



Links between Women's Land Tenure Security and Climate Action: An Evidence Brief

Women's land tenure security can help achieve climate change mitigation and adaptation through pathways involving long-term land investments, expanded range of response options, and more sustainable management of forest resources.

I. Introduction

Although existing evidence points to meaningful linkages between land tenure and climate change, findings can fail to critically consider whose land tenure security, decisions, and practices contribute to key climate change outcomes, and how. An IPCC special report highlights how land tenure insecurity can hamper behaviors that support sustainable rural development and resilience to shocks, including adoption of improved farming practices and long-term livelihood investments (IPCC, 2019). This body of research provides important insights into the potential for rural women's land tenure security (WLTS) to enhance climate-smart land use and investment decisions and access to related extension services, climate finance, and damage compensation.

Despite the potential of women's tenure security to support and accelerate climate action, prevailing gender inequalities and biases in formal and informal land tenure systems can exacerbate gender gaps in resilience and effectively limit women's voice and capacity to benefit from decision-making on land use-based adaptation and mitigation actions (Hurlbert et al., 2019). Gender inequalities in land tenure security exist due to discriminatory laws, inadequate implementation or enforcement of laws and policies, and social norms restricting women's rights to access, manage, inherit, transfer, and benefit from land (UN Women, 2018). These inequalities in aggregate increase women's vulnerability to the impacts of climate change.

Enhanced understanding of the complex and critical connections between women's land tenure security and climate can advance our knowledge of the investments and planning needed to mitigate climate

change and achieve more resilient futures. We reviewed empirical evidence about how women’s land tenure security affects climate change mitigation and adaptation, aiming to:

- Inform advocacy at the intersection of gender and climate justice, fostering a shared interest case for women’s land rights as an entry point to climate action.
- Guide the development of a more robust evidence base that can inform action-planning of states, civil society organizations and private sector entities to improve women’s land tenure security in climate change mitigation and adaptation programs and investments.

Focusing on rural areas of the Global South, we identified twenty-seven publications¹ to include in our review. To synthesize the findings from these publications, we developed a conceptual framework (described in Section II below) outlining 3 pathways through which improving WLTS could contribute to positive climate outcomes:

1. **Long-term land investments** e.g., reforestation, agroforestry, soil conservation techniques, flood barriers
2. **Increased range of response options other than land investments** e.g., shifting socio-cultural norms and facilitating access to other assets and services consequential for women
3. **Sustainable management of forest resources**, resulting in increased abundance of forest products and total forest area and enhanced capacities of women in forest communities to manage and cope with climate-related risks

Key take-aways:

- Emerging evidence supports women’s land tenure security as a route to climate change mitigation and adaptation.
- The evidence for direct connections between WLTS and planning and decision-making that promote mitigation and adaptation is thin. This is a result of the following 3 challenges:
 - Insufficient data on gendered land tenure and tenure security
 - The presence of multiple steps and mediating factors influencing how tenure security translates into the preparation, planning, and decision-making needed for enhanced climate change mitigation and adaptation
 - Climate-related outcomes are often not clearly defined.

¹ Two of the publications included in the review are literature reviews.

Land rights and tenure security:

Land rights are not limited to ownership, but rather consist of a bundle of rights that people might have or desire including their rights to participate in decision-making about land use and governance, to benefit economically from land use, and to prevent others from using land (UN Women, 2018).

Drawing from Jhaveri, **tenure security** is “the degree of confidence a rights-holder has that the tenure is clear, durable, will be enforced, and broadly upheld by the community (2021: 2).” Tenure security does not depend solely on formalization of land rights, which can be a positive (or negative) influencing factor. Socio-cultural norms and customary rules governing land rights also influence women’s tenure security, often differently than men’s.

Climate change mitigation, adaptation, and resilience:

We conceptualize climate change **mitigation** as activities that lead to carbon sequestration. Mitigation can occur through soil conservation practices that enhance carbon sequestration (e.g., crop rotation, fallowing, terracing, agroforestry); increased tree planting; and decreased rates of deforestation.

Adaptation focuses on increased individual, household, and communal capacities to adapt to climate change impacts. Capacities can be strengthened through increased investment in infrastructure (e.g., irrigation and other water harvesting systems, flood barriers, windbreaks); climate-smart agriculture (e.g., drought resistant crops, perennial crops, soil conservation); and greater adoption of sustainable land use practices (e.g., fallowing, agroforestry). Having more options to respond to climate shocks and stressors is another important aspect of adaptation (Theis et al., 2019).

Resilience is the capacity to resist, cope with, or recover from shocks and stressors and arrive to a reduced state of vulnerability (Huyer et al., 2021).

II. Pathways from WLTS to Climate Change Mitigation and Adaptation

We interviewed twelve experts in climate change, natural resources, and land tenure from international NGOs, donor agencies, and research and advocacy organizations to gather insights on pathways from WLTS to climate outcomes. Building on Meinzen-Dick et al. (2017), Murken and Gornott (2022), and the expert interviews, we developed a conceptual framework to guide our review.

We conceptualize three primary pathways from women’s land tenure security to climate change mitigation and adaptation: sustainable management of forest resources, long-term land investments, and increased range of response options (not related to land investments). The figure below shows evidence along each of the pathways, indicating the strength of the evidence by the thickness of the colored path.

Impacts of Women’s Land Tenure Security on Climate Change Adaptation & Mitigation

Strength of the evidence along three pathways – long-term land investments, expanded response options, and sustainable management of forest resources.

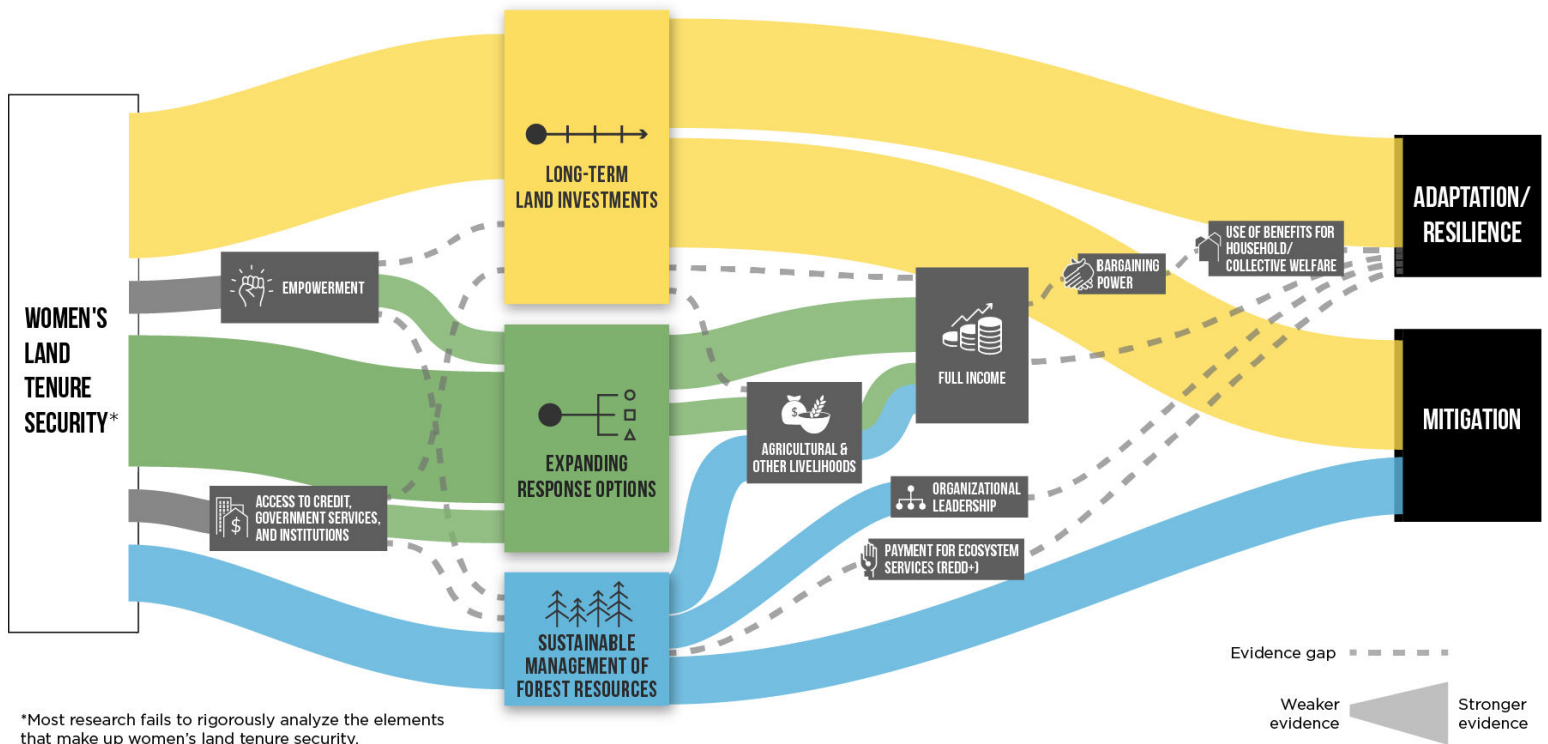


Figure 1

Key insights include:

- Pathway 1:** Formalized or documented tenure can contribute to long-term land investments that promote carbon sequestration and enhanced adaptive capacities among female-headed households in Sub-Saharan Africa. Formalized tenure was associated positively with various sustainable land use practices, soil and water conservation measures, and investments in adaptation infrastructure among female-headed households. **(Much evidence)**.
- Pathway 2:** When women have more than just the right to access land and also have rights to manage land and benefit from it; when there is no risk of their losing their land rights due to

changes in their marital status or family composition; and when formal and informal tenure systems align to enforce women’s land rights, they are likely to have a larger range of response options available to them. These were key elements of women’s tenure security that enabled them to pursue conservation agriculture, irrigation schemes, livelihood diversification, and other livelihood management strategies that helped build their adaptive capacity, with much evidence in Sub-Saharan Africa and South Asia. **(Much evidence).**

■ **Pathway 3:** Women’s inclusion in forest management groups in South Asia contributes to sustainable management of forest resources that results in forest livelihood productivity and full income, important factors supporting resilience. For example, studies showed how women’s inclusion in forest management groups had positive effects on forest income and forest resources collected for the community, as well as reduced time labor burdens for women. **(Moderate evidence).**

■ **Pathway 3:** Women’s inclusion in forest management bodies, in contexts where membership was predominantly male, can lead to enhanced carbon sequestration through sustainable management of forest resources that results in improved forest conditions in South Asia. **(Limited evidence).**

III. Building Stronger Evidence for Linked WLTS – Climate Action

Our review of evidence highlights the need for more and different data and research to understand and articulate how WLTS contributes to climate action. Gaps where researchers, governments, and funders can collaborate to generate data and research:

- 1) To understand how factors that affect WLTS are significant to achieving mitigation and adaptation. This requires collecting data from women and men as individuals (for example, interviewing women in dual-/male-headed households instead of only a household head) and collecting data on the complete bundle of rights (beyond formalized or documented tenure and beyond inclusion in forest governance bodies). These data are especially limited in contexts of collective tenure and sustainable forest management.
- 2) That follows impact along multiple links within each pathway between WLTS and mitigation, adaptation, and resilience. We need more rigorously designed mixed methods and qualitative research to demonstrate longer “chains of linkages” and more quantitative and mixed methods impact evaluations to assess the strength of each link. Within the Expanding Response Options pathway, applying conceptual frameworks of resilience to more clearly define expected outcomes can help researchers and evaluators to deepen and communicate the evidence base for this pathway.
- 3) For under-researched geographies and livelihoods. More research is needed from Latin American and Southeast Asian contexts and for pastoral, aquacultural and other livelihoods apart from the more researched agricultural and forest contexts.

Connecting existing datasets that include measures of gendered land tenure (for example the Living Standards Measurement Study – Integrated Survey on Agriculture (LSMS-ISA) and LSMS+ with other data, including remotely-sensed data or forest inventories could yield further opportunities for empirical research in the first two gaps on the relationship between women’s land tenure security and climate impacts.

IV. Call to action

WLTS can be a critical lever for climate change mitigation and adaptation, incentivizing long-term land investments, expanding the range of response options available, and contributing to more sustainable management of forest resources. Governments, CSOs, and private sector entities have key roles to play in promoting generation of gendered land tenure data and designing and implementing tools to articulate and assess the links between women's tenure security and climate outcomes. Coordinated work including all stakeholders will ensure stronger programming and investments to improve WLTS for climate change mitigation and adaptation.

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