

WHERE THE RAIN FALLS

LASTING IMPACTS IN
RAPID CHANGING CLIMATE



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CARE Bangladesh





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CLIMATE CHANGE

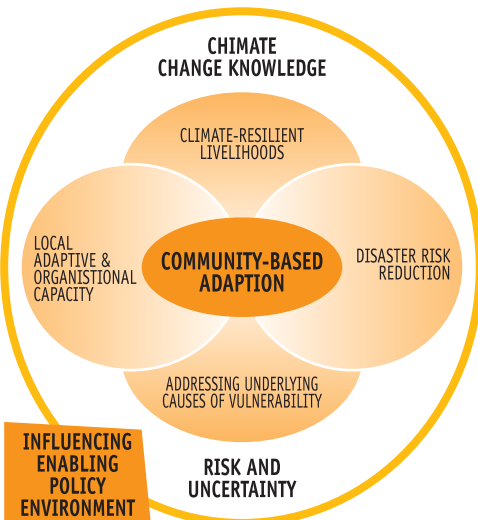


As climate change enters global discourse, it becomes increasingly important to understand its impact as well as effective strategies to build resilience to it. It disproportionately affects smallholder farmers dependent on rain-fed agriculture, making their living conditions increasingly precarious. According to the Food and Agriculture Organization (FAO), the share of the population living in extreme poverty could reach 122 million people worldwide by 2030 as a result of climate change and its impacts on small-scale farmers' incomes.

WHERE THE RAIN FALLS



CARE initiated this project in 2011 to improve resilience of vulnerable and marginalized smallholder farmers, especially women, to climate change impacts. It started as a research project that was conducted in 8 countries and resulted in a global policy report advancing the understanding of interlinkages between changing rainfall patterns, food security and human mobility. Based on the results CARE launched a community-based adaptation (CBA) pilot in Bangladesh. In the third phase, the aim was to expand resilience from individual households to communities.



This phase of WtRF aimed to reach 20 villages in 3 unions of Kurigram District, Rangpur working with 6500 farmers with two key goals:

1. To make 20 communities more resilient to climate risks and change.
2. Local, regional and/or national policies and several civil society organizations better integrate climate risks and change

To do so, WtRF utilized CARE's SuPER approach to climate-smart agriculture (SuPER – Sustainable, Profitable, Equitable and Resilient).



IMPACTS & KEY PRACTICES

LEARNING DOCUMENTATION FIELD PLAN

Objective: Document Key impact and good practices for External Communication, Future Proposal Planning and Programme Design of Care Bangladesh.

KEY DELIVERABLES

1. Good practices from Where the Rain Falls project
2. Impact Briefs with Case Study: 5 key major achievements of WtRF

METHODOLOGY

Taking a combination of FGDs, KIIs and reflection session with Project Team allowed identifying key lasting impacts and the key practices that led to them. The sampling plan came to be thus:

Type	No.	Purpose
FGDs	3	Techniques, Dissemination, Adoption and Gender Action
KIIs	6	Market actors, Govt. actors
Case Study	4	Budget inclusion, Farmer to Farmer (F2F) approach, Seed Bank, Gender roles
Team Meet	2	Reflection and documentation

The 3 FGDs were spread across 3 unions with corresponding KIIs with Market actors and Govt. Actors to cover the project area.

LASTING IMPACTS



Sustainable impact remains a challenge for many Climate Change Adaptation (CCA) projects as the nature of its impact keeps altering through interactions with localized factors. Thus, solutions remain context-specific and time-bound. To create more lasting impact WtRF influenced resilient practices and mindset into communities and major actors who influence them – namely local technical experts and government representatives.

IMPACT 1: CLIMATE SMART GOVERNANCE

The bitter truth of climate change adaptation is no single household can withstand most severe flooding or drought or other weather extremes. Thus, WtRF in its third phase focused on community resilience and further onto resilient governance systems.

When a large portion of the community is affected by extreme weather patterns, local governance bodies like Union Parishad (Union Committee) and Department of Agriculture Extension (DAE) are crucial in providing support that mitigates damage and quickens recovery.

Thus, WtRF involved these two stakeholders right from the beginning. DAE was involved from module design to providing climate-smart agri-training. Union Parishads were present during Community Action Planning and responsible for operationalizing them.

These repeated interactions shifted mindsets and were key in advancing awareness of climate change impacts into mitigative actions.

GOOD PRACTICE: BUDGET INCLUSION

Community Action Plans (CAP) identified need for resilient varieties of both rice and mustard seeds to be made more readily available to communities. The communities used their collective voices to raise this issue at Union Budget meeting and consequently all 3 Union Parishads included Community Based Actions (CBAs) in the annual union budget planning.

Thus, for the first time, mustard seeds and flood-tolerant rice were included in government support handouts for flood-affected farmers. Moreover, seed banks were established in 3 unions with government budget.

All 3 unions included climate resilient actions in the Union Budget for the first time, totaling actions worth over BDT 750,000

Perhaps, beyond actions, the biggest change was in mindset. In interview with UP members, Md. Yakub Ali said,



UP members discussing impact of WtRF

“Floods were a disaster before, beyond our control. Now, we, the people of Kurigram, see it as an ‘environmental challenge’, just like crop disease, water shortage etc. With government’s help and the right seeds, it can be managed and overcome.”

The DAE officials were also highly supportive of WtRF Project’s work, commending its design involving their technical experts in every stage of project through meaningful interactions with Farmer Field Schools (FFS).



Sub-district Agriculture Officer, Kurigram

Shoshti Chandra Roy, Kurigram Upazilla Agriculture officer, shared,

The Government has pushed forward for a revolution in agriculture. Projects like WtRF, aligned with that vision, help to refine those policies into actions with ground-level information.



Chakundar Par Group and their GAP

As proof, he showed the fertilizer allocation for DAE demo-plots now use vermi-compost whereas it was all chemical fertilizers before. This complements WtRF’s strategy for increased use of organic fertilizers.

IMPACT 2: REDEFINING GENDER ROLES

A unique aspect of WtRF is its focus on women farmers. The core group of Farmers Field School (FFS) are mostly women who were at the center of WtRF. CCA remains incomplete if it does not address gender-specific vulnerabilities of women farmers. In Bangladesh, gender-based discriminations leave women unrecognized as farmers, only as labor. This is despite growing role of women in every stage of agriculture from planting to harvesting.

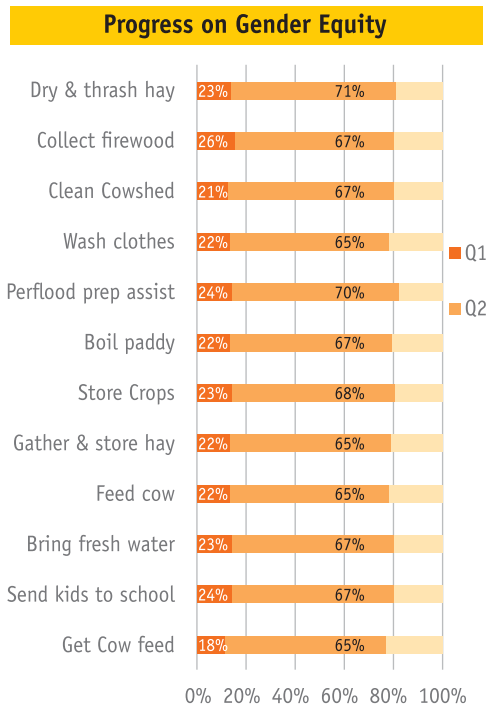
As women become increasingly involved in agriculture, they continue to handle all household/familial responsibilities, as that is considered ‘women’s work’. Thus, women are severely limited in time to work as farmers.

Equitable distribution of both agriculture and familial duties is essential if households are to become more resilient.

GOOD PRACTICE: GENDER ACTION PLAN

A key activity, unique to WtRF as a CCA project, was analysis of gender roles in agriculture and addressing discriminations through Gender Action Plan (GAP) and Social Change Agents (SCAs). In the GAP, women farmers identified 13 activities which would convince their spouse to take shared responsibility. They measured progress every quarter. Where individuals met resistance, the groups used collective peer pressure and SCAs to convince the men.

The results are significant. Averaging across 40 groups, on 13 common activities, results were:



In just 9 months (3 quarters) of working on GAP equitable distribution rose from 22% to 67%. The changes in mindset were seen in Fazal Miah, Member of Chakundar Par Group, who takes duty to make breakfast and to take the children to school. He takes pride in his work.

“She’s a better cook; but I am faster. Others may laugh; but my children are happy, Sufia’s happy – so I’m happy” Sufia, his wife, agrees, “Those few hours make a big difference to rest of my day.”

Like Sufia, women of WtRF groups gain 2-4 hours/day due to this sharing, which they commit to homestead gardening and other farming activities, adding to household food security.



Fazal & Sufia prepare vegetables for cooking

IMPACT 3: RESILIENT SUPPORT SYSTEM

Climate-smart agriculture is not a one-off solution as the challenges posed by climate change keeps changing. Thus, farmers need to constantly adapt to this rapidly changing environment.

Poor smallholder farmers, especially, need an adaptive support system that caters to their changing needs.

GOOD PRACTICE:

SAAO SUPPORT AND SEED BANKS

WtRF worked with various Government wings to strengthen these support systems by building their adaptive capacity. The key actors targeted for this were Sub-assistant Agriculture Officer (SAAO) of Department of Agriculture Extension (DAE). These officers are last-mile agri-experts guiding poor farmers most affected by climate change. In the process, SAAOs formed stronger relations with female farmers' groups, who were not recognized as farmers before but only as spouses/assisted labor to their farmer husbands.

This has led to interesting cases like that of Hasna Khatun of Noanipara. Working with their SAAO, Mamunur Rashid, she displayed exceptional skills in farming as a demo-plot

farmer of WtRF. Her skills impressed Mamunur Rashid and he advocated for her to be chosen as a demo-plot farmer for DAE, the first female one for the union. Mamun explains his decision,

Through WtRF, I realized women are the future of agriculture as men shift to other sectors. Ms. Hasna is highly skilled – well-known and respected within Noanipara. Once I saw her work for WtRF; she was an obvious choice.



SAAO Mamun on inspection visit of Hasna's DAE Demo-Plot

Like Hasna, many women from WtRF groups have become demo-plot farmers for DAE. They not only get strong technical support, they also work as role models, building recognition of women as farmers.

On a larger scale, WtRF worked to establish Seed Banks for a multiplied impact on resilience. The resilient varieties introduced in WtRF are new and produced in small batches. Thus, WtRF members multiplied the batch by keeping a *mond* (i.e. 40kg) of seeds for a combined seed bank. This was later distributed among poor farmers affected by flood – spreading its impact across the unions.

Seed Banks were established in all 3 unions. The first was done in last phase of WtRF; while the other 2 came from Union Budget.

This uptake of WtRF's approaches by UP indicates likelihood of sustainable impact. As Md. Riazul Islam, Paachgachi UP Secretary, in charge of Union's seed bank explains,



*Md. Riazul Islam,
UP Secretary, In-charge
of Seed bank*

Seed Banks are effective for poor farmers. It's not necessarily the quantity, rather a totemic support, to build confidence of farmers for more resilient attitude. Farmers need to fear flood less, take more risks to grow – this project supported that through seed banks.

He further shared records of last two years, where 123 flood affected farmers in Panchgachi received support of seed bank.

IMPACT 4: REPLICATION BEYOND

A key aspect of WtRF was multiplying impact of climate-resilience across communities. Across targeted 20 communities, 40 Farmer Field Schools (FFS) were established with 25 members each. These members personally transferred climate-adaptive practices to 3 neighbours each (with no overlaps) and other farmers in the wider community through demonstration plots. Thus, using this method, core group of 3600 farmers were used to spread impact among 6500 farmers in total.

GOOD PRACTICE: F2F APPROACH

Farmer-to-Farmer (F2F) approach of WtRF was key to replication of climate-smart practices beyond FFS. Women farmers were especially effective in convincing uptake of climate-smart practices among their neighbours as women relatively maintain better social relations within community.

Some techniques were especially appreciated and easily adopted by others:

- 1. Line Sowing & Perching among general farmers**
- 2. Raised Bed for vegetables especially**
- 3. Sack Gardening**
- 4. Natural compost**
- 5. Vermi compost (Production and/or usage)**
- 6. Key Hole Gardening**

These F2F interactions take many forms:



Amina with Nasirer Ma and her Sack Gardening

Amina Begum, Group Leader of Chakundar Par FFS reached out to Nasirer Ma, her neighbor. She is in her 70s, living alone as her son works in the city, sending money back to her. She got involved in homestead gardening practices to reduce her travel for groceries as it is tiring and risky at her age. Amina helped in setup and taught maintenance techniques. Helping women with limited mobility to try homestead gardening is one such technique.

Bobita Begum (Right) of Mondolpara FFS used flood tolerant rice variety introduced by WtRF to cultivate during flood season. She was also successful last year. Shah Jahan (Left) owns adjacent land. Initially skeptical, pushed by her convincing and her yield last year, he agreed to follow through one week later. Thus, despite 8-10 days of flooding, both farmers had bountiful yield with no crop loss. Bobita already sold her harvest at high price, while



Tale of 3 farmers - Bobita, Shahjahan and Ali

Shahjahan is ready to sell (as seen). Hossain Ali (back) owns land adjacent to both of them. He is a large farmer. Still not convinced, he stuck to planting after floods like before. Thus, his paddy is still in field with stunted growth due to falling temperature, reduced water supply and off-season for this rice variety. Next year, he plans to follow Bobita.

These kinds of learning by demonstration also spread climate-smart agri techniques.



Amena (L) and Zamana (R) catch up in the evening during their regular shared gardening sessions.

Another unique way is shared gardening sessions. Women farmers like Zamana Begum of Chakundar Par FFS used to join her neighbor Amena Zalal during the evenings for chit-chat. Now, they do the same over a shared garden. Thus, through casual conversations, new skills and techniques are transferred. Over last year, Amena has implemented sack gardening, grown 3 papaya trees and made a big trellis within her home, guided by Zamana.

CHANGING CROPPING PATTERN

Through F2F approach, climate resilient practices have spread beyond project impact groups, influencing farmers, both male and

female, and changing practices community wide. The most significant change has been looking at the whole farming calendar to influence cropping pattern as a whole instead of introducing one alternative crop.

In particular switching from commonly used BRRI-28 rice to Bina-11 rice (early variety) has allowed introduction of BINA-4 mustard seed. Thus, from a 2 crop cycle, farmers have shifted to 3 crops, raising income and diversifying risk.

The extent of adoption is clear from Aftab Miah of Abida Traders – a major agro-input retailer,

“In recent years, Mustard seeds have become popular, combined with BINA-11 and similar early harvest varieties rice from Lal Teer and other companies. Agriculture is shifting in Kurigram.”



Aftab, Seed Shop owner, Kurigram

IMPACT 5: FOOD SAFETY & NUTRITION

Homestead gardening is a component of WtRF project, addressing household resilience in through subsistence farming. The primary purpose being during flood season, all arable lands are waterlogged for months; thus, homestead gardening will secure partial food supply for those months.

Women farmers of WtRF strongly adopted and spread homestead gardening techniques despite limited economic benefits as they were motivated by familial and social factors.

**GOOD PRACTICE:
SAFETY, NUTRITION AND COMMUNITY**

Women Farmers invested heavily with time and resources, despite limited opportunity for economic benefits compared to commercial farming endeavors. One reason stated by many is trusting the source of food regardless of flood.

Maleka Begum of Tapur Gram FFS is one such farmer. Her family of 4 have a 30 decimal land adjacent to their home for farming. Their eldest son works in the city, sending money back; while her husband works as a dyeing expert. Joining FFS reignited their interest in agriculture, focusing on homestead gardening.

Their expertise shone through as in just 18 months, they turned their home into an arboretum. They grew 15 vegetable varieties, 2 staple foods, 3 spices, 4 wood trees, 14 fruit trees and 3 medicinal plants – totaling 38 varieties. Growing it all is vermi-compost pit they made in their homestead. Here’s what she started in her words,



Maleka Begum with her prized pumpkin (Left) and her family (Right)

“ I grow everything with vermi-compost, 100% natural! I want to be sure of what my children (boy and girl) are eating. Our neighbours, even those who farm vegetables for selling, buy from me. They don’t trust their own produce, using chemical fertilizers and pesticides. Once we (her and her husband) got the gardening bug, we didn’t stop till every inch of our homestead was used. ”

Like Maleka, many joined in, turning fallow spaces around homesteads and communities into gardens. Building on the social aspects of rural agriculture and F2F approach, FFS members formed “common gardens” with other

community members, working together and sharing the produce of vegetables. An example of this is in Chakundar Par. Momina Afsar is a tertiary beneficiary of WtRF, who was convinced by FFS members to turn a fallow land she had adjacent to her house into a communal garden. Her and FFS members worked on it together and shared the produce with all community members spreading WtRF’s benefits and practices of homestead gardening.



Momina Afsar (1st from left) with FFS members working on community garden



CONCLUSION

WtRF has built on its work to scale impact on resilience from household to communities and beyond. The final evaluation indicates impact of WtRF on agriculture in Kurigram:

50% farmers practiced at least 4 adaptive agriculture techniques and ~50% of female farmers are lead in combining flood tolerant aman rice with mustard crop, making them the face of resilience

However, as the aforementioned examples indicate, the impact goes beyond climate change adaptation. WtRF demonstrated resilient attitudes matter as much as practices. Recognizing women as farmers, acknowledging climate change in government budget and homestead gardening for nutrition are all important for lasting impact in ever-changing climate.



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