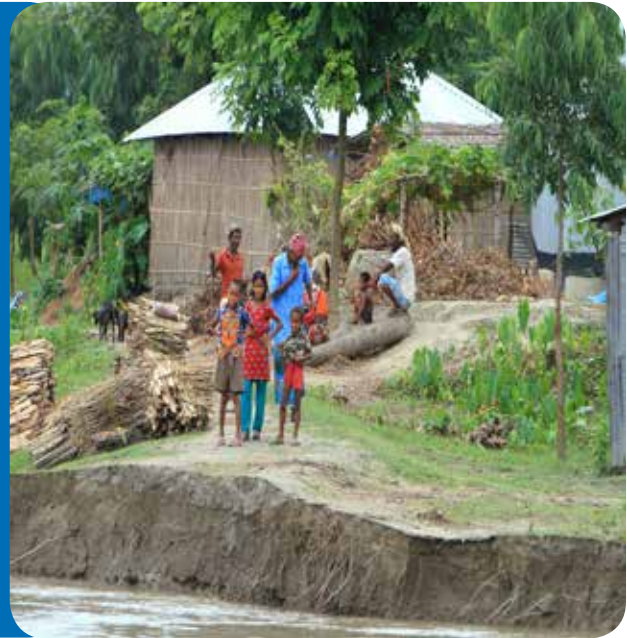


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Putting Research Knowledge into Action



## Promoting productive gendered spaces for adapting to climatic stress: Two case studies from rural Bangladesh



*Climatic stress is experienced differently by various groups and individuals based on several factors, including poverty and gender, which often influence where people live in respect to climatic stresses, their roles and responsibilities within households and communities, and the assets available to them for meeting individual and family needs in the face of these stresses. Gender provides a relevant framework for approaching climate adaptation in Bangladesh, in view of its patriarchal rural society where gender is central to the organization of social structures and norms. Women, especially from poorer groups, are thought to have the lowest asset base, the least capacity to adapt to shocks and are the most vulnerable (Ahmad 2012). Interviews were conducted with women participating in two initiatives to increase their contributions to household food and income security in Barisal District (Women onset technologies for sustainable homestead agriculture in Bangladesh project) and Kurigram District (Char market development initiative project). Based on these interviews, this policy brief highlights how sensitivity to access to specific assets and constraints experienced by women (in particular local contexts) can help realize their potential of becoming important actors in adapting local food production to climatic stress.*

### Key messages and opportunities

- Despite being confined to relatively small spaces in and around the homestead, the high economic value of cattle rearing demonstrates that, in some contexts, women's livelihoods can be highly productive.
- The greater mobility of women's livelihoods (e.g., cultivating vegetables in sacks [sack vegetables], cattle rearing) bestows on them a critical advantage over traditional agriculture, which is likely to be debilitated by floods for long periods of time. This resilience of women's livelihoods elevates their contribution to the family's well-being and positions them as key strategic investments for building adaptive capacity.
- The collaboration between women and men through a division of labor in cattle rearing suggests that gendered roles are not always divisive, and can form the basis of pragmatic livelihood partnerships based on relative strengths which do not deny women their agency.
- Through new learning and strength in numbers, appropriate group formation can empower women to be their own agents of change; manage risk and responsibilities when adopting new technologies; and overcome a number of structural disadvantages such as stifled access to land, information, skills and financial credit.

## Context

Barisal District in south-central Bangladesh is a rich agro-climatic area that is important for fish and rice production, despite being flooded annually. Kurigram District in the northeast is home to highly dynamic and vulnerable chars (low-lying riverine islands created by the deposition of silt and destroyed by erosion). Many chars are partially or completely submerged during annual floods and may exist only for a few decades, making them very precarious places to live. Men and women in both regions also observe more subtle climatic variations which are also disruptive to agriculture. These include alterations in flood timings and intensities; more intense and inconsistent rainfall during the last 8-10 years; and a dry season in Kurigram that lasts for 3 months compared to 15 days 20 years ago. The uncertainty resulting from these gradual changes affect cropping patterns and the productivity of major crops (rice in Barisal; rice and wheat in Kurigram), and has doubled the irrigation demand in Barisal and caused a 30-40% increase in demand in Kurigram since 10 years ago. Irrigation is, however, not a total solution to drought or rainfall variability in Kurigram, given its high cost due to the poor water retention of char soils. These factors combine to impose significant constraints on traditional crops, thereby emphasizing the importance of additional production systems such as those described below.

## Realizing the economic and adaptive potential of women-centered livelihoods

*Women's agriculture is largely restricted to their homesteads, particularly to vegetable cultivation and livestock rearing, although some women lease nearby land. The research highlights two climate- and gender-sensitive approaches that women have adopted to diversify and increase their incomes, and make homestead food production more flood-proof, while balancing these activities with their other household responsibilities.*

### Case study 1: Sack vegetable cultivation in Barisal

This simple technology is gender-friendly by being located in the homestead, flood-proof due to its physical mobility, and affordable and profitable. It costs only USD 0.26 per sack to start and USD 7.60 per sack for a season. Given an average seasonal profit of USD 6.30 per sack, and since most adopters manage 8-20 sacks, the cumulative profits have been significant enough for one woman to lease a fish pond (traditionally male-dominated) while another purchased a boat to transport vegetables and people, and others reinvested in poultry and cows. Some profits are also spent on



A typical location of sack vegetables on the periphery of the homestead, Razapur Village, Barisal District (photo: Research team).

children's health and education. As water storage ponds are usually the extensions of homesteads, women can provide the daily water requirement of two liters per sack without traveling far and negotiating with private water suppliers. This also frees women from the need to work as agricultural laborers. Especially notable is this method's adoption by widows and divorcees (approximately 40% of 1,000 beneficiaries) with no previous productive skills. The simple technology, low investments and reasonable returns provide a sustainable safety-net in terms of access to food and income for these most vulnerable of households.

Introduced by iDE-Bangladesh to this area, this method increases vegetable production (typically bitter and bottle gourd, cauliflower and chili). Each sack produces around 290 kg of gourd annually, making them a primary source of food security during floods when little food can be grown in the fields. It also provides added nutrition for lactating mothers and young children. Seeing the value of this enterprise, several women now find their husbands actively supporting them.

### Case study 2: Modern cattle rearing practices in the char lands of Kurigram

iDE-Bangladesh, an international nongovernmental organization, introduced modern cattle rearing practices for better production planning and management to realize an unfulfilled potential of this traditional livelihood activity. The uncertainty and low productivity of rice and wheat crops due to flooding, inconsistent rainfall and high irrigation costs called for identifying alternate and more climate-resilient livelihoods. Moreover, the fields owned by many families are under water due to erosion, while others don't own land at all. Only about 16% of households own land in some chars.



"I, and the other women, will continue to work in the fields, in livestock rearing and participate in the groups, even if we had a choice of not doing this. We are enjoying the opportunities to take charge of our family's well-being and be part of these social groups."  
*Shamim Khatun, a mother of two, whose husband migrates seasonally, Baishpur Char, Kurigram District (photo: Research team).*

The high economic value of healthy cattle, their mobility in the face of floods and erosion, less exposure to rainfall variation compared to crops and their location in or near the homestead make cattle rearing a viable and pro-women livelihood investment. Improved management practices have led to faster growth rates, better conditioned animals, a higher number of bulls fattened per cycle and the ability to command an optimal price (around USD 515 per animal) more consistently. These factors have combined to create a sixfold increase in annual revenue for the household, where use of this income is often a joint decision given women's key role in this livelihood activity.

Introduction of green fodder production predominantly by women (approximately 60% of 820 beneficiaries) complements cattle rearing, and has replaced the cultivation of traditional and more water-intensive winter crops, such as wheat and groundnuts, in some areas. The net profit from fodder is almost fivefold that of wheat, and provides better nutrition for cattle and savings on feed. These synergies between cattle rearing and fodder production are mirrored by a gendered division of labor in cattle rearing that is non-exploitative, but rather is shaped by the relative strengths of men and women. Women's roles include feeding, cutting fodder, giving ready feed, cleaning and watering, while the men purchase inputs and sell the cattle if this requires travelling to the mainland. The fact that some local individuals have become seed and feed suppliers, and cattle buyers regularly visit the chars, is nevertheless important, especially for women whose husbands migrate for seasonal employment.

### Women's agency in balancing their livelihoods with gendered roles

Women's ability to contribute to climate adaptation operates within a broader framework of gendered

responsibilities that include domestic chores and child rearing. While this may be seen as restricting women's livelihood mobility overall, some women in Barisal District voiced a preference for remaining within the homestead to balance their roles as wives and mothers with livelihood activities, and avoid spending long hours on farmland in a hot climate. Thus, they welcomed sack vegetable cultivation as an opportunity to increase the productivity of the homestead. Women are also making choices based on their individual circumstances. Ms. Kaledi Bishshash (Rajapur Village, Barisal), a mother of two young children, delayed adopting sack vegetables until her second child reached the age of 6 months, after which she commenced this cultivation. The two case studies demonstrate that, by working in spaces that women are comfortable (e.g., homesteads), development interventions can help optimize their contribution to climate resilience without jeopardizing the balance between their responsibilities.

### Group formation: Enhancing women's individual and collective agency

Groups organized around sack vegetable cultivation and improved cattle rearing included all actors involved in each livelihood activity: seed and fertilizer sellers, vegetable traders, cattle buyers and vets. Belonging to such a group provided women with a structured space to gain the critical advice and services they needed, such as market conditions for seasonal vegetables, quality inputs, cattle rearing techniques, and disease management and vaccinations. This generated the confidence to mitigate the sense of risk involved when adopting new technologies. These groups, in which women occupy most leadership positions, also allow women to express their entrepreneurial and leadership capacities, and elevate their own confidence as agents of change. This has been especially important for women whose husbands migrate for seasonal employment, where the support network of the group helps them take advantage of the opportunity to assume more responsibility for household food production. While group formation has been central to individuals' technology adoption, it also offers potential for transformative change at community scale by overcoming key structural barriers to women's involvement in agriculture. One group of women in Barisal, for example, is raising funds to lease a fish pond – a traditionally high-value male occupation which most women could not finance individually. These groups also assess overall village development needs, and have begun to involve their husbands in creating village development plans. Facilitating women's leadership in this process allows for a broader range of services such as basic health and sanitation, and child care needs to be highlighted to local government institutions.



## What can be done to optimize women’s adaptation to climatic stress?

1. By continuing to produce food and generate income during floods, when traditional agriculture may not be possible, women’s homestead production systems can play a key role in adaptation to climatic stress. Thus, policies and strategies should pay specific attention to the potential of women to reduce the risk posed by extreme climatic events to household food security, in addition to their contributions to household income.
2. The case studies highlight that the geographic spaces in which women’s and men’s livelihoods are situated are often different, and offer various bundles of natural assets that support different livelihood strategies which require different capacities. Recognizing these practical differences in policy responses and interventions can help realize the full potential of women’s contribution to building climate-resilient food production systems.
3. Women play multiple roles within the homestead and this calls for making trade-offs on how they distribute their time and effort. Thus, external interventions need to be responsive to the dynamics of differently situated women and their views on what adaptive options are suited to them.
4. This calls for a multi-dimensional and gendered approach to adaptive strategies that i) recognize and support the different strengths of men and women in contributing to adaptation, and ii) accommodate differently circumstanced women in adopting adaptive technologies at a pace that matches their specific situation.

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### Source

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Front cover photo: Erosion of a char land in Kurigram District, Bangladesh (photo: Research team).

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