appreciated in the household, i.e. do they have a sense of self-worth? <p>Relations:</p> <ul style="list-style-type: none"> • Has the activity contributed anything to you in terms of supportive household relations and domestic support so you can exercise your rights? • Has the activity contributed to a collective awareness of injustice and potential for mobilization? • Do men/women have the ability to change things collectively in the community? <p>Structures:</p> <ul style="list-style-type: none"> • Is there any level of interaction or sociability between people from different social groups? • Is the activity perceived as a group accomplishment?

Report from the FGD process

Data

Name of facilitator

Time: (start/finish)

Note taker:

Village/district:

Discussion group: (Men/women/old/young)

Notes

The most difficult discussion topic (i.e. the one that takes the longest time and participants' energy)?

How does the group reach a consensus (difficult/easy)? Explain.

Do participants understand their rights? Explain.

Write the most interesting quote from the discussion.

Are there any unexpected findings?

Is there any spontaneous discussion which is still relevant to the FGD topic during break time or after the FGD ends?

Any prominent problem(s) or interesting observations arising from the FGD process?

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Annex 11 Gender Transformative Change in the climate change mitigation program (agroforestry intervention)

	AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
POWER WITH								
Collective agency and action	Women's perception that their interests are represented	Most women in the three villages were not involved in the decision making about agroforestry. Women in one village did say that at the time husbands discussed the agroforestry species with their wives and the women used this opportunity to request certain species. However, a focus group discussion with the men's group in Site 2 revealed that species chosen for the agroforestry program were requested by the men. Women usually agree on any decision made. Women who attended the forum also agreed on the decisions made and stayed silent throughout the meeting		Group cohesion, trust and inclusivity	There was no increase of group 'value' as implementation was done individually. The farmer's group only distributed support from the government	Influence with local and social political bodies	There were no differences between men and women, neither had any political influence	
	Perceived group accomplishments and future expected accomplishments	The agroforestry program was coordinated by a farmer's group, but implementation was carried out by individuals		Diversity of representation and leadership	There were no rules or sanctions imposed for this program. The most crucial thing was to plant the seedlings provided	Rules governing membership in communal organizations	There were no rules regarding membership. Involvement in the program depended on whether the land fell within the initial agroforestry plot design	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Expansion of group ambitions; actions initiated by groups	No further action had been taken by the groups in any of the villages		Effectiveness of group leadership	The group leadership was perceived by most of our respondents in all three villages as effective. Through the farmers' groups, farmers receive valuable knowledge on agroforestry	Women's questions, complaints and requests heard by the village council (grievance mechanism)	Ideally, any complaint or question would be addressed directly to the farmer's group leader, however if a technical problem appeared, farmers tried to find solutions themselves.	
Political participation (protests, campaigning)	There were no differences between men and women in terms of their participation in politics. Women usually chose the same candidates as their husbands. There were also cases where husband and wife chose different candidates based on kinship; usually candidates were family members		Evolution of group rules and law	There were no rules or sanctions imposed for this program. The most crucial thing was to plant the seedlings provided			
POWER TO							
Knowledge and skills, awareness	Knowledge of cultural, legal and political processes	"In the Javanese agricultural calendar, we're used to following pranata wangsa. However, there has been a change of the wangsa over the last three years – it's slowly becoming inaccurate"	Commitment to educating daughters	"I am committed to educating my children, regardless of gender. But they don't want to pursue education and so I preferred to give up and save the money for other important things."	Sex differences in access to information and services (such as extension services) or education	Both men and women were able to access information but the kind of information they sought was different	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Assertive communication (most admitted they were more confident communicating with people they usually interact with, but not with new people)	Respondents argued that men were more confident in communication as they're used to it. Most of the time, women feel less confident communicating with new people (according to the men's group)		Domestic support for women so they can exercise their rights	There was no support regarding domestic work. All domestic chores were done by women. If they were tired or had urgent things to do, they stopped and continued cleaning/ cooking later. In some cases though, men helped with domestic work	Extent of training or networking among local women, as compared to men	No training was provided for women in the agroforestry program	
Women's literacy and access to a broad range of educational options	Children (boys/girls) have the right to decide which school to go to. For respondents, their children's abilities and desire to pursue education or not was seen to be more important than the parent's ambition to send their kids to school or not		Reduced gaps in men's and women's livelihoods and entrepreneurial and business skills	"In the past, people in this village depended only on farming. Now as there's increase in access to technology, women can also do another job (online business) or can get knowledge from the internet themselves"	Systemic acceptance of women's entitlement and inclusion	Women's involvement in the program related to their ownership of the land. If the land fell into the agroforestry design, then they were targeted for the program	
Women's awareness of their rights and practice of these rights	Some women were aware of how to look for information themselves. For instance, they'd ask other people about agriculture-related information. Others depended on their husbands to look for information (according to the women's group)						

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	AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
POWER WITHIN								
Internal psychological and resources	Self-esteem, self-efficacy and psychological wellbeing	The agroforestry program did not contribute to any increases in confidence or welfare for either gender		Supportive household relations; domestic support so women could exercise their rights	Most of the women did agricultural work (helping their husbands in the garden) as well as being responsible for domestic work	Level of interaction and sociability with people from different social groups	N/A	
	Assertiveness and autonomy	According to the focus group discussion with the men's group in one village, the program may contribute to women's autonomy (the state of being independent financially) when the trees start producing fruits. The agroforestry program could equally contribute to men's autonomy by providing tree species to be managed, while women could take part in managing money generated from the sale of fruits. For Site 3 specifically, no income was expected to be derived from the agroforestry program		Collective awareness of injustice and potential for mobilization	N/A	Perceived group accomplishments	Implementation of the agroforestry project was done individually. However, the achievements of each individual were seen as a group achievement.	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Appreciation in household; sense of self-worth	For some respondents, respect in the husband-wife relationship was when the wife obeyed the husband, spoke in a nice and polite way and always provided meals and drinks for the family. For others, there was mutual respect and a belief that husbands and wives should support each other (according to the men's group)	"Respect is when men ask for something, and women help. Respect is also about having open and good communication with husbands" (according to the women's group)	Perceived ability to change things collectively in the community	In one village, both men and women were involved in the implementation of agroforestry program. The program was carried out on degraded land owned by some farmers. Both men and women tried their best to maintain the results they achieved through the program. In another village, changes and improvements were pursued by the farmer's group leader. He actively encouraged the farmers to plant trees, and find out about conservation and what farmers can do			

Annex 12 Gender Transformative Change in the climate change adaptation program (artesian well intervention)

	AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
POWER OVER								
Income and labor	Ability to make large and small purchase independently	Women can make small purchases independently but need to ask their husband's permission for expensive items		Control over income generated through other household productive activities	Some women had full access to any income earned by their husband, but needed to communicate about spending with their husbands. Respondents who were not married or widowed had full control over their own income	Gender wage differentials	"Men are paid more because they're stronger. Even though they have longer break times than women" Some even said, "men receive more just because they were born men."	
	Women's positive evaluation of their economic contribution	Women were allowed to work outside of the home but still needed to prioritize the family and domestic chores		Control over labor allocation (men: subsistence; women: subsistence and household)	Women prioritized domestic tasks. They finished cleaning the house, preparing food for the family, bathing the kids, then they tended to their own business (meetings, working in the field, etc.)	Cultural restrictions on the nature of women's (and men's) professions	Women were able to do 'men's' work but within that work, there were differences between what men and women were doing. "I can also dig the soil, hoeing, but maybe men can do it better."	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Capacity to negotiate in markets	Women were seen as the experts in bargaining at markets. One of the male respondents said, "Women bargain because they realize how important the goods are for her (family and domestic life)." At village level, women also participated in discussions, for instance in RPJMD meetings (medium-term village planning)		Changes in time use in selected activities, particularly greater sharing by household members of unpaid housework and childcare	There were no changes in time use for selected activities. There were only gendered divisions in the work	Recognition of the equal value of care work and subsistence work; representation and remuneration at different levels of the value chain, disaggregated by sex	Respondents said that both categories were important. But as caring work was a "woman's responsibility", they must prioritize care work before anything else	
			Women's collective negotiation within the marketplace	Women commonly bargain in the market. One respondent said, "I walk away from my wife when she bargains, she asks for a much lower price than the initial price". Another said, "I don't dare to do that" or "a woman bargains because she and her family need the goods but they want a lower price".	Leadership in economic collectives, cooperatives (by sex)	If women had capacity to take up a position, then sex wasn't seen to matter. There were some organizations in which the members were all women, e.g. BUMDES, Posyandu or PKK	

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	AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
POWER OVER								
Assets	Ability to claim the outputs and income generated by the asset	All villagers were able to collect water regardless of gender. The activity of water collection was male-dominated, however.		Proportion of women to men with access to those assets (physical, social, economic) that are key to resiliency	Equal proportion. Although for houses far from the artesian well, men tend to collect the water.		No gendered rules regarding access to the water	
						De facto rights to inherit assets from others through sale, gift or inheritance	Land can be passed on from parents to their children, but men usually get more as per Islamic rules	
Control over one's mobility and body	Ability to go out alone; freedom of movement (within village and for the daily activities)	This was dependent on the activity. If it was related to daily errands, it was seen as fine. But if the travel was related to something specific such as a wedding or something else outside of the norm, women had to ask permission first. The focus group discussion with the women's group revealed that men can freely go anywhere		Respectful attitudes and practices of male children toward girls (discouraged from harassing)	"Children play together. Small fights happen sometimes, but not major ones"	Mobility of women within and outside their residential locality, as compared to men	"Women can go alone if they want to"	

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	AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
	Women's ability to visit friends, family and associates (for some women, they will be accompanied by their husband)	"We need to inform each other but we can visit friends or family ourselves"				Attitudes toward women's freedom of movement	"This depends on the way a woman is dressed. People here may be suspicious if she goes home late at night or is seen frequently outside during the night time"	
POWER OVER								
Agenda	Willingness to be involved in communal decision-making	If a group/issue relates to women, then women actively participate in the decision making, but in mixed groups, men still dominate the process and decision making		Support networks among female officials, entrepreneurs, leaders, etc.	Several training sessions had been held for women. Women farmers received training and support in planting from the agricultural agency. A company also came and gave a training on how to make ice cream	Representation of women among service providers and traditionally male-dominated committees (e.g. extension services)	Several women were working in village government offices. But there had been no female village head/sub-hamlet head led by a woman	
	Comfort with speaking out in public	"Sometimes I am shy talking in public, afraid of talking nonsense and being an embarrassment". Women agreed that the topic under discussion influenced their ability and confidence in public speaking. If the topic related to women's work, women don't mind talking about it		Scope of influence in community decision-making processes	Men and women have the same scope of influence only if they have the capacity to take part. Otherwise, they don't have the same scope of influence if they don't feel comfortable talking.	Perceptions of women's capabilities in public positions or decisions	"Men don't have problem with women's participation in group's decision making, especially if a woman has the capacity and knowledge to do it"	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
			Increased rate of participation in community organizations	The number of women participating in groups is increasing, perhaps because of the increase in access to education with more chances to meet other people	Acceptance of women's public speaking	Yes. The men said that they supported women who had better education and skills, including public speaking	

POWER WITH

Collective agency and action	Women's perception that their interests are represented	Women thought that the water provided by the artesian well was crucial	Group cohesion, trust and inclusivity	Participation in certain groups or associations could enhance one's confidence and access to information	Influence with local and social political bodies	There was no difference between men and women. They had no political influence	
	Perceived group accomplishments and future expected accomplishments	N/A	Diversity of representation and leadership	A male villager was assigned to look after the artesian well, switching on/off the pump. People made contributions to cover the fuel costs	Rules governing membership in communal organizations	Certain groups or associations were aimed only at women e.g. Posyandu or PKK.	
	Expansion of group ambitions; actions initiated by groups	A plan was in place to change the management of the artesian well to a PAMDES whereby water will be managed by the village government with a pipe distribution system installed.	Effectiveness of group leadership	There was room for improvement, especially in terms of well management: one person was not enough to handle the day-to-day technical operation of the well; it was also necessary to find budget for well maintenance	Women's questions, complaints and requests heard at village council (grievance mechanism)	When questions, complaints and requests relate to the artesian well, women can directly talk to the village head whenever there's a problem with it.	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Political participation (protests, campaigning)	"Husbands and wives choose the same candidate as sometimes the candidate is our relative. In regency/provincial elections, husbands and wives can have different choices."		Evolution of group rules and law	There are no rules or sanctions			
POWER TO							
Knowledge and skills, awareness	Knowledge of cultural, legal and political processes	When talking about climate change, the men's group understanding was that it was extreme weather. Women's understanding was that it was unpredictable weather that makes people sick	Commitment to educating daughters	"I don't want my kids to be a contract worker like me. They should live better lives."	Sex differences in access to information and services (such as extension services) or education	There was no difference in access, just that men and women sought out different information	
Assertive communication		Most respondents admitted they were more confident communicating with people they usually interact with but not with new people. Assertive communication was also dependent on the issue being discussed, or if respondents were communicating with the same gender	Domestic support so women could exercise their rights	No domestic support was available for women. Whenever they were required to go outside the home or had other work, they finish every domestic activity first: preparing food, sweeping, etc.	Extent of training or networking among local women, as compared to men	Training sessions had been held for women but not related to the artesian well project	

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AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Women's literacy and access to a broad range of educational options	Education options were decided together with the husband and the children		Reduced gaps in men's and women's livelihoods and entrepreneurial and business skills	Increased access to education, technology and training have increased women's capacity to do what they want; however some work is better done by certain genders (e.g. men: construction, hoeing)	Systemic acceptance of women's entitlement and inclusion		
Women's awareness of their rights and practice of these rights	In terms of practicing their rights (e.g. to education and information), women take the initiative to seek out information, especially to help their kids in school with their homework and studies						
POWER WITHIN							
Internal psychological and resources	Self-esteem, self-efficacy and psychological well being	"Confidence can be built when someone is involved in a group/association"	Supportive household relations; domestic support so women could exercise their rights	"Women have a lot on their plate. If they get mad, I better stay away for a little bit, afraid of saying something that might hurt her."	Level of interaction and sociability with people from different social groups	N/A	
	Assertiveness and autonomy	N/A	Collective awareness of injustice and potential for mobilization	N/A	Perceived group accomplishments	"The artesian well is the village's achievement"	

Continued on next page

AGENCY	Example	Contrasting opinion	RELATIONS	Example	STRUCTURE	Example	Contrasting opinion
Appreciation in household; sense of self-worth	<p>“There needs to be transparency in household relations. Women have to take care of their husband, their child. They need to educate their child well.”</p> <p>One of the male respondents admitted to spending more of his time in the cattle pen but he and other men in the group said that their wives don’t complain at all because the money earned is important for the family. (according to the men’s group)</p>	<p>“Women are responsible for taking care of their families, cleaning the house. Subsistence work is not necessary. Even if we had a job, our earnings would not be acknowledged by our husbands. They would be kept by us.” (according to the women’s group)</p>	Perceived ability to change things collectively in the community	N/A			

Annex 13 Gender Analysis Pathway: Access, benefit, control and participation in the climate change mitigation program (agroforestry intervention)

Criteria	Gender responsiveness
Access	There are no local rules governing access to land. For the agroforestry program, the lands targeted for the program were all individual lands. Women can own land by inheriting it from their parents.
Participation	In most of the villages, women participated only at implementation level In some cases (for example, when husbands had migrated out of the village), women would represent their husbands at meetings
Control	In the three villages <ul style="list-style-type: none"> • most of the women were able to make independent decisions when purchasing small things, including domestic goods. For big and expensive items, decisions were made together with their husbands • land management decisions were made by the husbands, although a few of the respondents also mentioned that women's opinions were also taken into account in decision making • decisions about tree species to be used in the agroforestry program were made by men although women, especially in Site 1, had an indirect influence on decision making
Benefits	<ul style="list-style-type: none"> • In Site 1, most respondents believed that there would be future benefits as a result of the agroforestry project. To date however, there had been no significant contribution to livelihood income. The agroforestry project location was prone to disasters like landslides, however, and many respondents also mentioned a decrease in the number of these disaster events since the program began • In Site 2, respondents also had positive perceptions over the future benefits the agroforestry project would bring • In Site 3, respondents believed that the agroforestry trees would not bring any economic benefits to the farmers. The orange trees were growing poorly whilst the eucalyptus trees were considered to have low economic value

Annex 14 Gender Analysis Pathway: Access, benefit, control and participation in the climate change adaptation program (artesian well intervention)

Criteria	Gender responsiveness
Access	<ul style="list-style-type: none"> • Access to the artesian well: everyone is welcome to collect and use the well water. The community relied on informal relationships, in which trust and cooperation govern the use of artesian well: community members are expected to pay more when using the water for a big event; for a specific purpose like water for cattle; or when they have more access to water due to a pipe installed • Access to land: most of the lands in the village are owned by men. They follow Islamic rules of inheritance, in which men receive more assets than women • Access to information and technology: both men and women have access to cellphones and the internet. There are some training sessions aimed at women (though these are not related to the program)
Participation	<ul style="list-style-type: none"> • Water is distributed in two ways: distribution pipe (five houses) and manual collection using containers • For those collecting water manually, the work was mostly done by men as it's considered to be a heavy job: "women can't do it."
Control	<ul style="list-style-type: none"> • Women's control over income varied depending on agreements within household: <ul style="list-style-type: none"> – Some men gave 100% of their income to their wives. These wives were able to spend this money on small things like domestic needs, children's snacks, etc – Other men saved part of their income for their own needs or other big expenditures like house renovations. Money kept by their wife could be used freely for small things • One of our female respondents said, "I am not the one who's working for the family, so I need to carefully use the money earned by my husband, keep track of spending and report to my husband afterwards." • Women dominate the use of water: cleaning, cooking, bathing the kids, etc. One of our respondents acknowledged that women were the most vulnerable group impacted by extreme droughts
Benefits	<ul style="list-style-type: none"> • No income was derived from the program, however spending on bottled water decreased
Health and water quality	<ul style="list-style-type: none"> • The community agreed that the water from artesian well was of good quality. Some of them drank the water without boiling it first • The artesian well gave the community a sense of security, as they still had access to clean water during droughts

Climate finance, gender and poverty are not stand-alone, independent topics. Climate change affects all people in different ways. Climate finance can catalyze actions that can either alleviate or exacerbate gender equity and poverty. Mechanisms that fund climate action should be designed to enable, rather than hinder marginalized populations, notably women and the poor, in facing climate change.

The study aims to understand climate finance for advancing gender equality and poverty reduction, by assessing different mechanisms: 1) the Village Fund (Dana Desa); 2) the Public Service Agency for Forest Development Financing Center (BLUP3H); 3) the Indonesia Climate Change Trust Fund (ICCTF); 4) the Special Allocation Fund (DAK); and 5) the Environmental Fund Management Agency (BPD-LH).

The study focuses on adaptation and mitigation climate action at sub- national, which include budget items tagged in the Indonesian Climate Budget Tagging system (CBT). We assess whether climate financial flows and climate actions contribute to long-term gender transformative change and pro-poor co-benefits on the ground. The sites include the agroforestry program of BPDASHL Serayu Opak Progo in Central Java and the artesian well program in Lombok.

Climate change-related adaptation and mitigation strategies have gender-differentiated impacts. In practice, implementation of pro-poor and gender-responsive climate finance is lagging behind. If the root causes of vulnerability are not taken into account, potential solutions could exacerbate the existing inequities while leaving the challenges of climate change unaddressed. There is growing evidence that equitable and gender responsive climate finance can enhance climate response efforts, while simultaneously promoting poverty reduction and gender equality.



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