



GLOBAL  
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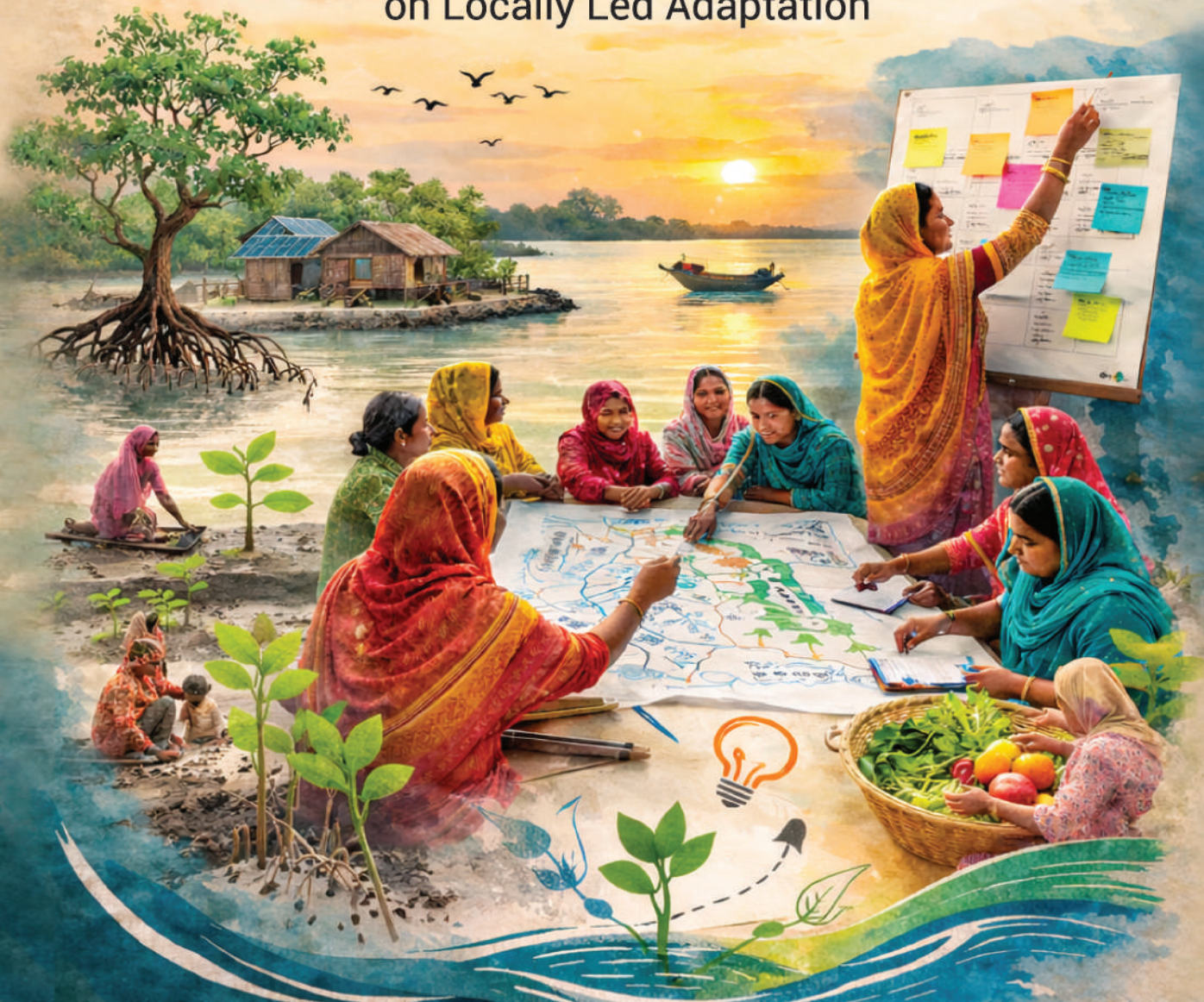
Uttaran

Canada

Women's Adaptation Plans for Climate Resilient Livelihoods in the Sundarbans

# Voices from the Sundarbans

**Case Stories,  
Lesson Learned & Good Practices**  
on Locally Led Adaptation



# Highlights of the Journey

The coastal Sundarbans in southwest Bangladesh has long been a place of survival, where land and water constantly reshape each other, cyclones regularly strike and salinity alters livelihoods. For generations, adaptation meant enduring the elements of rebuilding homes, reworking income strategies and absorbing shocks. But survival alone cannot overcome structural vulnerability. This book highlights a different path of adaptation, rooted in women's leadership.

Across thirteen case stories from villages like Moheshwaripur, Borobari and Kalabogi, women who once silently managed climate risks began analyzing them collectively. Through participatory mapping, seasonal calendars and structured reflection, women lived knowledge became documented expertise. This shift was not only economic but epistemic and institutional. Women moved from managing vulnerability to shaping adaptation strategies through the Women's Adaptation Labs (WAL), creating a space for collective decision-making and risk analysis.

Livelihood planning evolved from reactive responses to proactive, climate-responsive strategies. By evaluating ecological suitability, market access and financial capacity, households diversified their income sources, distributing risk and stabilizing cash flow. Homestead production and soil-sensitive agriculture improved nutrition, linking adaptation to wellbeing.

This transformation went beyond households. Community-generated evidence entered formal policy discussions through structured advisory platforms, connecting grassroots knowledge with governance systems. While change at the institutional level remains gradual, it marks the shift from coping to strategic, anticipatory planning. The ultimate outcome is cultural. Preparedness has shifted from emergency reaction to anticipatory habit. Resilience is no longer just about rebuilding aftershocks but about planning, diversifying and negotiating before the next storm.



# Stories of Women's Adaptation

Locally Led Transformation  
in the Sundarbans



# FROM REBUILDING TO RECLAIMING VOICE

**"Sabeya Begum"** Moheshwaripur, Koyra



*"Sabeya Begum: From surviving storms to leading change in her community"*

**A**long the southern edge of the Sundarbans, where land and water constantly negotiate their boundaries, Sabeya Begum has built her life in quiet determination. A divorced mother living in Moheshwaripur village in southwest Bangladesh, she carries the full weight of providing for her family in a landscape shaped by tides, storms and shifting soil. Her livelihood depends on small-scale agriculture, seasonal fishing and collecting honey from the forest, all deeply connected to the river that flows beside her home. The river sustains her family, yet it also threatens everything she works for.

Over the years, Sabeya has watched her surroundings slowly transform. The soil that once yielded vegetables has grown increasingly saline. Freshwater ponds, once reliable sources of drinking water,

turn brackish during dry months. Cyclones breach embankments and wash away savings accumulated through months of hard labor.

***"Every year we rebuild,"*** she says quietly, ***"but it feels like we are always starting over, never moving forward."*** The cycles of loss and recovery have become a rhythm of survival.

Her days begin before sunrise. She collects water, prepares meals, cares for children and elderly relatives and manages what little income the household can generate. When honey collection or fishing brings in earnings, she carefully allocates them to food, school supplies and repairs. When yields decline, she stretches resources further than they seem capable of stretching. After storms, she clears debris and repairs damaged structures; during periods of water scarcity, she walks longer distances in search of potable water. Climate change has not only increased financial uncertainty it has multiplied her unpaid labor and narrowed her margin for error.

Despite her central role in managing climate risks at the household level, Sabeya once had little say in broader adaptation or livelihood planning decisions. Community meetings were often dominated by men and women's daily experiences remained unrecognized as valuable knowledge. That began to shift when a participatory climate risk analysis initiative was introduced in her village. Women were invited to map hazards, assess local resources and reflect on how salinity, water scarcity and extreme weather affected nutrition, income and well-being.

For Sabeya, these sessions were transformative. She and other women described how saline intrusion reduced homestead gardening, affected children's nutrition and increased the burden of fetching safe water. Their insights were combined with scientific salinity data, hazard maps and seasonal calendars, creating a more complete understanding of vulnerability.

***"Now, we speak, we plan and our knowledge counts,"*** she explains. ***"I can see how what we do everyday matters to the bigger picture."***

Through this process, Sabeya and her peers co-identified adaptation priorities that extended beyond short-term income. They advocated for diversified, lower-risk livelihoods that could withstand salinity, protect household nutrition and reduce pressure on the Sundarbans ecosystem. They emphasized the importance of safer water access, embankment maintenance and stronger engagement with local authorities to address flood risks. Their proposals reflected a practical understanding of sustainability, balancing survival needs with environmental protection.

Participation has strengthened Sabeya's confidence in ways that reach beyond project activities. She now contributes actively to village consultations and speaks openly about community needs. Her perspective bridges lived experience and technical planning, ensuring that adaptation measures are grounded in daily realities.

***"I used to think my voice was too small,"*** she says. ***"Now I speak for my family and my neighbors and people listen."***

Sabeya's journey illustrates that climate vulnerability is shaped not only by exposure to hazards but also by access to voice, information and decision-making power. When women are recognized as knowledge holders and leaders, adaptation becomes more inclusive and sustainable. In Moheshwaripur, resilience is no longer defined solely by rebuilding after each storm, it is being redefined through participation, agency and collective planning. ■

# RESTORING THE SOIL, RESTORING DIGNITY

Ety – Uttarbedkashi, Koyra



*"Ety's resilience grows alongside her homestead garden,  
where climate adaptation transforms challenges into opportunity"*

**U**ttarbedkashi, a saline-affected union of the Sundarbans, agricultural uncertainty has deepened over the past decade. Ety, a smallholder farmer, had long depended on cultivating traditional rice and seasonal vegetables on her modest plot of land. However, despite declining yields and repeated crop losses, she continued planting the same varieties each year. Her farming decisions were shaped by inheritance and habits rather than evidence-based data. When harvests failed, they were often dismissed as the result of a "bad season."

***"I thought maybe Allah was testing us," Ety reflected. "Every year the harvest became smaller, but I did not know why."***

Everything began to change during the participatory hazard and resource mapping sessions facilitated through the Women's Adaptation Lab. Large, printed maps displayed localized salinity intrusion trends and historical waterlogging patterns. Community members were invited to mark areas of repeated crop damage. As Ety compared the technical salinity maps with the hand-drawn village resource map, she made a striking observation, her land fell squarely within a zone where salinity levels had steadily increased over the past ten years.

Seasonal calendars added another layer of insight, revealing that peak salinity levels coincided precisely with the flowering and grain-setting stages of her rice crops, critical growth phases highly sensitive to soil and water conditions.

***"For the first time, I could see my land on the map," Ety said quietly during one session. "The problem was not just a bad year. The soil itself is changing."***

Rather than abandoning agriculture altogether, which would have further increased her household's economic vulnerability, Ety chose a more strategic path. Through structured feasibility discussions and peer learning, she decided to divide her land into functional zones. A portion was allocated to saline-tolerant rice and pulse varieties, which were cautiously tested to manage risk. Another section was converted into homestead vegetable cultivation using raised beds to reduce exposure to waterlogging. She also introduced small livestock as an additional income buffer. The transition was gradual but informed. By spreading risk across multiple livelihood components, Ety reduced dependence on a single crop cycle. Within one year, she reported improved food diversity and fewer seasonal losses. More importantly, her decisions were now based on evidence rather than uncertainty.

***"Now I do not farm blindly," Ety explained. "I look at the season, the water, and the soil before I decide what to plant."***

Beyond her own field, Ety's confidence grew visibly. She began explaining salinity patterns and seasonal shifts to neighboring women, encouraging them to examine their own plots in relation to risk maps. Within the Women's Adaptation Lab, Ety emerged as an informal peer resource, helping others interpret data and link it to lived experience.

Ety's journey illustrates a deeper shift: climate analysis moved from abstract projections to practical household decision-making. Scientific data did not replace her knowledge; it validated and strengthened it.

Ety's experience demonstrates that climate adaptation is not merely about shifting livelihoods, it is about redesigning the relationship between people and ecosystems. By integrating environmental restoration with income generation, she transformed vulnerability into opportunity. ■

# WHEN WOMEN SIT AT THE TABLE

## The Women's Adaptation Lab



*"Women come together to reshape their community's future, turning climate challenges into actionable plans"*

**O**n a humid afternoon a group of women sit in a circle under a shaded courtyard. There are no microphones, no formal stage, no raised platform separating leaders from listeners. Yet what unfolds in this space carries quiet significance. For many of these women, this is the first time they are not simply attending a meeting they are shaping one.

For years, community discussions about embankments, disaster response and livelihood challenges were dominated by men. Women listened but rarely influenced decisions. Their labor sustained households; their knowledge remained confined within home boundaries.

That pattern began to shift when the Women's Adaptation Lab (WAL) was formed under the Women's Adaptation Plans project.

The Lab was not designed as a typical committee. It was structured as a safe and analytical platform where women could collectively examine climate risks, map resources and discuss livelihood strategies using structured tools. Seasonal calendars were drawn. Hazard zones were identified. Water sources were mapped. Income fluctuations were analyzed.

At first, conversations were hesitant. Many women were unsure whether their observations were "important enough" to share. But as discussions deepened, a realization emerged: the daily management of water, food, health and household finance made them the most consistent climate risk managers in the community.

***"We always knew the problems," one member recalls. "But this was the first time someone asked us to analyze them."***

Through collective reflection, the group in Borobari identified several key vulnerabilities affecting their community. They observed that increasing salinity was significantly impacting homestead production, making it difficult to grow crops and maintain gardens. Additionally, the irregular income from traditional livelihoods, such as fishing and agriculture, further deepened their economic instability. The women also highlighted the limited access to safe water during the dry seasons, which exacerbated both daily living conditions and health concerns. Furthermore, they noted the weak engagement with local authorities, which hindered their ability to effectively address these challenges and advocate for necessary resources and support. ■



*Empowering women with the Five Capital Framework:  
"Turning local knowledge into resilient, sustainable solutions for the future"*

Using the five-capital framework, they examined available resources—human skills, social networks, physical assets, financial capacity and natural resources. This structured process transformed discussion into strategy. What distinguished the Lab was not only participation but leadership rotation. Women facilitated sessions, documented insights and presented findings to broader village meetings. The dynamic shifted visibly. Women who once hesitated to speak began summarizing group decisions confidently.

As business plan development began, the Lab functioned as a peer-review platform. Members evaluated each other's livelihood ideas for feasibility, market demand and environmental sustainability. Constructive feedback replaced silent observation. The collective also engaged with Local Project Advisory Committee (LPAC) representatives, linking village-level analysis with institutional platforms. For the first time, structured documentation of women's priorities entered formal consultation spaces.

***"Our problems are no longer only inside our homes," another member explains. "They are part of village planning."***

The shift was subtle but profound. Collective leadership began reducing internal competition and building mutual accountability. Members supported each other in accessing markets, sourcing inputs and managing risks. Knowledge sharing accelerated.

Beyond economic outcomes, the Lab altered social perception. Male community members increasingly recognized women's analytical contributions. Invitations to broader meetings included female representatives as decision-makers rather than observers.

Leadership is no longer defined by loud voices or hierarchical authority. It emerges through structured dialogue, shared learning and collective responsibility.

The Women's Adaptation Lab demonstrates that resilience is strongest when it is organized and when women are not only participants but architects of local adaptation pathways.

# PLANNING FOR PROFIT, PLANNING FOR STABILITY

Monika Rani Mondal – Moheshwaripur, Koyra



*"From relying on uncertain labor to building a stable future with her own climate-resilient grocery shop"*

**O**n market day in Moheshwaripur bazaar, Monika Rani Mondal watches buyers negotiate prices for essential goods like soap, salt, oil, and dry food. For years, she stood on the margins of such transactions occasionally selling small quantities of dry food or homemade products, never certain of the return. Income was irregular, prices fluctuated, and decisions were often reactive rather than planned.

In Moheshwaripur village, Monika's family relied on irregular agricultural labor and her husband's seasonal fishing income. However, increasing waterlogging, crop loss, and cyclone disruptions

reduced wage opportunities and made household income highly unpredictable. During monsoon months, the family often struggled to manage daily expenses and school costs for their children.

***"With farming, one flood can destroy everything," Monika shared. "But people always need daily goods. I started thinking differently about income."***

Monika's turning point came when she became involved in the Women's Adaptation Plan project. There, she participated in structured livelihood screening sessions, shifting her focus from climate-sensitive farm-based activities to small enterprises that were less exposed to environmental shocks. Through seasonal income mapping and market analysis, Monika realized that local demand for essential goods remained constant, even during floods or other climate-induced disruptions. Basic goods like salt, oil, dry food, and soap were always in demand.

With technical guidance and basic financial literacy training, Monika piloted a small grocery shop from a raised section of her home. The risk screening process included assessing flood exposure, safe storage systems, supply chain reliability, and working capital needs. Unlike seasonal labor, the grocery business provided consistent income throughout the year, including during climate shocks when mobility was

restricted, but demand for essentials remained high.

***"I no longer wait for work to come," Monika explained. "I manage my own business, and I can plan for my children's future."***

As her grocery shop became a reliable income source, Monika's role within the family shifted. She began contributing regularly to savings, managing household budgeting, and participating actively in financial decisions. The shop also became a small community support point during emergencies, supplying essential goods when transport routes were disrupted.

Monika's climate-resilient grocery shop illustrates how diversified, market-informed microenterprises can reduce exposure to environmental risks while strengthening women's economic agency. By moving beyond climate-sensitive wage labor, she established a sustainable income model that aligned with local demand and adaptive planning.

Her journey demonstrates that climate resilience is not limited to agricultural innovation alone. It also includes strengthening local market systems and women-led entrepreneurship, which is crucial for community-level resilience.

In Moheshwaripur, adaptation is no longer only about surviving environmental shocks. It is about building enterprises that can absorb them. ■

# THE SEARCH FOR SAFE WATER

Anita Mondal – Uttarbedkashi, Koyra



*"Balancing her tea stall and the daily challenge of securing safe water in a changing climate"*

**U**ttarbedkashi village, where salinity intrusion quietly reshapes daily life, Anita Mondal balanced long hours at her small tea stall with the growing burden of securing safe drinking water for her family. As freshwater ponds became increasingly saline and unreliable, Anita found herself walking longer distances to collect water, often before opening her shop at dawn. The additional time reduced her earning hours and left her physically exhausted.

***"Every year the water tastes saltier," Anita shared. "I spend more time searching for safe water than running my shop."***

Like many others, Anita had heard climate change discussed in general terms. Cyclones, salinity, erratic rainfall, these were familiar words. Yet she had not initially connected them directly to her daily workload, declining business hours, or seasonal illness patterns in her family.

This perspective shifted during participatory seasonal calendar exercises facilitated through the Women's Adaptation plan project. Women collectively mapped rainfall variability, peak salinity months, labor demand cycles, water scarcity periods, disease outbreaks, and income gaps. As patterns emerged visually on large charts, Anita noticed something striking: the months when her tea stall sales dropped, when household illness increased, and when water collection became most difficult were not random, they overlapped consistently.

***"It is not just one problem," she observed during the session. "When water becomes scarce, everything becomes difficult health, income, even peace in the house."***

Hazard mapping exercises further revealed how saline intrusion had expanded beyond agricultural land, gradually contaminating

freshwater ponds traditionally used for drinking and cooking. Her local observation prompted additional validation visits and group discussions. The village risk profile was updated to reflect these micro-level realities, strengthening both accuracy and community ownership of the data.

***"For the first time, our experience was written on the map," Anita later reflected. "Before, we only complained. Now we can show the problem."***

Armed with clearer evidence, Anita began rethinking her household strategy. She invested in improved water storage containers to better manage peak salinity months and diversified her tea stall offerings to include dry snacks that required less water preparation. Within the Women's Adaptation Lab, she advocated for integrating water security priorities into local planning discussions and encouraged other women entrepreneurs to assess how seasonal risks affected their businesses. Her engagement extended beyond personal adaptation. Anita emerged as a vocal participant in consultations with local representatives, linking water access directly to women's economic productivity. She framed water security not merely as a household issue, but as a foundation for sustaining small enterprises in climate-vulnerable communities. ■

# LEARNING TO LEAD BEFORE THE NEXT STORM

Purnima Rani Mondal – Moheshwaripur, Koyra



*"Empowering her family and community, one step at a time, through climate-resilient farming"*

**A**t 44, Purnima Rani Mondal had already spent decades navigating the invisible but essential responsibilities of rural life. Each day began before sunrise, walking long distances to collect drinking water, as salinity gradually contaminated nearby sources, tending to small livestock, preserving food ahead of cyclone warnings, and protecting her home from tidal floods. Climate change was no longer a distant concept for her, it was embedded in her daily survival.

Yet despite her profound understanding of environmental shifts, Purnima had rarely spoken up in

public meetings. Community planning spaces had traditionally been dominated by male elders, and women's voices were often sidelined. Women like Purnima, who carried the weight of survival for their households, were rarely invited to contribute insights on climate change in planning discussions.

***"I knew the problems very well," Purnima shared, "but I never thought my knowledge was important enough to speak about in front of others."***

This began to change when Purnima joined the project. Initially, the ideas discussed in the project seemed abstract, but as she engaged in participatory risk mapping and seasonal calendar exercises, she began to see her lived experiences translated into structured evidence. She began connecting the dots between longer water collection times, declining crop yields, rising food prices, and increasing cyclone frequency. These problems, which she had always seen as isolated challenges, were now recognized as part of a larger pattern of climate risk.

***"For the first time," she said, "I saw that what happens in my courtyard is connected to bigger changes in the climate."***

In the Women's Adaptation Lab, the structured facilitation approach ensured equal speaking opportunities and respectful dialogue, fostering a safe space for women like Purnima to share their knowledge. As the discussions evolved, Purnima's confidence grew. She began contributing practical, low-cost solutions, such as improved crop diversification and better livestock protection during extreme weather. Her ideas were no longer abstract; they were evidence-based, grounded in her lived experience.

Encouraged by peer support and facilitator mentoring, Purnima eventually took on a more prominent role. She represented her group during joint consultations with community leaders, using risk assessments to articulate

how water insecurity and food instability were interwoven with climate risks. Her presentation was clear, structured, and directly aligned with local development priorities.

***"I used to think meetings were only for educated people," she reflected. "Now I understand that experience is also knowledge."***

At home, Purnima's transformation was just as profound. Her participation in the Lab gave her a greater voice in household decision-making. Her husband began consulting her before allocating resources for crop input and livestock improvements. What had once been silent labor became recognized expertise. Purnima now actively contributed to discussions about savings and climate-resilient investments in her family.

The transformation also had an impact on her community. As Purnima began to share her insights and solutions in the Lab, older community members began to recognize that climate adaptation was not just about surviving seasonal shocks, it was about strategic planning. Purnima's involvement in the Lab bridged the gap between daily survival and systematic, proactive resilience.

Her story demonstrates how locally led adaptation can empower individuals and communities. When women's leadership expands, it doesn't just affect the present, it creates intergenerational pathways for climate resilience. Purnima's engagement with the Women's Adaptation Plan not only transformed her household's resilience but also helped shape a future where knowledge sharing and collective responsibility lead to sustainable adaptation for the entire community. ■

# NOT ONE BASKET, BUT MANY

Dipti Rani Mondal – Sutarkhali Union, Dacope



*"From weathering climate shocks to building stability with her climate-resilient grocery business"*

**O**n a woven mat spread across the floor of her home in Sutarkhali Union, Dipti Rani Mondal arranges small piles of money in front of her. One stack for poultry feed. Another for school expenses. A third for household essentials. There is no single large sum instead, several modest earnings collected from different sources over the week.

For years, her family depended almost entirely on seasonal farm labor and small-scale crop cultivation. When flooding and salinity reduced yields, and waterlogging shortened cropping

cycles, her household economy became unstable. Daily wage opportunities have become unpredictable, leaving long income gaps especially during monsoon months.

***"We always waited for one income," she says. "If that failed, everything failed."***

Climate variability worsened this vulnerability. Cyclones and salinity reduced agricultural opportunities, while disrupted transport routes and market closures increased the uncertainty. Dipti and her family found themselves in a cycle where, if one source of income failed, they had little to fall back on.

During livelihood diversification assessments, Dipti and other participants explored how they could reduce their dependency on climate-sensitive agriculture. Through participatory risk analysis sessions, Dipti realized that while farm-based income was declining, the local demand for essential goods remained steady throughout the year even during floods. The group conducted a basic market scan, reviewing purchasing patterns, competition, transport disruptions, and storage risks.

The analysis indicated that a small, strategically stocked grocery shop could provide a steady income with comparatively lower exposure to climate shocks. Unlike agriculture, retail trade was less vulnerable to salinity and rainfall variability, provided that storage and supply chains were carefully planned.

***"With farming, we always waited for the weather," Dipti explained. "If there was too much rain, we lost everything. But people always need rice, oil, salt, and soap."***

With structured guidance, Dipti developed a simple business plan that prioritized essential commodities with high turnover and stable demand. To reduce climate risk, she elevated storage shelves above historic flood levels and

diversified suppliers to prevent stock shortages during transport disruptions. The initiative also encouraged discussions within her household regarding shared responsibilities. As Dipti gradually expanded her shop operations, her family began supporting procurement from nearby markets reducing her mobility constraints and strengthening household cooperation.

***"At first, I was afraid to invest," she recalled. "But after learning how to calculate risks and profits, I felt more confident. Now I understand my business decisions."***

Gradually, Dipti's grocery shop began generating consistent weekly income, smoothing the seasonal fluctuations that had previously strained the household. The shop not only improved her family's financial stability, but also enhanced her standing within the community. Neighbors increasingly relied on her store during flood periods, when travel to distant markets was difficult. Beyond income, the initiative strengthened her financial management capacity. Dipti opened a savings account and began setting aside small, regular amounts for reinvestment and emergency preparedness.

This shift from reactive coping to proactive planning marked a significant step toward long-term resilience.

***"I am no longer waiting for work," Dipti said. "I have created my own work." ■***

# FROM WAITING FOR HELP TO BUILDING HER OWN FUTURE

Sunita Boiddo – Uttarbedkashi, Koyra



*"Nurturing her crops and her future, one resilient step at a time"*

**T**here was a time when Sunita Boiddo measured each monsoon season in fear. In Uttarbedkashi village, the rising water often meant waiting for flood levels to recede, waiting for damaged homes to be repaired, waiting for occasional relief assistance to arrive. Her household had little land, no savings, and irregular income from small-scale homestead gardening. When flooding and rising temperatures affected her crops, everything became uncertain. A single bad season meant borrowing from neighbors or cutting back on food.

***"I used to think survival depended on what others gave us," Sunita recalls quietly.***

Sunita's vulnerability was shaped by multiple factors: limited physical assets, weak financial reserves, and restricted access to structured income opportunities. Climate shocks magnified these constraints. Flooding and temperature rise damaged small investments before they could mature. Without a clear livelihood plan, she moved from one temporary activity to another, never building stability.

Her entry into the project marked the first time she was invited not simply as a beneficiary but as a planner. During structured project sessions, Sunita began to connect her observations to broader climate patterns. Scenario analysis, seasonal risk mapping, and livelihood screening exercises allowed her to see how climate risks were directly linked to her income stability and unpaid care burden.

For the first time, Sunita realized that adaptation wasn't just about reacting to problems, it was about proactive planning. She began to evaluate adaptation strategies not just for profitability, but also for workload balance, environmental sustainability, and household acceptance.

A turning point came during a negotiation skills module, where participants practiced framing adaptation investments in terms that resonated with family priorities. This included financial security, reducing the risk of loss, and improving food availability. Equipped with

evidence from WAL risk assessments and cost-benefit discussions, Sunita initiated a structured conversation with her husband and in-laws.

She presented the case for reinvesting savings into elevated poultry housing and diversified, heat-tolerant vegetable varieties.

***"At first, they worried about the cost," she shared. "But when I explained how much we lose each season due to flooding, they understood that prevention is cheaper than recovery."***

Her proposal was accepted. The improved poultry shed reduced mortality during water-logging, while crop diversification stabilized household nutrition and income. Beyond the economic gains, this process marked a shift in intra-household dynamics.

***"Before, I would ask for permission," Sunita noted. "Now, I present a plan."***

Her growing confidence extended into the community. Within the project, she emerged as a peer mentor, encouraging quieter members to articulate their ideas and guiding discussions on workload-sharing within families. She also began advising neighboring women on simple cost-risk calculations before adopting new livelihood options.

***"If we understand the risk," she often told them, "We can make decisions with strength, not fear." ■***

# SPEAKING ACROSS THE TABLE

Salma Akhter – Uttarbedkashi, Koyra



*"From small-scale online business to advocating for climate-resilient infrastructure, empowering women entrepreneurs to thrive"*

**T**he room felt different from the corner of her home where Salma Akhter usually packed online orders and tracked mobile payments.

Seated around a long table were Union Parishad representatives, sector department officials, and project facilitators. Discussions centered on infrastructure gaps, service delivery, and local development priorities. For many in the room, these meetings were routine. For Salma, it was a new world, yet one that was becoming increasingly connected to hers.

Just a few years earlier, she wouldn't have imagined participating in such formal spaces. In Uttarbedkashi Union, Salma had started a small online business, selling locally crafted items through social media platforms. What began as a modest income effort grew into a reliable microenterprise. Yet every monsoon, frequent power outages disrupted her customer communication and delayed deliveries. Clean water shortages added strain to household operations. Climate risks weren't abstract, they directly interfered with her ability to work, earn, and grow.

***"People think climate change only affects crops," Salma said. "But when power goes out or water is scarce, my business suffers too."***

Through structured risk assessments and scenario planning sessions, Salma learned to translate her personal challenges into collective evidence. She recognized that local infrastructure, especially water, electricity, and connectivity was central to climate-resilient livelihoods, not just for farmers but for women entrepreneurs like herself.

When the Local Project Advisory Committee (LPAC) began engaging with WAL members, Salma was selected to share key priorities. At first, she hesitated. Formal presentations felt intimidating. But supported by maps, planning matrices, and her lived experience, she gained confidence.

She explained how frequent electricity cuts reduced customer satisfaction and undermined business consistency. She linked water insecurity to women's unpaid labor and reduced productive time. Most importantly, she framed her proposal within existing government programs—highlighting how improvements in WASH and energy services could enable more women to contribute economically.

***"I am not asking for charity," she told the room. "I am asking for systems that allow us to keep working and building our future."***

The response shifted. Union officials acknowledged that local economic development could no longer rely on agriculture alone. Salma's presentation helped expand the development lens to include microenterprises and informal women workers affected by climate risks.

Participating in LPAC discussions also deepened Salma's understanding of governance processes. She began identifying entry points in existing schemes, budget plans, and service delivery systems. At home, her role evolved. She wasn't just managing a small shop, she was now part of a broader planning conversation.

Back in Uttarbedkashi, she shared her experience with other women running home-based enterprises. She encouraged them to keep records, document barriers, and engage in community meetings not as passive recipients, but as contributors with evidence and voice.

Salma's journey illustrates the expanding frontier of locally led adaptation: when grassroots economic actors speak across institutional tables, climate resilience becomes more inclusive. Adaptation planning moves beyond farms and embankment reaches into homes, devices, and enterprise ledgers.

In Uttarbedkashi, resilience is no longer confined to survival strategies. It's being shaped by women like Salma who sit, speak, and influence how communities thrive in a changing climate. ■

# WHAT THE PLATE REVEALS

Ratna Mondal – Moheshwaripur, Koyra



*"Cultivating resilience through diversified farming and empowered decision-making"*

In Ratna Mondal's kitchen in Moheshwaripur, the changes brought by climate are visible not in maps or reports, but on the plate. There was a time when her meals included fresh vegetables grown in the homestead yard leafy greens, gourds, and seasonal produce that required little cash expenditure. Fish from nearby canals supplemented the diet. Meals were simple but balanced.

Over the years, as soil salinity increased and freshwater sources declined, the variety diminished. Vegetables struggled in saline soil. Crop yields dropped. Purchasing produce from the market became necessary and expensive.

**"Sometimes," she says softly, "we had rice and salt and little else."**

Climate variability affected not only income but food diversity. When household earnings fluctuated,

nutrition was often the first compromise. Protein intake decreased. Fresh vegetables became occasional rather than regular.

Ratna carried the quiet responsibility of managing food distribution within the family. She reduced her own portions so children could eat more. She adjusted recipes to stretch ingredients. Yet she recognized that these coping strategies were temporary.

Her involvement in the Women's Adaptation Plan reframed nutrition as a climate issue rather than a private struggle.

During participatory discussions, women mapped how salinity intrusion affected homestead gardens. Seasonal calendars revealed months of acute food insecurity. Facilitators introduced the connection between climate risk, livelihood instability, and household nutrition.

For Ratna, the realization was powerful: ***"Food problems are not only about money. They are about environment."***

Through livelihood screening sessions, she identified small-scale vegetable cultivation using improved soil management techniques and compost application as part of her adaptation plan. Combined with limited poultry rearing, this created both income and direct nutrition benefits.

With technical guidance and peer support, she began cultivating saline-tolerant vegetable varieties in raised beds. Compost improved soil texture. Production was modest but consistent. Fresh vegetables gradually returned to the household diet.

Income from surplus produce sales supplemented food purchases during lean periods. More importantly, dietary diversity improved.

But perhaps the most significant change was not only in what they ate, but in how household decisions were made.

Initially, like many women in the village, Ratna had very little influence over financial decisions. Her husband and elder male relatives were the ones who decided where money would go, from purchasing farm inputs to planning savings. But through her growing involvement in the Women's Adaptation Lab, Ratna gained the confidence to actively contribute to household decisions.

With her newfound knowledge and authority, she

began discussing savings, reinvestment, and financial planning with her husband. Together, they decided to allocate part of the household savings to strengthen the gher embankments and invest in salt-tolerant vegetable varieties. For the first time, Ratna had an equal say in financial decisions, which directly influenced the household's economic stability.

***"Before, I would ask for permission," she recalls. "Now, I present a plan."***

Ratna's confidence extended beyond household boundaries. She became an active participant in community meetings, using her experience with livelihood diversification and food security to advocate for climate adaptation strategies that considered the interconnectedness of agriculture, nutrition, and household decision-making.

Her transformation also sparked a change in household dynamics. Her husband, once the primary decision-maker, began consulting her about important choices related to financial management, food production, and livelihood strategies. Ratna wasn't just managing household tasks she was now contributing to long-term planning and sustainable investments, helping the family become more resilient in the face of climate impacts.

The shift in power dynamics wasn't only economic; it was social and emotional. Ratna was no longer seen as simply the provider of meals; she was recognized as an equal partner in shaping the family's future.

Ratna also began tracking seasonal patterns of food availability, aligning her household planning with projected income cycles. Instead of reacting to shortages, she prepared in advance.

The Women's Adaptation Lab discussions strengthened her understanding of nutrition as part of resilience. She now speaks openly about the importance of balanced meals during community sessions, particularly for children and pregnant women.

***"When we protect our soil," she explains, "we protect our food."***

Her story highlights a crucial but often overlooked dimension of climate adaptation: resilience is measured not only by income growth or infrastructure repair, but by the quality and diversity of food on the family table, and by the empowerment of women to make decisions that shape their household's future. ■

# FROM SURVIVAL TO SUCCESS: REVIVING DREAMS THROUGH EMPOWERMENT

Urmila Mondal – Moheshwaripur, Koyra



*"Transforming her life and community through sustainable candle-making and entrepreneurship"*

In the coastal village of Moheshwaripur, nestled on the edge of the Sundarbans, Urmila Mondal's life reflected the struggles and resilience of women from rural, low-income communities. Born into a family with limited resources, Urmila's aspirations stretched far beyond the confines of her village. She earned her BSc and MSc in Chemistry from Khulna, a rare accomplishment for a woman from her socio-economic background. However, societal expectations and financial constraints soon dashed her dreams of pursuing a career. Like many women in her situation, marriage became her next step.

At 26, Urmila settled into married life, raising two children – a son and a daughter with her husband. While her family of four appeared content, life was far from easy. With limited income, a lack of

opportunities, and the constant pressure of daily survival, Urmila's life became a repetitive cycle of hardship. To support her family, she began collecting crabs and shrimp larvae from the rivers of the Sundarbans, a backbreaking job that not only took a toll on her physical health but also exposed her to numerous health issues, including gynecological problems from the saline water.

Reflecting on her circumstances, Urmila said, ***"Life and God chose this path for me. I never wanted this, but when I look at my children, I go to the river to earn whatever I can. My husband's income can barely feed them, and education feels like a distant dream."***

For years, Urmila's life revolved around this daily struggle. But everything began to change when the Women's Adaptation Plan (WAP) project arrived in her village. Initially, she was hesitant to engage. With the responsibility of feeding her children and maintaining her health, she had little time for community activities. But as the WAP project's courtyard sessions and Women's Adaptation Lab (WAL) activities began,

Urmila's interest slowly grew.

During these sessions, Urmila started recalling her old dreams of becoming a businesswoman. She envisioned using her knowledge as a chemist to start something in her community a candle-making business. Candles were always in demand due to frequent power outages, especially during disasters. Urmila thought to herself, ***"Why buy candles when I could make them myself? As a chemist, this could be my way out of poverty."***

With the support of the WAP project's facilitators, community volunteers, and researchers, Urmila began mapping out a plan. The project helped her understand available resources, local market dynamics, climate stress factors, and how to adapt her skills to create a sustainable livelihood.

Through a series of meetings and planning sessions, Urmila worked alongside experts to refine her business idea. A comprehensive plan was developed, including material lists, market analysis, and a clear roadmap to turn her candle business into a reality.



The WAP project played a pivotal role in Urmila's journey. It provided her with essential business training, including business management strategies and market linkage facilitation. The project also provided all the materials she needed to start her business, from raw materials to packaging supplies. Additionally, Urmila received training in facility development and how to manage budget critical skills that helped her scale her business. ***"The project not only gave me the tools to create candles but also helped me understand the business side of things," Urmila shared. "They guided me every step of the way and taught me how to manage my time, resources, and finances more effectively"***

Within a month, Urmila's candle business was up and running. She began crafting a variety of candles colored, scented, and even decorative ones all made from local honey wax, which her husband collected as a honey producer. To her surprise, the demand for her products exceeded expectations. In less than a month, her earnings multiplied fivefold compared to what she had earned in two months from her previous work.

But the story didn't end there. Urmila's success became a catalyst for change in her community. As her candle business flourished, women from neighboring villages, like Fahmida from Uttarbedkashi, came to visit, intrigued by Urmila's success. They learned from her, observed her process, and saw the tangible results of hard work and perseverance. Inspired by Urmila's example, Fahmida started her own small business, focusing on honey-based products, using the resources available in their community.

Furthermore, Urmila's success in business inspired many other women in her community to start their own ventures. Groups of women, who had previously lacked the confidence to begin their own businesses, began reaching out to Urmila for mentorship. ***"Women from other groups started coming to my shop to learn, ask questions, and manage budgets," Urmila explained. "I have also helped them figure out how to start their businesses, just like I did."***

The WAP project's influence extended beyond Urmila's personal journey. It became a model for empowerment, with women now actively

participating in the local economy. Many women, after seeing Urmila's success, were planning to join her in this business, and some had even started to manage their own candle-making ventures. This transformation showed how a single business could spark a wave of entrepreneurial spirit across an entire community.

Urmila's business also had a broader market impact. Initially, her business was local, but she connected with district-level market sellers who were impressed with the quality of her organic candles. This connection opened up new opportunities for Urmila. ***"The mix of organic and chemical wax helped me lower the production costs," Urmila explains. "By reducing costs, I could offer a better price to my community while still making a profit. It was a win-win."*** The candles, priced reasonably, became popular within the community, especially during power cuts and disaster seasons.

Urmila now plans to expand her business. ***"I want to create a small-to-medium business making organic candles and eventually sell them online. My dream is to grow my business and collaborate with other women entrepreneurs in the project,"*** Urmila said proudly. With support from the WAP project and the strong local market demand, Urmila is confident that her business will thrive.

Her story of transformation has also prompted other women in her community to think bigger. The Women's Adaptation Lab (WAL) has become a space where Urmila and others share their knowledge, discuss market trends, and learn from each other. Market actors, local sellers, and entrepreneurs visit the lab to see the potential of local businesses and to explore new opportunities.

Urmila's journey is a testament to the power of locally led adaptation and community-driven change. Through the WAP project, she not only revived her long-forgotten dream but also created a ripple effect, inspiring countless other women to pursue their own business ventures. It is a powerful reminder that with the right support, resources, and a spark of belief, dreams can be turned into reality even in the face of adversity. ■

# NO ONE LEFT BEHIND

## Lipika Mondal – Sutarkhali Union, Dacope



*"Defying limitations with resilience and leadership,  
transforming challenges into opportunities"*

Lipika Mondal moves carefully across the uneven courtyard of her home in Sutarkhali Union. A childhood illness left her with limited mobility in one leg. In a landscape where embankments break and floodwaters rise without warning; physical movement is not a small matter, it determines safety.

For years, climate risks intensified her vulnerability. During cyclones, evacuation meant relying entirely on others. When floodwater entered the homestead, navigating slippery ground became dangerous. Income opportunities were limited because most available work required physical endurance.

***"I always felt I was the last to prepare and the first to worry," she says.***

Climate change has magnified structural barriers. Uneven roads, damaged embankments, and distant

water sources disproportionately affected people with disabilities (PWD). Yet adaptation discussions rarely included their specific needs.

During participatory climate risk mapping sessions, facilitators encouraged women to identify not only environmental hazards but also social vulnerabilities. Lipika spoke about evacuation challenges, access to water during flooding, and the difficulty of participating in physically demanding livelihood options.

Her perspective reshaped the discussion.

For the first time, accessibility became part of climate planning conversations. During these participatory climate risk mapping sessions, the Lab members focused on addressing key questions that would help create more inclusive adaptation strategies. They explored how livelihood activities could be designed to accommodate women with limited mobility, considering the unique challenges that individuals like Lipika face. They also examined how household-level preparedness could reduce dependency on others during evacuation situations and discussed how community alert systems could be made more inclusive, ensuring that persons with disabilities (PWD) were not left out of critical communications.

Through livelihood screening, Lipika identified small-scale, home-based enterprise options that suited her physical capacity. With support from the project, she developed a structured business plan for running a small tailoring and household goods business from her home. This plan included various components, such as startup cost estimation, market demand assessment, seasonal income projections, and risk mitigation strategies to ensure continuity during flooding or other climate-related disruptions. Unlike physically intensive activities, this enterprise allowed continuity even during mild climate disruptions.

Before her participation in the Women's Adaptation Plan, Lipika's role in household decision-making was limited. Income decisions were primarily managed by her husband and male relatives. She felt that her disability often resulted in her being seen as dependent, even though she contributed to the family's survival through traditional fishing and handicraft work.

But through her involvement in the process and the confidence it gave her, Lipika began to shift these dynamics. With increased knowledge and confidence, she started discussing savings, reinvestment, and business expansion strategies with her husband. She successfully advocated for allocating part of her earnings to repairing safer river access points near her home, making it more accessible for her during high tide or floods.

Her family began to recognize that Lipika's contributions were not just household chores but strategic decisions that helped stabilize the family's livelihood. Her husband and other male relatives, who once took the lead in family decisions, gradually began consulting Lipika about financial choices, livelihood activities, and family investments. This marked a significant shift in power dynamics from being excluded from decision-making to being an active and equal partner in shaping the household's future.

Her growing confidence was visible not only in financial planning but also in community leadership. Lipika began speaking at community forums, advocating for disability-inclusive adaptation planning. She challenged the perception that people with disabilities were unable to participate meaningfully in climate adaptation and resilience planning.

***"I used to stay quiet," she reflects. "Now I explain what we need."***

Her involvement also influenced collective awareness. Other members began actively considering PWD needs in planning discussions. Adaptation priorities were no longer generic; they became inclusive.

Beyond income generation, Lipika's story highlights an essential principle: vulnerability is layered. Climate exposure intersects with physical ability, gender, and social status. Effective adaptation must recognize these intersections.

Resilience is not measured only by embankment height or income growth. It is measured by whether every household, including those with persons with disabilities (PWD) can participate, prepare, and recover with dignity.

***"No one should be left behind," Lipika says firmly. "Resilience must include all of us." ■***

# FROM MAPPING RISKS TO MOBILIZING ACTION

## The Rise of Women-Led, Locally Grounded Adaptation Planning



*"Mapping risks and shaping solutions for a resilient future"*

In the coastal villages bordering the Sundarbans, communities had long adapted to climate challenges with limited influence over the decisions that affected their lives. Homes were rebuilt after cyclones, livelihoods shifted in response to salinity, and women reorganized household budgets to cope with seasonal income gaps. However, critical decisions about embankment maintenance, water management, and resource allocation were made elsewhere, often disconnected from daily realities.

This began to change with the Women's Adaptation Plans (WAP) project, which introduced structured, women-led, and locally grounded adaptation planning aligned with institutional systems.

Initially, the change was procedural. Facilitators invited women and community members from Kalabogi,

Borobari, and Moheshwaripur to map their villages. They drew embankments, ponds, tube wells, homesteads, flood-prone areas, and livelihood zones. Seasonal calendars were developed to identify months of peak vulnerability, and salinity data and hazard analysis were introduced to complement local observations.

For many participants, it was the first time their lived experience was translated into actionable, documented evidence. One participant reflected, **"What we knew in our hearts was now on paper."** This participatory climate risk assessment created a shared understanding of exposure, sensitivity, and adaptive capacity, where women's daily experiences, once confined within households, became central data points in structured analysis.

The Women's Adaptation Labs (WALs) became structured platforms for co-creation, where women assessed their human, social, natural, physical, and financial assets before selecting livelihood pathways. The business plans developed during these sessions integrated climate risks, market feasibility, and seasonal variability. Risk mitigation strategies, such as elevated poultry shelters, saline-tolerant crops, and income diversification were embedded from the outset.

The shift became evident at the governance interface. The Local Project Advisory Committee (LPAC), which connected village-level findings to institutional actors, allowed women to present their climate risks and adaptation needs directly to local authorities and decision-makers. This interaction marked the transformation of their concerns from

informal complaints to evidence-backed proposals. **"We no longer wait for solutions. We create them,"** said one Lab member. The shift from reactive coping strategies to proactive planning was evident: over the course of a year, changes were observed in household diversification, business planning literacy, nutrition awareness, and seasonal preparedness. The most significant transformation was in behavior: adaptation planning moved from a one-time emergency response to an ongoing, continuous process, with women taking the initiative to update seasonal risk calendars and adjust income strategies before each monsoon season.

The Kalabogi, Borobari, and Moheshwaripur experience demonstrated the importance of structured participatory risk assessments, analytical livelihood screening, and institutional linkages through advisory mechanisms. This approach not only fostered continuous learning within the community but also integrated various aspects of adaptation, making it a more resilient system.

As one participant said, **"Now, we speak with evidence. Now we are heard."** These transformations are setting the foundation for locally led adaptation, ensuring that the future of Sundarbans is shaped by women's leadership, backed by data-informed decision-making, and aligned with institutional frameworks.

In the Sundarbans, resilience is no longer about waiting for solutions; it is about mobilizing actionwomen-led action, where community-generated evidence shapes the adaptation pathways, ensuring that resilience becomes both locally grounded and structurally durable. ■



*"Women take the lead in adapting to climate risks, continuously updating strategies for resilience and empowering their communities"*

# Good Practices Emerging from Locally Led Adaptation in the Sundarbans

Effective practices that advance gender-responsive, community-driven resilience in climate-vulnerable coastal areas

<p><b>Reframing Women as Climate Analysts &amp; Planners</b></p>  <p><b>Institutionalize Women's Analysts in Planning</b></p>	<p><b>Building Social Infrastructure</b></p>  <p><b>Sustain Peer Networks &amp; Collective Platforms</b></p>	<p><b>Embedding Climate Intelligence into Livelihood Design</b></p>  <p><b>Screen Ecology &amp; Seasonal Risks in Livelihood Strategy</b></p>
<p><b>Connecting Household Adaptation to Nutrition &amp; Wellbeing</b></p>  <p><b>Integrate Nutrition Sensitive Adaptive Practices</b></p>	<p><b>Bridging to Institutional Tables</b></p>  <p><b>Link Advisory Outcomes with Local Governance</b></p>	<p><b>Bridging to Institutional Tables</b></p>  <p><b>Link Advisory Outcomes with Local Governance</b></p>
<p><b>Embedding Inclusion in Adaptation</b></p>  <p><b>Integrate Participation of Youth &amp; Persons with Disabilities</b></p>	<p><b>Shifting Culture from Recovery to Anticipation</b></p>  <p><b>Integrate Participation of Youth &amp; Persons with Disabilities</b></p>	<p><b>Locally Rooted Sustainable Resilience</b></p>  <p><b>Cultivate Anticipatory Planning Mindset</b></p>



**Good practices presented in this volume, drawn from the thirteen stories, do not highlight isolated successes. Instead, they showcase a gradual transformation in how adaptation is understood, practiced, and institutionalized within climate-vulnerable coastal communities. These good practices emerged not from pre-designed templates, but from a process of transformation that took place across households, collectives, and governance spaces.**

### **1. Reframing Women as Climate Analysts and Planners**

One of the most profound shifts observed across the stories is epistemic a change in whose knowledge counts.

Women who once navigated salinity, water scarcity and livelihood instability privately began analyzing these risks collectively. Through participatory mapping, seasonal calendars and structured reflection, daily experience was converted into documented insight.

***"This was not symbolic participation. It was analytical empowerment".***

Gender transformation occurred not only because women were present but because their observations shaped planning priorities. The Women's Adaptation Lab institutionalized this shift by creating a recurring platform where

women engaged in climate diagnosis and solution design.

From a Locally Led Adaptation (LLA) perspective, this represents genuine community ownership. From a sustainability perspective, it builds local analytical capacity that persists beyond project timelines. Adaptation begins to change structurally when women move from coping managers to strategic planners.

### **2. Building Social Infrastructure Through Collective Platforms**

Infrastructure is often imagined as physical embankments, shelters, tube wells. Yet one of the most durable forms of infrastructure established through the project was social.

The Women's Adaptation Lab functioned as a social institution. It created continuity. It fostered peer accountability. It nurtured collective confidence.

Stories of collective leadership reveal that adaptation strengthens when women deliberate together, test livelihood ideas collaboratively and reflect on risk as a shared challenge rather than a private burden.

In LLA terms, this builds endogenous capacity. In institutionalization terms, it embeds adaptation culture within the community fabric. When projects end, social platforms remain.

### **3. Embedding Climate Intelligence into Livelihood Design**

Across multiple stories, livelihood planning shifted from reactive income search to climate-responsive strategy.

The integration of environmental risk screening through the five capital framework prevented maladaptive investments. Women evaluated soil salinity, water reliability, physical infrastructure and market access before committing resources.

Diversification emerged not as income

maximization but as risk distribution. Layered livelihoods reduced exposure to seasonal shocks.

This practice reflects a sustainability principle: economic resilience must align with ecological reality. Adaptation becomes durable when income generation respects environmental constraints rather than competing against them.

#### **4. Connecting Household Adaptation to Nutrition and Wellbeing**

Climate vulnerability manifests most visibly at the household table. When salinity reduces crop yield and income declines, nutrition suffers first. The stories demonstrate that adaptation must extend beyond enterprise profitability.

Homestead cultivation, compost improvement and small livestock rearing were integrated not only to generate cash but to restore dietary diversity.

This practice reveals a cross-sector insight: climate adaptation is inseparable from public health and human development. True resilience protects bodies as much as income.

#### **5. Institutional Bridging: From Courtyard to Committee Table**

Perhaps the most strategic good practice emerging from the stories is the bridging mechanism between community-generated evidence and governance systems.

Through structured engagement platforms, women carried mapped risks, livelihood analyses and adaptation priorities into advisory spaces. This reduced the gap between lived vulnerability and

institutional planning.

LLA principles emphasize subsidiarity decisions taken as close as possible to those affected. The establishment of advisory linkages operationalized this principle. Institutionalization occurred when adaptation stopped being a project activity and became part of governance dialogue.

#### **6. Embedding Inclusion into Adaptation Architecture**

The inclusion of youth and people with disabilities was not treated as separate programming. It was integrated into planning discussions, livelihood screening and preparedness strategies.

This reflects a deeper understanding: climate risk interacts with social inequality. Gender transformation expands when it intersects with intergenerational knowledge transfer and disability inclusion. Sustainability strengthens when all social groups can participate in adaptation processes. Inclusive planning produces socially legitimate resilience.

#### **7. Shifting Culture from Recovery to Anticipation**

The final synthesis across stories is cultural. Communities began reviewing seasonal risks before monsoon arrival. Livelihood investments were timed strategically. Preparedness became routine.

This anticipatory culture marks a transition from survival mentality to strategic foresight. Institutionalization is not complete when structures exist; it is complete when behavior changes. The Sundarbans case demonstrates that anticipatory thinking can be cultivated through structured participation and repeated reflection.

## Cross-Cutting Reflections

Below is a synthesis matrix showing how each good practice contributes across four structural dimensions:

Good Practice Theme	Gender Transformation	Locally Led Adaptation (LLA)	Sustainability	Institutionalization
<b>Women as Climate Analysts</b>	✓ Elevates women's epistemic authority	✓ Community-generated risk analysis	✓ Builds local knowledge capital	✓ Knowledge feeds planning processes
<b>Collective Platforms (WAL)</b>	✓ Strengthens women's collective agency	✓ Community-ownership of adaptation agenda	✓ Social infrastructure persists	✓ Platform remains beyond project
<b>Climate-Responsive Livelihood Design</b>	✓ Economic empowerment	✓ Context-specific livelihood choice	✓ Household driven decisions	✓ Planning coherence improves
<b>Diversified Income Strategies</b>	✓ Protects dependency vulnerability	✓ Household-driven decisions	✓ Household driven decisions	✓ Social legitimacy strengthens
<b>Nutrition-Sensitive Adaptation</b>	✓ Expands gender equity	✓ Bottom-up priorities influence institutions	✓ Bottom-up priorities influence institutions	✓ Planning coherence improves
<b>Governance Bridging (LPAC)</b>	✓ Expands gender equity	✓ Participation beyond elite groups	✓ Planning coherence improves	✓ Community evidence enters governance
<b>Inclusion of Youth &amp; PWD</b>	✓ Expands gender equity	✓ Expands priorities system	✓ Social legitimacy strengthens	✓ Inclusive norms institutionalized
<b>Anticipatory Culture</b>	✓ Women lead preparedness	✓ Women lead prioritize	✓ Reduces shock losses	✓ Seasonal planning institutionalized

# Strategic Lessons Learned:

## System-Level Insights form Locally Led Adaptation in the Sundarbans

Locally Led

**Epistemic Shift,  
Not Just Participation**



Embed Community Knowledge in Planning

**Link Community to Institutions**



Create Structured Interfaces

**Climate-Smart Livelihoods**



Integrate Ecology & Economy

**Behavioral Change**



Foster Anticipatory Culture

**Inclusive Governance**



Ensure Equitable Access

**Evidence-Based Advocacy**



Strengthen Data Capacity

**Capability Transfer**



Build Knowledge & Skills

**Scalable Model**



Prepare, Diversify, Link



Replicate Integrated Pathways

**— FROM PROJECTS TO POLICY —**

Building Embedded Resilience for Women & Communities

**Lessons learned from these thirteen case stories reveal more than just localized transformations. Collectively, they offer valuable insights into how climate adaptation can evolve from being a project-based intervention to a deeply embedded local capability. These lessons span structural, institutional, and policy levels, highlighting the potential for sustained and scalable adaptation efforts.**

### **1 Gender-Transformative Adaptation Requires Epistemic Shift Not Just Participation**

The most strategic shift observed was not economic but epistemic. When women's lived experience was formalized into analytical tools, a redistribution of authority occurred. Adaptation planning no longer relied solely on technical experts or external actors. Knowledge production became decentralized. This has governance implications.

If climate planning frameworks do not institutionalize mechanisms for community-generated analysis, participation remains procedural rather than transformative.

#### **Strategic Lesson:**

Gender-transformative adaptation must embed community knowledge generation into formal planning architecture, not merely invite attendance.

### **2. Locally Led Adaptation (LLA) Is Effective Only When Linked to Institutional Systems**

Community ownership is foundational but insufficient in isolation. Without governance

linkage, locally generated priorities risk remaining localized. The creation of advisory bridges (such as LPAC-type mechanisms) demonstrates that institutional uptake requires structured channels.

However, alignment must avoid co-optation. Community platforms must retain autonomy while engaging institutions.

#### **Strategic Lesson:**

LLA must operate through structured interfaces that connect grassroots analysis with formal governance processes while preserving local agency.

### **3 Climate-Smart Livelihood Programming Must Be Systems-Aware**

Livelihood diversification strengthened household resilience. Yet the broader insight is that economic adaptation must be embedded within ecological constraints and market systems. Income strategies that ignore soil salinity, water variability and seasonal risk amplify vulnerability.

Adaptation programs must integrate environmental screening, market analysis and risk forecasting at design stages, not retroactively.

#### **Strategic Lesson:**

Livelihood adaptation should be treated as part of climate system management, not as standalone economic support.

### **4 Social Infrastructure Is as Critical as Physical Infrastructure**

Physical infrastructure (embankments, water systems) remains essential. Yet the stories demonstrate that durable resilience is rooted in social institutions, collective platforms, peer networks, local leadership structures.

These social systems sustain anticipatory

planning beyond funding cycles. Investing only in hardware without strengthening local social architecture limits adaptive continuity.

**Strategic Lesson:**

Climate adaptation financing must recognize and support social institutions as critical infrastructure.

**5 Institutionalization Requires Behavioral Change, Not Only Structural Platforms**

Creating committees or advisory mechanisms is insufficient if behavioral orientation does not shift.

The most significant transformation observed was anticipatory culture, seasonal planning before shocks, risk-informed investment, proactive dialogue. Institutionalization is achieved when foresight becomes habit.

**Strategic Lesson:**

Adaptation programs should measure behavioral transformation and planning culture not only output delivery.

**6 Inclusion Is a Governance Issue, Not a Social Add-On**

The integration of youth and people with disabilities revealed that vulnerability is layered. Climate exposure interacts with gender, mobility, age and economic status.

Inclusive adaptation requires governance-level commitment to equitable access and representation. Without structural safeguards, the most vulnerable remain peripheral to decision-making.

**Strategic Lesson:**

Equity mechanisms must be embedded in adaptation governance frameworks, not treated as project-level enhancements.

**7 Evidence-Based Advocacy Enhances Policy Legitimacy**

Community advocacy gained traction only when supported by documented risk analysis and structured data.

This has implications for scaling. When communities can produce credible adaptation evidence, policy actors engage more substantively.

**Strategic Lesson:**

Capacity-building for community-level data generation strengthens policy negotiation power and enhances institutional legitimacy.

**8 Resilience Is Orientation Not Risk Elimination**

The Sundarbans remain exposed to cyclones and salinity. No intervention removed hazard.

The structural shift lies in orientation: preparedness before shock, diversification before loss, negotiation before crisis. Strategically, resilience should be assessed in terms of agency, preparedness capacity and institutional linkage, not only hazard mitigation.

**Strategic Lesson:**

Adaptation evaluation frameworks should measure strategic capacity and anticipatory behavior alongside economic indicators.

**9 Sustainability Emerges from Capability Transfer, Not Asset Distribution**

Physical or financial support provides short-term relief. Long-term resilience depends on analytical capability, the ability to assess risk, screen livelihoods, negotiate priorities and adjust strategies. The most durable outcome across stories is capacity internalization.

**Strategic Lesson:**

Adaptation investments must prioritize knowledge and planning capacity over short-term asset delivery.

**10 Scaling Women-Led Adaptation Requires Model Clarity**

The experience demonstrates a replicable pathway:

1. Participatory risk diagnosis
2. Structured analytical platform (WAL)
3. Climate-screened livelihood planning
4. Diversification strategy
5. Governance interface
6. Behavioral institutionalization

Scaling requires maintaining this sequence. Isolated replication of components weakens impact.

**Strategic Lesson:**

Women-led adaptation can scale effectively when implemented as an integrated system, not as fragmented activities.

**Reflection**

The Sundarbans experience demonstrates that adaptation is not primarily a technical challenge.

- a. It is a governance challenge.
- b. It is a power challenge.
- c. It is a knowledge challenge.

When women generate risk intelligence, design livelihood strategies, diversify income systems and engage institutions with documented evidence, adaptation shifts from episodic intervention to systemic capability. The long-term implication is clear: Women-led, locally led adaptation is not a supplementary model. It is a governance pathway for climate resilience.

# Final Thoughts

The Sundarbans have long taught their inhabitants the discipline of endurance. Here, land yields to water and reclaims itself again. Storms dismantle what has taken months to build. Salinity seeps slowly, altering soil, crops and the rhythm of daily life. For generations, survival in this landscape has depended on resilience born of necessity—rebuilding, adjusting, coping and enduring. Yet endurance alone does not transform vulnerability.

The stories presented in this volume reveal something deeper than adaptation as reaction. They show a transition in orientation from coping with climate stress to strategically navigating it. This transition did not occur through infrastructure alone, nor through short-term economic support. It emerged through a restructuring of knowledge, agency and collective capacity.

When women began mapping their villages, analyzing seasonal risk patterns and screening livelihood options against ecological realities, adaptation ceased to be abstract. It became analytical. When their findings entered advisory discussions with institutional actors, adaptation became political. And when households began planning before monsoon onset, adjusting investment cycles and diversifying income streams proactively, adaptation became cultural.

Across the villages of Moheshwaripur, Borobari and Kalabogi, resilience has not eliminated hazard. Cyclones continue. Embankments remain fragile. Salinity persists. What has shifted is the distribution of agency. Women who once managed climate stress privately now shape adaptation discourse publicly. Households that once reacted to loss now anticipate risk. Communities that once raised informal grievances now present structured evidence.

The significance of this transformation lies not only in improved livelihoods or strengthened governance engagement. It lies in capability. Adaptation, when reduced to asset delivery, remains temporary. Adaptation, when internalized as analytical capacity and collective habit, becomes durable.

This journey also illuminates the broader implications of women-led, locally led adaptation. It demonstrates that meaningful resilience is neither top-down nor purely grassroots. It is relational. It requires structured participation that elevates local knowledge into formal planning spaces. It requires economic strategies that respect ecological limits. It requires social platforms that persist beyond funding cycles. It requires institutional bridges that translate community evidence into policy dialogue.

Above all, it requires a shift in how vulnerability is understood. Vulnerability is not solely exposure to hazard. It is shaped by who holds knowledge, who shapes decisions and who is heard in governance spaces. When women's authority expands, adaptation becomes more grounded in daily realities and more responsive to structural inequities.

The Sundarbans will continue to face uncertainty. Climate projections suggest intensifying risk. The lessons documented here do not offer a guarantee against future shocks. Instead, they offer something more powerful: a framework for confronting uncertainty strategically.

Resilience is often described as the ability to bounce back. The experience captured in this book suggests a more ambitious vision. It is the ability to anticipate forward to learn, adapt, negotiate and plan in ways that reshape the trajectory of vulnerability itself.

In this landscape of shifting boundaries between land and water, another boundary has shifted, the boundary between endurance and strategy. Women who once carried climate risk quietly now carry plans, maps and aspirations for their communities' futures.

That shift may be gradual. It may be understated. But it is profound. And it signals that adaptation, when rooted in local knowledge and collective agency, can move beyond survival toward enduring transformation.

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