CASE STUDY

THEME 1:
Women, land rights and resiliency

How women's rights, especially over land, improves the capacities of families and communities to implement resilience actions

Home is where climate resilience should be built

A case study of climate resilience in the indigenous Munda community in the southwestern coastal area of Bangladesh

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The Munda people are one of the 45 indigenous (*Adivasi*) peoples in Bangladesh. Residing in Shyamnagar *upazila* (sub-district) of Satkhira district, the Munda community has lived beside the Sundarbans — the world's largest mangrove forest – for over two centuries. They have traditionally made their living from the forest — harvesting honey, catching fish, prawns, and crabs in the forest and surrounding rivers and channels, and collecting other forest products.

This case study focuses on the Munda community in Datinakhali village of Burigoalini union in Shyamnagar sub-district.

Shyamnagar sub-district is home to 450 Munda families,[1] of whom 148 families are landless. Many members of the community are considered as poor, earning less than 100 US Dollars per month. Having no land

[1] Sundarban Adibashi Munda Sangstha was formed in 2003 to improve the welfare of the Munda and "to bring them into mainstream development" (SAMS, n.a.).

Key Messages

- The Government of Bangladesh has not yet recognized the indigenous peoples' traditional knowledge, customs on conservation, nor their right to govern and conserve the Sundarbans — the home of the Munda people.
- To improve their livelihood resilience, the Munda people maintained that land tenure security is indispensable. They proposed a special policy initiative for land-based resilience building among the community.
- The current policy on agricultural *khas* land distribution among the landless can address the land rights deprivation of Munda women. If they are granted land, either individually or jointly with their husband, Munda woman are capable of sustainably using and managing it.
- In consultations with the Munda community, they expressed what is necessary to achieve resilience. They all agreed that migration is not a sustainable solution for them, because their culture and livelihoods are closely linked to the Sundarbans. To improve their livelihood resilience, they all affirmed that land tenure security is indispensable.
- The Munda community demands their participation in any decision-making that concerns them. The top-down approach, along with the corruption and insensitivity, has undermined ongoing projects and activities that are supposed to enhance their resilience. The community said that the scenario would be much better if they could take the lead.

of their own, Munda families live in geographically vulnerable areas such as coastal embankments.

Seventy percent of Munda men rely on fishing, catching mud crab, and harvesting honey for their livelihood.[2] However, restrictions imposed by the Forest Department have prohibited them from making a living in the Sundarbans, thus forcing them to make a living in other ways, such as by working as daily wage workers.

Since 1971, the Munda community has experienced extreme weather events, such as drought in 1974, and successive cyclones from 1988 to 2009. Tropical Cyclone Sidr, which hit Bangladesh in 2007, resulted in one of the worst natural disasters in the country. Then, just two years later, in 2009, another severe cyclonic storm, Aila, caused equally extensive damage in the country.

[2] As reported in a focus group discussion organized by the Association for Land Reform and Development (ALRD) in 2022.

After a disaster: No land to fall back on

Cyclone Aila made its first landfall in the Shyamnagar sub-district, wiping out the homes of more than 34,000 people, or almost 12 percent of the population of the sub-district. Of those rendered homeless, 600 people, or 40 percent, belonged to the Munda community.

Months later, as many as 28,000 people were still staying in makeshift tents or near embankments. In addition, 359.55 square kilometers of land were completely inundated by surge water. This was particularly damaging because the vast majority of the population was engaged in agriculture and fisheries, such as shrimp culture (Baten and Kumar, 2010).

While prawn farming had been predominant in the area, a few villages in the Shyamnagar sub-district had been engaged exclusively in paddy farming. In the aftermath of Aila, the increased salinity of the soil and the groundwater reduced crop yields. According to community members, fluctuating rainfall patterns also became a problem for rice farmers.

The Sundarbans became off-limits to people who had traditionally depended on forest products for a living. But while forest officials restricted access by poor communities, other people were allowed to enter and exploit the forest resources by bribing middlemen.

At the same time, excess salinity had begun to degrade the biodiversity of the Sundarbans. While mangrove trees like Sundori, Keora, and Hogla grow in saline water, the excessive salinity and logging of saline water are choking them. The trees are dying and their number is falling. Native fish species are also growing extinct (Rezoyana, U., et al., 2018).

In Datinakhali village, in particular, Cyclones Sidr and Aila swept away all houses and properties. Many shrimp and soft-shell crab farms that used to dominate the landscape of the village were wiped out. Livestock, such as cows, goats, and chickens, became a rarity. According to members of the community, the high salinity of farmlands

following the cyclones affected the growth and quality of livestock. Thus, following Tropical Cyclone Aila, eight Munda families left Datinakhali village and migrated to other places.

Disasters take a toll on a community's cultural traditions

The Munda rituals and festivities are integral to the lives of the agrarian communities in Bangladesh's coastal districts. However, changes in land-use patterns due to increased land and water salinity and sea-level rise have led to a sharp decline of such traditions.

An elderly member of the Munda community in the village of Datinakhali, in Burigoalini union of Shyamnagar upazila, relates, *"When we cultivated rice, we used to hold celebrations and festivities to appease the deities. Now that we have no land to grow rice on, these ceremonies have lost their importance."*

The practice of *Puja* — a Hindu ritual that involves offering flowers, light, fruits, and water to help reduce anxiety (Garai, 2017) — has been affected by challenges to growing flowers and fruit trees. Rats, snails, and frogs from agricultural fields are cultural foods for the Munda people. However, due to shrinking agricultural lands in both unions [Burigoalini and Gabura], the Munda people now have to travel to other places to collect them. They also used to sacrifice hens, but because they can no longer raise these in the adverse conditions in their community, they now have to buy them at the market. However, the hens on sale are not always the correct color for the religious/cultural ritual. Moreover, one community member relates that another festival is no longer observed because the designated place for it had been lost to riverbank erosion.

Krishnapada Munda, executive director of Sundarban Adivasi Munda Sangsha (SAMS), shares that before cyclone Aila, they used to celebrate the "Karam" festival, one of the biggest celebrations of the Munda community. However, after the cyclone, that festivity can no longer be observed because the central element of the celeberation, the Karam tree, is now nowhere to be found in the community. The last Karam tree was uprooted during the tidal surge caused by Cyclone Aila. Thus, today, if any of the Munda people want to celebrate this festival, they will have to travel for hours to reach the Northern part of the country where the Karam tree still stands. This is an expensive journey that few Munda people can afford.

Responses by the community

Agricultural households often adopt various disaster-response strategies to reduce the impact of climate change on their livelihood, such as diversifying their income sources, changing cropping practices, and crop diversification (McLeman, 2014). The coastal communities affected by Cyclone Aila were encouraged to adapt to climate change or to reduce their vulnerability to natural disasters by, among others, shifting to saline water-tolerant crops and diversifying into vegetables, such as eggplant and spinach that do not require major irrigation systems (Rabbani, et al., as cited in Subhani and Ahmad, 2019). Other adaptation strategies included growing vegetables on Mud Towers and dams; cultivating saline-tolerant vegetables around the shrimp ponds; using recycled household water for irrigation and vegetable production; installing Pond Sand Filters to filter water; rainwater harvesting; rearing livestock in other parts of Shyamnagar; and, forestation in the islands.

Following Cyclone Aila, eight Munda families migrated to other places. Most of them found refuge in a CSO-led shelter initiative in the Tala sub-district of Satkhira, while the rest stayed in a government-shelter barrack located in a village far from the Sundarbans. Each of the migrant families received a piece of land with built house in Tala sub-district, under the auspices of Sundarban Adivasi Munda Sangstha (SAMS), a Munda community-led local NGO. The families also received a few small ponds/tanks which they could use for fish farming. They likewise practiced homestead vegetable gardening in the small space between the houses. SAMS facilitated this kind of rehabilitation for a total of 87 Munda families from Shyamnagar upazila of Satkhira and Koyra upazila (adjacent to Shyamnagar) of Khulna district.

Meanwhile, three Munda families ended up living in the government-funded shelter barracks in Burigoalini village, which were built in the 2010s to resettle 100 families affected by Cyclone Aila. This barrack has 10 rows of combined houses on comparatively bigger land for each of the 100 families. There are also three large ponds that the families

can use. However, the occupants subsequently left these houses because of adverse living conditions there, such as damage to the shed houses from heavy rains, and the fact that there were no livelihood options available nearby.

Another 18 Munda families from different places in Sathkira and Kulna districts were resettled in Jelekhali Mundapara under an arrangement similar to that in Tala sub-district and which was also facilitated by SAMS.

In both Tala and Jelekhali sub-districts, however, none of the resettled families received agricultural land. Both male and female family members took on wage work, either on other people's land or in local crab and shrimp processing farms, while some male family members left to find work in brick clines or on farms in other areas. In focus group discussions organized by ALRD, these families said that if they had been allocated agricultural land, then they would have been self-reliant. However, despite a national policy to distribute agricultural *khas* land to landless families, the government has not put in place a program to implement it despite the applications submitted by several of these families.

Responses by authorities

The devastation wreaked by Cyclones Sidr and Aila put a spotlight on Shyamnagar in national and international discourses on climate change and disaster risk reduction (DRR). This generated considerable external investment in development programs in the area. Shyamnagar became a test site for climate change adaptation and DRR projects of local and international donors and NGOs. Programs on gender empowerment, women's education, and connectivity through mobile communication were also implemented in Shyamnagar.

Cyclone Aila hit the southwestern coastal region just when the government was rehabilitating areas damaged by Cyclone Sidr. Thus,

some funds and a number of projects that had been earmarked to support recovery from Cyclone Sidr were realigned to initiate Cyclone Aila recovery projects. For example, damaged rural roads were reconstructed by modifying the World Bank (WB)'s Emergency 2007 Cyclone (Sidr) Recovery and Restoration Project.

Subsequently, the government developed plans specifically for the Aila recovery. These plans followed two approaches: (1) segmenting and prioritizing the reconstruction activities under the Annual Development Plan (ADP) of the government; and, (2) formulating special initiatives (with foreign aid) for large-scale projects.

The ADP and the Rehabilitation of Aila-Affected Rural Infrastructure Project (RAARIP) were designed to complete the unfinished rehabilitation tasks (Sadik et al., 2017). However, not one of these projects incorporated new DRR measures (Sadik, et al., 2018). At the same time, these plans were focused on long-term initiatives and not on addressing immediate needs.

Lacking prompt support from the government, the affected communities used what little savings they had, reduced spending on health, stopped sending their children to school and put them to work to augment the family's income. HM Golam Reza, the parliamentarian from this constituency (Satkhira-4- Shyamnagar and Kaliganj *upazilas*) admitted that "the fund allocated for rehabilitation of the Aila-hit homeless people is scanty" (The Daily Star, 2009).

Assessment and way forward

According to the Munda community, inadequate responses to disaster events, particularly the lack of clear understanding of tenure issues, impacted negatively on their lives and livelihood in the context of natural disasters and the impacts of climate change. Thus, it is important to address land tenure issues in early efforts at building resilience and disaster preparedness.

The Government of Bangladesh has not yet recognized the indigenous peoples' traditional knowledge, customs on conservation, nor their right to govern and conserve the Sundarbans. One such traditional practice that the government has yet to acknowledge is the Munda community's adherence to the ethos of *Bonbibi* – a legendary guardian spirit of the forests who is venerated by residents of the Sundarbans. The community's deference to *Bonbibi* is demonstrated by their observance of customary no-take zones, core protected area formations, and no-fishing days. The Munda people have sustained these practices on their own initiative rather than through top-down law enforcement (AIPP, 2021).

In consultations with the Munda community, they expressed what is necessary to achieve resilience. They all agreed that migration is not a sustainable solution for them, because their culture and livelihoods are closely linked to the Sundarbans. To improve their livelihood resilience, they all affirmed that land tenure security is indispensable. They proposed a special policy initiative for land-based resilience-building among the community.

Availability and access to financial capital often help poor and marginalized families to diversify their income opportunities and family incomes. In Bangladesh, there are various formal and non-formal microfinance facilities available. Local people have access to two different forms of credit systems: (1) loans from local wealthy people, or the *mohajon*, who charge high interest rates of 100 percent per year; and, (2) micro credit from NGOs, who charge around 15 percent annual interest. Unfortunately, extremely poor households, cannot afford loans from the *mohajon*, and are usually excluded from access to NGO loans.

The other means of accessing capital is through the *dadon* system. A trader provides an advance to fishers, crab collectors, shrimp farmers, and rice farmers on the condition that he or she must sell their produce or harvest at lower-than-market prices.

On the other hand, bank loans require land as collateral with all the requisite land documents. Land documents are also a prerequisite for obtaining the Farmer's Card. Clearly, land tenure security is necessary to access credit and government agriculture services that include incentives, subsidized equipment, seeds, and fertilizers, among others. As access to these support services can help rebuild after climate shocks, Munda community members think that land tenure security can positively change their lives.

The current policy on agricultural *khas* land distribution among the landless can address the land rights deprivation of Munda women. If they are granted land, either individually or jointly with their husband, Munda woman are capable of sustainably using and managing it. Aside from distributing *khas* land, the government can confiscate waterlogged areas from illegal occupants and encroachers and allocate them to the community. Even poor-quality land such as this can be used by the community for crab fattening or for cultivating salinity-tolerant crop varieties.

Lastly, the Munda community demands their participation in any decision-making that concerns them. The top-down approach, along with the corruption and insensitivity, has created gaps in ongoing projects and activities that are supposed to enhance their resilience. The community said that the scenario would be much better if they could take the lead. ■

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CASE STUDY

IP women challenge the intersection of gender and land rights inequalities:

A case study of rural women's resilience efforts in Analamanga Region, Madagascar

Prepared by Mino Ramaroson, Huairou Commission

The Fiaferana municipality in the Analamanga region is located in the central highlands of Madagascar and is home to the Merina tribe.

According to the 2021 census,[1] Fiaferana had a population of around 7,068 residents. Roughly 90 percent of the population is engaged in farming, and approximately 60 percent of the residents live below the poverty line, with incomes of less than two US Dollars per day.

Climate change has significantly altered the seasons in Fiaferana. Like the rest of Madagascar, but especially in the central highlands, cyclones have become increasingly frequent and more powerful.

In 2019, some 25 houses were destroyed by these cyclones. Every year, these cyclones wreak havoc, bringing floods and hailstorms that damage homes, crops, and farmlands. At the same time, while the rainy season has become more intense, with ruinous effects, it has also become shorter.

Such changes in rainfall patterns, including the incidence of flooding and hailstorms, have had a profound impact on the community's livelihoods.

[1] https://www.instat.mg/documents/upload/main/INSTAT_RGPH3-Definitif-ResultatsGlogaux-Tome2_17-2021.pdf

Key Messages

- Gender and land rights inequality pose a two-pronged challenge for the women of Fiaferana. Women are denied inheritance rights, further limiting their access to and control over land resources. A key contributing factor to this disparity is a discriminatory land tenure regime in rural settings which relies heavily on customary practices that are not gender-sensitive.
- At the same time, the tenure security of women is increasingly compromised as climate-related effects intensify. The intersectionality of rural women's vulnerabilities and the climate crisis is creating a complex web of challenges that need to be addressed holistically.
- The current land policy framework in Madagascar, while avowedly gender sensitive, does not incorporate a gender dimension, and neglects the specific challenges and rights of women in the implementation of land reform.
- Integrating customary land tenure systems within formal land governance structures can significantly strengthen community resilience but only if social norms and practices are not gender-biased.
- Fiaferana women have adapted to climate impacts such as hailstorms and cyclone-induced flooding by embracing sustainable land management, including the adoption of organic agriculture, and by replenishing forests and protecting natural habitats, among others.

The women of Fiaferana have reported that they used to be able to rely on their traditional knowledge of when and how to plant their crops.

In recent years, however, these traditional farming practices have been overturned by the unpredictability of the climate. The women said that 20 years ago, they used to be able to plant rice twice a year. Today, because of the risks posed by insufficient rainfall or hailstorms, they can only plant one crop a year. They also either delay or prematurely start planting in anticipation of insufficient rainfall.

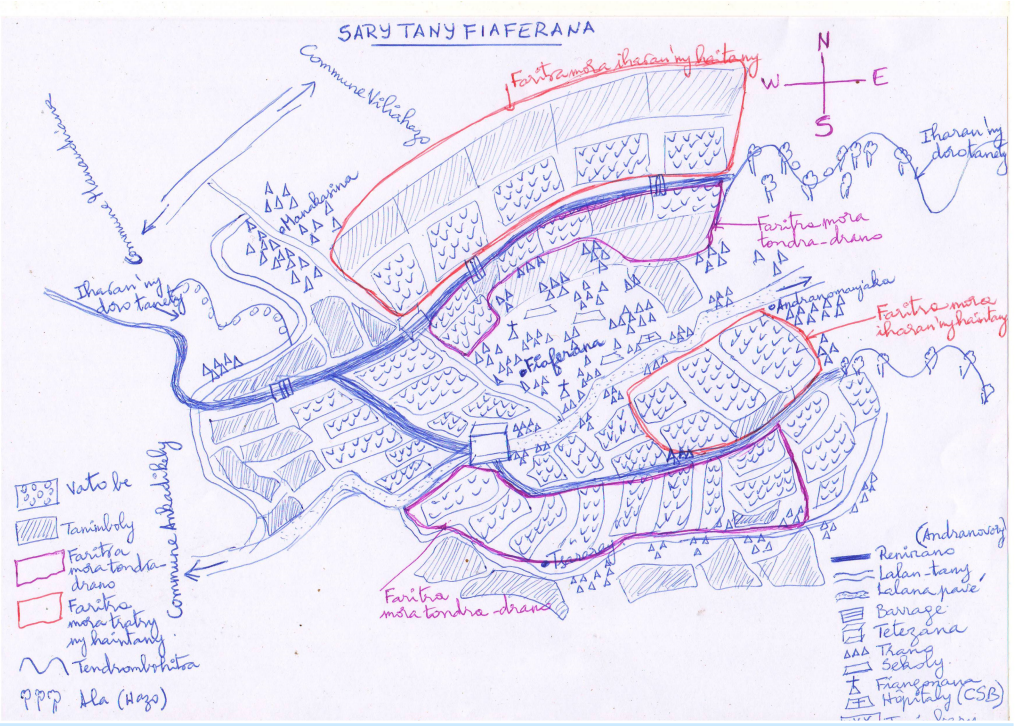
Intense rainfall has also led to soil degradation and landslides, diminishing the available agricultural land.

The irrigation systems that once served the rice fields have been destroyed by soil erosion and heavy rains, further reducing the available land for production in the area.

Gender and land rights inequality: Two-pronged challenge for women

The women of Fiaferana labor under a power imbalance in relation to land ownership and rights that is observed across the various tribes in Madagascar.

This disparity is particularly pronounced in some regions, including in Analamanga, where women are denied inheritance rights, further limiting their access to and control over land resources. A key contributing factor to this disparity is a discriminatory land tenure regime that prevails especially in rural settings which relies heavily on customary practices. Customary norms and traditions govern the land management system, and these often lack a gender-sensitive approach. In general, the current land policy framework in Madagascar, while avowedly gender-sensitive, often fails to incorporate a gender dimension, neglecting the specific challenges and rights of women in the implementation of land reform.



Map of Fiaferana as designed by the women's group in the area

Land laws and women's rights in Madagascar

In Madagascar, where the majority of the population engages in agriculture as their primary livelihood, land is a critical asset. The importance of land in sustaining livelihoods and communities cannot be overstated.

The first significant land reform in Madagascar occurred in 2005, marking a pivotal shift in the perception of property rights. It transitioned from the notion of "State-owned land" to "untitled private property." This reform aimed to overhaul the land management system, emphasizing decentralization and modernization. The decentralization of land management relied on the establishment of a local service, the communal land office, responsible for issuing land certificates for individually or collectively occupied but untitled land parcels. A key aspect of this transformation was the inclusion of the customary land management system within the decentralized land offices.

Building upon the initial reform, a second land policy letter was introduced, incorporating eight of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forest and Fisheries (VGGT) principles. This policy letter also advocated for land certification, which plays a crucial role in securing land tenure rights. The adoption of these frameworks within the reviewed land policy led to a more focused gender dimension in the current National Land Policy Letter. The recognition that women are not homogenous regarding land, that different groups of women have different needs and face different situations, is anchored within the reviewed land policy.

Decentralization thus significantly improved the public land management service. In 2022, after 17 years of reform, 546 land offices were established, and nearly 1,370,000 certificates were issued compared to the estimated 680,000 land titles delivered in the last century.[2]

Despite these advancements, estimates show that documented land parcels in Madagascar still account for less than 30 percent of the total land area. This presents challenges in ensuring land tenure security, particularly in the current context of increasing land-based investments and the adverse effects of climate change. Unfortunately, women continue to face disadvantages in the land tenure process, highlighting the need for gender-sensitive policies and practices to ensure equitable access to and control over land resources.

[2] From the foundations to achievements: Where does the Malagasy land reform stand? P. Burnod, E. Bouquet, Technical Committee, "Land and Development", January 2022.

The tenure security of women becomes increasingly compromised as climate-related effects intensify. The intersecting vulnerabilities of rural women and the changing climate create a complex web of challenges that need to be addressed holistically. This observation prompted the establishment in 2018 of FARM (Femme en Action Rurale de Madagascar), a self-managed and independent movement that enables rural women to fully assume their responsibilities in solidarity within the rural women's movement.

In 2019, FARM began working in Fiaferana, where it has four members' groups, which collectively represent approximately 200 rural women. Through their advocacy efforts, focused on identified issues such as the effects of climate change and the impacts of the COVID-19 pandemic, they successfully secured parcels of land from the municipality, totalling 26 hectares, and farmed them collaboratively.

Impacts of climate change and disasters on women's welfare and rights

The impacts of climate change on rural women in Fiaferana have been far-reaching and have profoundly affected their lives in several ways.

Loss of land
The increasing frequency of hailstorms and floods caused by cyclones (which also caused the destruction of the irrigation systems) has left vast tracts of rice fields unproductive. This has had a devastating impact on FARM members, prompting them to negotiate with the local authorities to get access to land. The 26 hectares that they obtained enabled the women to increase their income and economic stability. However, the parcels of land were provided as a donation without any accompanying documentation. Currently, the women are engaged in the process of seeking formal land titles. However, this process has proven to be financially burdensome for them.

Food shortage
Climate change-induced shifts in weather patterns have resulted in reduced agricultural productivity. This reduction in crop yields and livestock has contributed to food shortages, leading to increased food

FARM is composed of 250 rural women's groups in eight regions of the island whose mission is to promote gender equality and climate justice through raising awareness and providing training to rural women about their rights, strengthening their organizational and technical capacities, and ensuring their full participation in decision-making processes economically, ecologically, socially, and culturally.

insecurity among rural women and their families. Nutritional deficiencies and hunger have become pressing issues.

Migration
Climate-induced migration has become a common phenomenon among rural women and their families in Fiaferana. As droughts or floods render their land temporarily or permanently unproductive, many are forced to migrate to urban areas in search of alternative livelihoods. This migration disrupts their connection to the land and their ability to invest in it.

Land conflicts
The competition for land in Fiaferana has led to conflicts, particularly as rich families from the capital buy up available lands, causing land prices to increase beyond the capacity of poor families to afford. Thus, poor families in Fiaferana have been migrating to the city to search for work. This has led to rising unemployment in the city and increased pressure on the informal settlements, thus causing more land insecurity.

Loss of cultural identity
Displacement and changes in land use due to climate change have eroded the cultural ties that many rural women have to their ancestral lands. The poor families that are migrating to the city are losing their connection to their rural home. Without support for these families, their detachment from their ancestral land can be emotionally distressing and impacts the social fabric of these communities who end up living in informal settlements.

Landlessness and unemployment
The effects of migration have been twofold: poor families from Fiaferana have not only lost their land at home, but have found

themselves jobless in the city. This double blow exacerbates poverty and increases their vulnerability, as they struggle to find alternative sources of income.

Lack of mitigation measures
In many regions, there is a notable absence of comprehensive planning and mitigation measures to address the specific impacts of climate change on land. This lack of foresight and preparedness further compounds the challenges faced by rural women and their communities.

Lack of investment and access to extension services
Rural women often face significant barriers in accessing resources, such as land, credit, and modern agricultural technologies. This lack of access hampers their capacity to invest in climate-resilient practices, which are essential for mitigating the impacts of climate change on their livelihoods.

In light of these challenges, addressing the gender-specific impacts of climate change in the regions is crucial. Implementing climate-resilient agricultural practices, providing access to education and training, and ensuring the inclusion of rural women in decision-making processes related to climate adaptation are all essential steps in mitigating the adverse effects of climate change on their lives and livelihoods.

Responses by communities

In the face of climate change impacts, local communities have embarked on innovative strategies that not only promote climate resilience but also empower women and protect their land rights.

First and foremost, they have embraced sustainable land use practices. Farmers are increasingly diversifying their crops and adopting drought-resistant varieties to mitigate the effects of changing rainfall patterns and prolonged droughts. These adaptive farming techniques not only help ensure food security but also reduce soil degradation. Another significant response is the adoption of agroecological practices, particularly in small-scale agriculture.

Communities are maximizing the use of all available inputs and small plots to increase crop yields while preserving the land. This approach not only boosts agricultural productivity but also allows women to actively participate in farming activities, strengthening their claim to land rights.

Organic agriculture has become a prevailing practice for the women groups in Analamanga. Here, women are actively involved in self-producing organic fertilizers and cultivating local seeds. An inspiring example comes from a woman, Berthine Razafindravao, member of a community-based organization (CBO) with 25 members in Fiaferana Municipality. She efficiently utilizes a small 20 square-meter parcel for year-round organic green pea production. From this production alone, Berthine earns 100,000 Malagasy Francs or 4.14 US Dollars per month (which represents half of the minimum wage). Her regular income from this plot, which has become increasingly productive due to organic fertilizer use, highlights the potential for women's economic empowerment through organic agriculture.

Short-cycle rearing of livestock, such as poultry and rabbit, as well as worm farming, have also gained traction. In Fiaferana, a group of 150 rural women started raising 20 chickens. They now sell 100 chickens per week per member, providing income and food security for participating families. Women are actively engaged in these ventures, contributing to household finances and reinforcing their role in land management.

Furthermore, fish farming, primarily targeting women, is being carried out with notable success. Their regular harvest of 500 to 800 grams of fish per unit, sold at competitive prices, provides a consistent income stream.

Additionally, rural women groups have started reforestation and afforestation projects to combat deforestation caused by resource-intensive livelihoods such as charcoal production. They collectively work on the 26 hectares of land that they received from the local

authorities, applying agroecological methods in growing fruit trees and crops. By replenishing forests and protecting natural habitats, they aim to restore ecological balance and reduce the risks of landslides and soil erosion during heavy rainfall.

Key actors involved in supporting these initiatives include the European Union's DINIKA project, which contributes to these efforts by fostering climate resilience and sustainable land use practices in the Analamanga region.

These local responses not only help communities adapt to climate change but also contribute to women's economic empowerment and the protection of their land rights. By actively participating in sustainable agricultural practices and income-generating activities, women gain a stronger footing in decision-making processes related to land, thereby fostering gender equity and resilience in the face of environmental challenges.

Responses by authorities

The central government generally does not provide support for locally initiated efforts to tackle the challenges arising from the impacts of climate change. The BNGRC (National Bureau for Risk and Disaster Management), which serves as the national agency for disaster risk prevention and response, primarily focuses on addressing natural and human-made disasters as they occur. There is a notable absence of follow-up, critical reflection, or proposed actions in the aftermath of disasters, even in regions known for their susceptibility to such events.

In contrast, there is a growing emphasis on community-led advocacy for sustainable land and resource management. Communities are working to raise awareness about the importance of preserving land, water resources, and forests. They engage in dialogues with local authorities to promote policies that address climate change adaptation and mitigation while safeguarding their land rights. A concrete positive

outcome of community engagement with local authorities is the grant of 26 hectares of land to women's groups in Fiaferana. The women are now using the land for reforestation by planting eucalyptus, acacia and fruit trees. They also received land for market gardening using organic production.

Assessment

Key issues

Rural women respond by adapting to changing conditions, but their options are limited. One of the pressing issues faced by rural women in the context of climate change is the insecurity of land tenure. This insecurity not only disrupts their lives but also exacerbates climate-induced migration. Women are forced to leave their homes due to the loss of productive land. In some regions, they compete for resources, leading to conflicts.

Additionally, there is a noticeable absence of adequate mitigation and adaptation measures in areas heavily impacted by climate change. This lack of preparedness further compounds the challenges faced by these communities.

Furthermore, gender disparities persist in land ownership, with women often having limited access to and control over land resources. Finally, there is a significant gap in government policies aimed at protecting tenure rights, leaving rural communities vulnerable to the adverse effects of climate change.

Reflections and insights

Secure land tenure is fundamental in enhancing rural women's resilience to climate change. It serves as the foundation for investment in sustainable land management practices, enabling them to better adapt to changing environmental conditions. Additionally, integrating customary land tenure systems within formal land

governance structures can significantly strengthen community resilience if social norms and practices are not gender-biased. This integration can lead to clearer land rights, reduced disputes, and more effective land management.

Moreover, adequate land planning is pivotal in mitigating the impacts of climate change. By identifying safe and suitable areas for settlement and agriculture, communities can reduce their exposure to climate-related risks and ensure more sustainable land use practices.

In sum, addressing these key issues and applying these insights can help rural communities better navigate the challenges posed by climate change which exacerbate land tenure insecurity.

Recommendations

Drawing from the insights of the case study, a set of recommendations can be formulated to address the pressing challenges faced by rural communities in the context of climate change and land tenure insecurity.

- It is essential to strengthen land tenure security through the issuance of land certificates and titles, providing communities with a legal document to protect their land rights.
- Promoting sustainable land management practices is crucial in mitigating the adverse impacts of climate change. This includes measures to prevent soil degradation, optimize water resources, and adopt climate-resilient agricultural techniques.
- Implementing gender-sensitive land policies is vital to ensure that women's land rights are recognized and protected.
- Disaster preparedness and mitigation strategies should be developed, with the involvement of rural women, and incorporating land-use planning tailored to climate-impacted regions.
- Fostering collaboration between government agencies, non-governmental organizations (NGOs), and local communities is

imperative to comprehensively address the intertwined challenges of land tenure and climate change, ensuring a more resilient and equitable future for rural populations. ■

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