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# Climate Tribune

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# Water is life

When pond's water is parched during the dry season, people living in the coastal area of Bangladesh know the worth of water needed to sustain life here.

Juel Mahmud

“Water, water, everywhere, nor any drop to drink,” the line from ‘The Rime of the Ancient Mariner’ is more applicable when you go to the southwestern coastal region of Bangladesh. Owing to its very low elevation, the area is susceptible to various acute and slow-on-set natural hazards such as cyclone, storm surge, riverbank erosion, saline intrusion; and around 20 million people who are living along the coastal line have been suffering from adverse effects of these extreme events. The situation became worse after two consecutive super cyclones: Sidr (2007) and Aila (2009). It was almost impossible to find a single source of freshwater as both ground and surface water was contaminated with the high concentration of saline. Over the period, thousands of hectares of agricultural land have accumulated saline from frequent tidal surges, lost their productivity and shifted into monocultural shrimp farming hotspot.

‘Water is Life’ as it plays the most significant role for existing every living being on the earth. At the dry session when the ponds are parched, people of the coastal area of Bangladesh know the worth of water as nothing is more demandable except adequate usable water to sustain life here. Aiming to address water-related threats and vulnerabilities of these impoverished populations, HELVETAS Swiss Intercooperation has initiated a project titled “Panii Jibon” (Water Is Life) that has been implemented by four local partners: Development Organization of the Rural Poor - DORP, Bangladesh Disaster Preparedness Center - BDPC, Ovibashi Karmi Unnayan Program - OKUP and International Centre for Climate Change and Development - ICCCAD in Paikgacha and Koyra Upazila of Khulna and Morrelganj Upazila of Bagerhat. The overall objective of this project is to build resilience and reduce well-being loss of climate change affected disadvantaged communities, and particularly vulnerable women and youth, in the disaster-prone areas of Southwest Bangladesh.

The project started back in 2015, after completing its first phase (Phase-I, 2015-2017) and the second phase (Phase-II,

2018-2020) in 2020, now it is working towards its final phase (Phase-III, 2021-2023) from 2021. Throughout the last two phases, the project has touched approximately 100,000 women and youth (including women-led households, people with special needs, and extremely poor people affected by recurrent disasters) of disadvantaged communities in accessing safe drinking water. The project also assisted in adapting the farming system (homestead based) to enhance local food security, nutrition and better income generation.

Indeed, the project has been developed with four core features: water security, livelihood, migration and

session and exercising the lessons by conducting similar training sessions at their working place.

At the community level, Panii Jibon has been achieving its goal of water security through creating opportunities and more options for fresh water sources, sanitation and hygiene. Around 50,000 people are now getting safe water for drinking and household purposes from newly built or renovated water sources. With the close collaboration of the local government, the project team excavated numerous new ponds, re-excavated existing pond and canal, distributed thousands of water tank for rainwater harvesting (RWH), con-

far from my home for selling my homestead's production, even I can sell a kg of eggplant or bean at this collection center and get a better price,” said Mrs. Nurnahar lives in Raruli Union of Paikgacha Upazila.

In the context of climate change, migration dynamics in this area have also changed and in the last 20-30 years, at least one family member or relative has migrated from here to seek income-generating opportunities. Loss of income and lack of livelihood opportunities are the main triggering factors for migration to nearby cities. To ensure safe migration and proper utilization of remittance, at first, the project team identified potential migrants then provided them with different vocational and technical pieces of training and prepared them as skilled migrants as well as support to find out an alternative livelihood at their origin. The project also worked with the female counterparts of migrants who are living at their own houses and organized training programs for their livelihood.

Likewise, Panii Jibon has used the lesson learning from the project achievements, connecting and integrating the local advocacy outcomes with national climate change and development-related advocacy structures and initiatives. Policy advocacy amplifying transparent and inclusive government structure and process for effective climate change financing and monitoring both at the local to national level.

However, the next phase will begin with establishing climate justice, at not only the national and global levels but also concretely what climate justice means on the ground. Phase-III will focus on advocacy and replication of previous phases by demonstrating the innovations of the last two phases and dissemination of climate-resilient approaches and models in the WASH and food sectors vertically and horizontally and link up more explicitly with climate change platforms networks as well as public authorities at all levels. ●

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## HELVETAS Swiss Intercooperation has initiated a project titled “Panii Jibon” (Water Is Life) that has been implemented by four local partners

the cross-sectional mainstay climate change, where DORP, BDPC, OKUP and ICCCAD have worked collaboratively with strong coordination of Helvetas. Early action research helped to address the basic needs and diversified livelihood opportunities (WASH, saline tolerant crop and fish cultivation, functional disaster management structures) for the communities. To enhance the absorptive and adaptive capacities of disadvantaged communities, the project team has conducted day-long and residential capacity building training and workshop programs on livelihood, CRA (Community Risk Assessment), RRAP (Risk Reduction Action Plan) and climate change adaptation. Participants are sharing their learning in their communities that they acquired from the

structed and renovated Pond Sand Filter (PSF), promoted hygiene and proper sanitation and provided sanitary latrine to the inhibitors. Their continued advocacy with local government makes a positive impact on the local budget and a visual change has been noticed at the local level particularly in the project areas where the wash budget has increased prior to Panii Jibon. In terms of livelihood; the project has supported the creation of alternative income sources, supported local farmers with seeds, technologies, demonstration and training. “Collection Center”, is one of the remarkable initiatives that has taken from Panii Jibon, where farmers come with their daily productions from their land and sell these to the buyer. “Now I do not need to go to the Bazar that is



Prashanta Kumar Ghosh is administering vaccines in his village of Raruli in Khulna

BELAYET HOSSAIN

# How a man lost everything in cyclone, then became a changemaker

Prashanta Kumar Ghosh's story shows that providing access to proper information, and capacitating the local communities regarding alternative livelihood can be good adaptation tools in the context of climate change

Moumita Sen, Md Kamruzzaman Khan, and Ashish Barua

**B**angladesh is exposed to various natural disasters due to the geographical location and climatic characteristics. Flood, tropical cyclones, landslides are very common to hit every year. Among other parts of Bangladesh, the coastal belt is the most vulnerable and deprived due to the prevalence of tropical cyclones. One of the most severe one in recent times was cyclone Aila in 2009, which affected the lives of people in the coastal areas immensely.

Twelve years have passed since the Aila struck, but its impact is still affecting the marginal communities of the region. One of the witnesses of this climate-induced disaster in coastal areas is Prashanta Kumar Ghosh, a permanent resident of a small village, called Raruli. The village is situated at Raruli union under Paikgacha sub-district in Khulna district. Due to cyclone Aila, his family lost almost everything, pushing them down from being in a solvent economic class to poverty.

Prashanta completed his SSC before cyclone Aila and was trying to get a job in addition to farming. He had to change

the plan as the cyclone severely affected the whole area in south-western districts. "That was a very tough time for me and my family, we were struggling to manage three meals a day regularly. I could not find any work in my village. I travelled even to Khulna and Gopalganj in search of work but failed to manage any", Prashanta stated. Prashanta was in such a miserable state that he had stopped his child's education and was burdened under the huge debt with the microfinancing agencies. "I was unable to meet the basic needs of my family. Local shop owners stopped selling products on credit and neighbours de-

nied help, as they were also struggling”, he added.

Previously, Prashanta lived on livestock farming making a moderate profit every year. His children used to go to school. His family was solvent and happy. “We used to be happy and manage our expenses by our business. My husband would work hard and sometimes help me as well. Our livestock business was profitable, so we did not have any loan burden. But everything has changed after Aila”, said Champa Ghosh, wife of Prashanta.

During that period, they could not think of any alternative as he did not have any expertise other than livestock rearing. Prashanta and his wife jointly tried to recover with homestead gardening, but it did not work out well because of salinity. He started to seek support from the government and non-government relief programs. He tried to take support from local livestock departments but could do nothing as he did not have that much connection.

By 2009-2010, he was supported by some of the international and national NGOs which came forward and noticed the experience and interest of Prashanta in livestock rearing. He participated in several training on livestock which sharpened his skill. But unfortunately for Prashanta, the training alone was no good. He needed investment to restart the business. “I did not have any savings, furthermore, I was burdened with a huge loan from microcredit associations. I have tried with those all, but none was coming forward, no one agreed to provide me with any more support. I was wondering how to step ahead”, said Prashanta.



## Twelve years have passed since the Aila struck, but its impact is still affecting the marginal communities of the region

By this time, Prashanta has been skilled in livestock rearing, saline tolerant forage farming, and vaccination with the support from Upazila Livestock Offices and got the attention of the Upazilla Livestock Officer (ULO). Upazila Livestock Office then in collaboration with some external support provided him financial assistance. In 2012, with that start-up support, he bought a calf. This provided a glimpse of hope for him, as he was trying hard to man-



## At the initial stage of this new skill, he was even mocked by the villagers as ‘Gorur Doctor (doctor of cows)’, but it did not falter Prashanta

age some extra earning from informal sources.

As soon as he started, he experienced a crisis of fodder for the calf, because the grass production was also severely affected because of Aila. Then again, he took support from the ULO. With ULO’s suggestion and technical support, he sowed some seeds in his land. He started to grow saline tolerant Napier grass for livestock and found it profitable. “I recommended to him to try a new type of grass as it would not require insecticides and could also be harvested eight to nine times per year,” said Bishnupada Biswas, the ULO. He started to earn Tk3,000-3,500 per month by selling the surplus grass to the villagers after feeding his cows.

Over the period, Prashanta improved his livelihood options. Owing to his academic knowledge and interest, he could easily grasp the new techniques and knowledge he was being provided with. Around 2018-19, with the support from ULO, he learned about the primary treatment of livestock and he encouraged and engaged his wife in rearing poultry. At the initial stage of this new skill, he was even mocked by the villagers as ‘Gorur Doctor (doctor of cows)’, but it did not falter Prashanta. “I have seen the sad part of my life, and I am aware any time it might come back again as we are living in the climate-vulnerable area. So, I am getting myself ready this way, this is my way of adapting. I am not worried about who is saying what”, stated Prashanta.

By this time, Prashanta had worked hard and expanded his business gradually. Along with grass, he started to sell milk. Currently, he earns around Tk11,000 per month by selling milk. In the last two years cow selling generated Tk1,43,000, and with this money he purchased more land for grass cultivation. Now he has 6 cows in his farm, and he expects a good return every year.

By the last couple of years, he has been a lighthouse for the community. He has been part of the local produc-

er groups and works as a Local Service Provider. The story of Prashanta shows that providing access to proper information, and capacitating the local communities regarding alternative livelihood can be good adaptation tools in the context of climate change. As an avid learner with good connectivity with government organizations and NGO initiatives, Prashanta has been able to access updated information and has utilized this to contribute to his wider community as well. “Prashanta da guided us so efficiently that we have restarted our farm and are making a profit again. With the help of Prashanta da, more than 100 livestock farms were regained in our community”, said Brojen Ghosh, one of the local livestock farmers. Like Brojen, Prashanta has helped more than 100 disaster-hit families to recover by adapting new techniques of farming.

Prashanta is a changemaker who has taken his life experience to bring change in his life while committing to change and support others in this community. Talking about his vision for his community he said, “I have suffered a lot; I have seen the impact of a disaster in my life; I don’t want others to do the same. I always try to step ahead to learn as I know this is important in the context of climate change. And, therefore, I also support others as we cannot advance alone for climate change issues”. ●

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# A stitch in time saves nine

How a joint effort to rebuild the Goroikhali-Gangrothi embankment shows the need for locally led adaptation

Ashish Barua and Kamruzzman Khan

The Khudkhali point of Goroikhali-Gangrothi embankment located at Goroikhali union in Paikgacha, Khulna is a very important site for the locality. The embankment is on the fast-flowing Shibsra river, a 100 KM long river forming much of the boundary between Paikgacha and Dacope sub-districts. This particular Khudkhali part of the embankment has saved thousands of households within and surrounding unions from disasters mainly cyclone, tidal surge, salinity, and waterlogging.

“The embankment at ‘Khudkhali’ point was severely damaged during cyclone Aila in 2009. Around 200 metres of the embankment was damaged, but it affected thousands of households in more than 20 villages. The devastating experience we had in a couple of years that followed, completely changed the livelihood of the community in the surrounding villages in that short span,” said Sahabuddin Gain, the Union Parishad member of that respective ward.

The damage of the embankment resulted in the villages of Gorolkhali and Loskor union to be fully inundated, while Amadi, Bagali and Moheshwaripur Unions were partially inundated by

cyclone Aila in 2009. With the embankment not being taken care of for almost next two years during high tide and the area being flooded every day resulted in salinity intrusion. With regular saline water intrusion, the salinity both in water and soil had increased in the area and, it changed the agricultural pattern drastically. “You have probably heard about ‘Watermelon from Shanta’ - that was very popular all over the country. The wholesalers from Dhaka would come here and procure the watermelon even from the ground. But it has almost been a history now, and that’s because of Aila. Though year by year we’re recovering, it is a slow process compared



Goroikhali-Gangrothi embankment at Goroikhali union in Paikgacha upazilla, Khulna district, an example of joint initiatives through influencing and resource mobilization

COURTESY



## The damage of the embankment resulted in the villages of Gorolkhali and Loskor union to be fully inundated

to the way we did previously”, said Sahabuddin Gain.

So, how are they recovering?

The embankment is under the portfolio of the Water Development Board (WDB). So, WDB is the sole authority to do any work on the embankment. The Union Parishad (UP), the local government structure cannot take any initiative except minor repair for the embankment. “But local people always put pressure on us; they demand repair and rehabilitation of the embankment which is a demand that we can not fully satisfy. So, each year we do some repair work through the ‘cash for work’ program as we find it very important. Besides, we try to mobilize the block fund for early action from upazilla parishad which is distributed immediately before the disaster. This falls short of the the demand on the ground”, said Ruhul Amin Bishwas, the Union Parishad Chairman.

Since Aila, the UP with the support from the community has tried hard to repair the embankment to save these large communities and villages. But with the resources and voluntary services, the maximum they could repair is raising the embankment by 2-3 feet. But the embankment starts getting eroded as soon as the monsoon starts. “The soil quality is not that good here, it contains low moisture. It gets dry rapidly but as soon the water drops, it gets melted like ice-cream, and the soil salinity is also a concern. So, whatever we repair, it is get nearly completely lost again during the next monsoon. It will sustain if the embankment is developed with additional materials such as wood, bamboo, sandbag, and concrete blocks”, said Bishwas. But it does not necessarily mean that they have been waiting for the WDB to come forward with these. They have capitalized on a disaster as an opportunity for the repair work of this embankment.

“It was 2019, you can probably recall ‘Cyclone Fani’. We were very worried

as soon as we started getting the early warning. We all knew that if there is any damage at Khudkhali point, all the villages will get inundated again and all the crops will be lost overnight. I feel lucky that we had very active Disaster Management Committees here”, said Ruhul Amin Bishwas. The Disaster Management Committee at the Union level had emergency meetings, and then there were Ward-level disaster management committees as well, which were active and functional with the support from NGOs and different projects working here. The committees had a consensus to work for the embankment jointly as this would save almost all of them in the union. They communicated with the upazilla administration as well for support for the work.

“We have allocated an amount of block fund for early action, as the UP



## From time to time, the civil society platforms submit petitions, organize public hearing which creates peer pressure on the mandated authority

appealed. I supervised the work very closely and I was excited at the power of the community. It was unbelievable that thousands of community men and women arrived there to do voluntary work. They worked for 24 hours over day and night. That’s impressive”, said Julia Sukayna, the then Upazilla Nirbahi Officer (Sub-district Administrative Officer) of Paikgacha sub-district. The embankment was raised around three feet at that time. Immediately after the cyclone, the UP allocated ‘40 days cash

for work program’ for additional work. And, then it was raised around five feet high in total, which is quite resilient against such types of cyclone and tidal surge. With the joint effort from the community, ward and union level disaster management committees and support from the upazilla administration embankment was saved from cyclone Fani.

“See, we worked for 3-4 days, it was hard work, but we knew that if we could save the embankment, our life and livelihood would be saved for all year-round. You can see it now as you look into the field, it was different two years ago”, said Rita Mondol about the agricultural land. Within the last couple of years before the cyclone they could cultivate only bitter gourd, eggplant, ladies’ finger, spinach and pumpkin; but after that cyclone watermelon, onion, sesame, almond, sweet potato, sunflower were added. With hope in his eyes and full of pride Nimai Sana, a farmer from the Gorolkhali union said, “We hope we will be able to recover the history of watermelon from this area again, if the embankment is well-maintained.”

“This was a joint effort; it was a comprehensive work. See, all were here, the community without whom we UP itself could not manage it. How were they motivated? There is a number of projects that are on-going on climate change and disaster preparedness by the NGOs. These make them aware and

and actions with different stakeholders including UP, upazilla administration, WDB and other line departments at upazilla level. From time to time, the civil society platforms submit petitions, organize public hearing which creates peer pressure on the mandated authority. “But we don’t have any scope to be happy only with this. This is important to look forward to as we know the intensity of cyclones is increasing because of climate change; we’re experiencing a higher level of tidal surge gradually. So, we must influence the respective authority to take action considering those issues. Nonetheless, our efforts will go in vain”, added Bishwas.

Joint efforts are important to address the ongoing impacts of climate change and disasters. The account of community living along the Gorolkhali-Gangrothi embankment and how they used their knowledge to locally adapt to their problem only reinstates the need for locally led adaptation, where actions should be locally owned. ●

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# Alternative resilient livelihood through fish farming

How Bidhan Chandra Das became the 'friend of fish farmer' in his village



Bidhan Chandra Das shows his fish he farmed in his own pond

COURTESY

Ashish Barua, Moumita Sen, and Md Kamruzzaman Khan

Intense and frequent occurrences of cyclone, flood, tidal surge, river erosion, and salinity stress have been rigorously disturbing agriculture, fish cultivation, and livestock rearing in the coastal zone in Bangladesh. Communities in these coastal areas remain enormously vulnerable to these disasters which hinders their livelihoods more than any other region of Bangladesh. The poor infrastructure, disorganized institutional setup, improper resource management, social inequality, and absence of freshwater due to salinity intrusion has made the situation worse.

"I was a fisherman. Due to this seasonal loss in fish farming; my livelihood was destroyed by the attack of two consecutive cyclones Sidr and Aila," said Bidhan Chandra Das from Sonatola village. Sonatola village lies within the administrative boundary of Jiudhora Union at Morelganj Upazila in Bagerhat District and it is a disaster-prone area. Bidhan is the only earning member in this family of five, consisting of his wife, two daughters and ageing mother. He depends solely on fish farming on his small fish gher of two bigha land.

During monsoon season, tidal inundation results in most of the fish ghers becoming submerged; this persists even after the monsoon is over. Moreover, climate change is causing longer and wetter rainy seasons in the coastal region, which is eventually initiating this waterlogging and longer flood period. These flood waters wash away the fishes from the ghers, adding to the suffering of the local fish farmers. The farmers have to endure significant loss as most times they are unable to achieve their expected profit due to the damages of their fishes in the gher.

Bidhan faced a similar fate, like many others in his village. The prolonged and constant loss experienced every year since 2009 resulted in the cumulative debt. "I did not know how to recover from that miserable situation. I was burdened by huge debt. I could not see any source of earning. It was a huge challenge to recover the cost and make a profit again", Bidhan recalled his sufferings. "It was a mental trauma for me to arrange meals every day for my family. Seemed like a never-ending journey," added Konika Mistry, Bidhan's wife.

Bidhan had been working in the fish farming sector all through his life. He has reasonable knowledge and years of experience in this sector, but he was

left clueless at this stage in his life. He stated, "I was confused and frustrated. I have only expertise in fish farming. One thought was roaming in my mind; at this age, should I go for another occupation without any knowledge? I was hoping and praying for any support to continue the fish farming again."

On one side, Bidhan was trying to find a way or opportunity, on the other hand, the Upazila Fisheries Office (UFO) with the support from international and national NGOs was organizing training for fish farmers and looking for helpless farmers like Bidhan. In 2014 Bidhan started his journey to learn new techniques and explore support offered by Upazila Fisheries Office to grow his expertise to be able to run his fish farm better and be resilient to climatic



## Bidhan faced a similar fate, like many others in his village. The prolonged and constant loss experienced every year since 2009 resulted in the cumulative debt

shocks. "I have received various training on fish farming for capacity building by the Upazila Fisheries Office. Upazila Fisheries Office also organized fish farming exhibitions for disseminating modern fish farming techniques to the local farmers", Bidhan stated. In 2016, Bidhan became a Local Service Provider (LSP) for the Producer Group (PG) with the support from Upazila Fisheries Office and other sector actors. He understood very clearly that this new expertise will help him to run his fish farm while also providing advisory support to other farmers in this sector.

Bidhan used to apply very traditional methods to nurture his fish farm, which was neither profitable nor climate-resilient. It always left him uncertain of unpredictable natural events. As per the local practice, fish farmers depend heavily on loans to run their business. Any kind of distraction from estimated profit can lead up to huge debt. After receiving the training, Bidhan realized, "The traditional ways of fish farming are very much exposed to climate changes and extreme events. The recovery period is very long and sometimes fish farms cannot be restored fully. It is very wise to use and adopt modern technol-

ogies to respond and resist the natural calamities efficiently."

By enlightening the local fish farmers with proper knowledge and information regarding advanced techniques aligned with climate resilience with the help of local government authority, the traditional mindset of a fish farmer like Bidhan has been changed uplifting their confidence in their profession. More advocacy at the community level can make fish farming one of the dominant livelihood options as well as more resilient and sustainable.

Bidhan stated, "Now I am now very much familiar with new scientific and climate-resilient technology. For example, I have elevated the banks of the gher considering flood. The death rate of fish has decreased during the last 3 years

and technologies can be applied.

"Compared to the local demand, we usually do not have the required set up to support training due to lack of manpower and resources. But we do provide updated information and guidelines to local farmers from time to time. But I think more training can contribute to building resilience in the fish farming sector," said Pranab Kumar, Upazila Fisheries Officer. He added, "Bidhan came up with such a positive attitude, which became an inspiration to others. He keeps regular communication with UFO and disseminates the updated information to other farmers. He has a leadership quality which helped the community to rethink their coping strategies to recover their miseries."

Local fish farmers seek help from Bidhan from getting his advice to buying the best quality fish fry to fish feed. He also updates them about the current market rate for selling. "Many of us started fish farming again with a small piece of land. Bidhan da provided the guidance and demonstrated new techniques to restart our farm. He also introduced us to professionals of the Upazila Fisheries Office," said Nasima Begum, a local farmer from the village. "We call Bidhan Da 'Friend of Fish Farmers' in our village," echoed Eva Rani Paik, another local farmer.

Local Service Providers should be promoted and provided support to keep the pace of fish farming on track. Timely training and knowledge dissemination can make the fish farming sector climate-resilient and profitable for local farmers. Moreover, to enhance the diversity of livelihoods through transformative actions and a participatory approach from both ends can bring accountability including governance structures. And the story of Bidhan's journey so far with UFO and within his community has been evident to this concept. ●

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# Making market at the doorstep

An alternative solution for better access to market for the smallholder farmers

MM Jakaria and Md Kamruzzaman Khan

**W**est Gulishakhali (ward no 8) is a village at Nishanbaria Union under Morrelganj Upazila, Bagerhat district. This is a flood and saline prone 4 square kilometre area, which is adjacent to the Sundarban mangrove forest. More than 400 households in this village fully and partially depend on agriculture, fishing and extraction of resources from the Sundarban.

“We did not have a good crop because of salinity and again there is flood. Few farmers would produce flood and saline tolerant agricultural varieties but most of them could not make profit, as they could not sell their product in the market, and the market is far away from our village. But, in the last couple of years, we have a different experience,” said Abdul Alim, a farmer from Gulishakhali. What is the different experience?

West Gulishakhali is a village with a lot of ‘Ghers’ (large water bodies mainly used for shrimp and fish culture). There are long banks of the Ghers, which is very much useful to cultivate vegetables almost all year-round. Most of the villagers here in Gulishakhali have the re-

quired information and skill to cultivate climate-resilient crop varieties, but only a few of them would produce saline and flood-tolerant vegetable varieties. Most of the producers in this village were not interested because they did not have access to the market “Whatever we would produce, we would consider only household needs. What will we do with the extra? There is nobody to purchase it. If you produce extra, you need to go to the market to sell, which is not easy to reach. You can do it if you think only commercially,” added Alim. And hence, for a long time, they did not think about it either individually or in a group.

“We can sell shrimp and fish at a good price at the local market, but we cannot

sell our small vegetables at fair price. We had to sell our vegetables to the remote market. Sometimes especially during monsoon we experience transportation costs getting very high, and it does not lower the chance of making profit,” Kader Bepari, a smallholder farmer said. From time to time, they talked to each other and thought about what to do and there was no significant initiative to deal with that existing challenge. The potentiality was observed by a project and it inflated the discussion. Since 2018, the producers in that community have started working in ‘Producers Group’ mainly on climate resilient agricultural technologies, water management systems and improved market linkage. The

group members had the practice to organize a regular meeting to share their experiences, to learn from each other and to discuss various existing issues and challenges. “Yes, the Panii Jibon project has influenced us to get united and take the steps for the collection centre which changed the situation. We led everything while the project facilitated us from the back side,” said Md Sabed Ali, the Vice-President of Gulishakhali collection centre.

One of the key challenges, discussed by the group members was the issues of access to the market and then came up with the idea of initiating a collection centre. “We discussed this problem among the producer group members and came up with a potential idea to try with a Collection Centre in the village. We identified seven locations surrounding, however, we have decided about West Gulishakhali as one of the potentials,” said Rakib Gazi, a smallholder farmer.

The collection center with the effort from community and external stakeholders was established and started functioning in July 2019. The community contributed through a cost-sharing modality from the local producers. For smooth operation and maintenance, the Collection Centre has been managed



There are long banks of the Ghers, which is very much useful to cultivate vegetables almost all year-round



Daily transaction in the Collection Centre at west Gulishakhali village in Bagerhat district  
KAMRUZZAMAN KHAN



Smallholder farmer Julekha Begum

KAMRUZZMAN KHAN

by a management committee, consisting of 11 members including two women members from the producer groups.

“The committee has been elected by the farmers for two years tenure. Our committee periodically conducts meetings to ensure the smooth operation of the Centre. We have also conducted a number of linkage meetings with nearby wholesalers, and signed an agreement with the wholesalers for purchasing vegetables through the bidding process,” explained Rahima Begum, one of the women members of the management committee.

Every day, a number of local producers from Gulishakhali and neighbouring villages come to the centre now and sell their products here. They sell their products through a competitive bidding process where buyers attend the bid and the top bidder can buy the vegetables. There are dedicated people for registering the product and sales to the buyer who works under the supervision of the committee. They pay the producers for their product later even at the household level; so the producers do not need to wait and waste their time. “I’m happy that I don’t need to wait there to sell my product. I just go, drop my product, and come back to restart my work again. For this, I need to pay a little, but I can invest the time in my work which gives me a better return,” said Zulekha Begum, a woman farmer from the village.

The engagement of smallholder producers has been increasing day by day. The buyers even from Bagerhat and

Khulna districts are now showing interest as the market is growing gradually. In 2019, they started with 14 smallholder farmers which increased to 107 by the year 2020. There is also remarkable progress in the number of women buyers as well. 33 women producers now interact in the collection centre though they started only with four. The number of wholesale buyers is now eight, while there were only two at the initial stage. The collection centre experiences a rise in sales of vegetables as the



## One of the key challenges, discussed by the group members was the issues of access to the market and then came up with the idea of initiating a collection centre

figure shows. “In 2020 we sold a total of 640 mounds of vegetables worth Tk7,83,000. In 2019 it was 82 mounds with a monetary value of Tk100,322,” said Saded Ali, the Vice-President of the collection centre. The centre is helping the poor farmers by introducing them to the market systems. It has increased access for the women smallholder farmers as they can easily come to the centre

and sell the crops from their homestead gardening as well.

“The market starts early in the morning; the farmers can sell their product in minimum time and then can go back to their daily work. And as there is no extra hassle, more and more producers are joining us, and this is our worry as well because sometimes we need to stock the product outside the centre. We understand that the current centre cannot accommodate all the products during the picking season. We don’t know how

are also additional concerns about the extension of the centre as it is on Khas land and not registered. So, they need to communicate with the local government for legal approval from the government. “We need to have a better relationship with the government and the private sectors so that they can contribute for us to make these sustainable efforts and they also get benefited in return. There is no doubt that it is imperative in this context of climate change to ensure food security, but the question is how to keep it running,” Ali said.

This story of the community successfully running a collection centre with the help of Pani Jibon project that motivated the farmers to produce saline tolerant fresh vegetable, alongside their existing fish farming not only boosted the communities economy but created livelihood options that has been aiding them to become food secure, while enhancing their adaptive capacity with increased access to financial resources and market chain. ●

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# Mother's Parliament

## An evidence of Locally Led Adaptation

Ashish Barua, and Mohammad Zobair Hasan

Bangladesh is making quite a good number of progress on the strategic front to take climate action. The country has Disaster Risk Reduction strategies and Nationally Determined Contributions (NDC) developed and updated regularly. The Perspective Plan 2021-2041 focusing on building the resilience of the country to climate change and other environmental challenges as one of the strategic goals to make vision 2041 a reality is an important strategy towards climate action. Additionally, an important and comprehensive strategy that was adopted by the country named Bangladesh Delta Plan 2100 accounts for managing the risks posed by the deltaic formation of the country along with the incidence of natural disasters and climate change. Furthermore, Bangladesh is also accessing the Green Climate Fund and reaching the vulnerable com-

munities with these funds.

Not only at the policy and strategy side, but there are also several local initiatives being taken at the community level. There are several pieces of evidence on the ground which have been encouraging the movement against Climate Change in the country. For example, 'Mother's Parliament' (MP) is a locally-led initiative that has secured the 'People's Choice Award' in ChangeMakers Award by Global Water Partnership. This is interesting that the highest number of people have liked the journey of the climate champions out of 350 competitors from different corners of the globe. But the question is why they liked it and voted for the initiative?

The answer is probably here while Mosammat Sufia Khatun, the Speaker of MP from Morrelganj, Bagerhat, who said, "We want our actions that have been replicated in other areas of the country to be taken up abroad." The significant feature is that it is an easily replicable idea and practice, it is led by

the community people themselves. So, what is the MP? And what does it do for climate change?

The MP is an apex body consisting of nine members representing the Health Village Groups working on the ground. They come through a democratic process, where all the health village groups vote and choose the leaders to work at the upper level including sub-district and district. "See, we, the women have hardly any scope to share our thoughts, our choices and preferences; neither at home nor outside," said Sufia. "We are happy that we have got a platform now where we can talk freely and exchange our pleasure and sorrows. But, that's not the end. We meet here with a commitment to work for ourselves, for the climate-vulnerable community," she added.

Sathi Rani, the Deputy Speaker of the MP joined the movement as she understands that the different needs of women and adolescent girls must be raised. "Climate change and disasters affect



'Mother's Parliament' (MP) is a locally-led initiative that has secured the 'People's Choice Award' in ChangeMakers Award by Global Water Partnership



Mother's Parliament at Koyra Upazila in the Khulna district are discussing the issues related to their action plan

women and men disproportionately. And, usually we, the women are the most affected while all the plans and decisions are made by the male. Do they understand our problem, probably not. And, how will it be understood if we don't speak out," said Sathi Rani.

Rani emphasises that the "most affected" people should have the "most space" in the decision-making process which is practised by the MP. The MP advocates and solves issues raised by the water users at the community level. They work closely with the community group to identify communities' needs and concerns and bring them to the agenda of the MP. Then they play a key role to advocate with respective government line departments and local governments to solve the water problem.

This is the beauty of the Mother's Parliament which goes with the first principle of Locally Led Adaptation 'Devolving decision making to the lowest appropriate level'. How do they apply it?

"Look at us three, we come from different community groups, the diversity is here," said Gita Hazra, the Deputy Speaker of the MP in Morrelganj, pointing out that the President and the Vice-Presidents of the group are from different religions. "We consult the community; we listen to people especially from the excluded group and the most vulnerable. Even among us, no one holds more power than others, we decide on consensus. We take decisions ourselves rather than nodding with the decisions made or facilitated by other externals. This is important because we the affected people here are taking our decisions every day to adapt to the climate change at the local level," said Hazra.

The MPs successfully advocated for affordable WASH technology that deals with increased salinity and flooding in their communities due to climate change, such as Pond Sand Filter systems. In the 2018-19 fiscal year, the MPs achieved an increased budget allocation of 125%, to a total of \$64,422/UP for water, sanitation and hygiene at the Union Parishad level. In Morrelganj, they managed to find additional sources of funding and the investment increased by 212% in 2019-20. Approximately 12,500 people have better access to potable water at both household and community level because of this initiative. "The way the MPs facilitated the whole process for PSF in Samaddarkhali is praiseworthy. They submitted the petition, they followed it up regularly, they raised the issue in a public hearing and during the meeting at upazila



A session of Mother's Parliament ongoing in Koyra Upazila under Khulna district where members of the MP discussing the issues related to their action plan

level. This is great that they were able to convince the department to consider it as a priority and it happened finally. Now when you see around thousands of people are having access to safe water in this climate crisis," said Md Monirul Islam, the Sub-Assistant Engineer of Department of Public Health Engineering, Morrelganj, Bagerhat.

This is how the MPs are working in Koyra, Paikgacha and Morrelganj sub-districts in Khulna and Bagerhat. Though all the three MPs are working well now, their journey was not that easy, especially at the initial stage when they started in 2017. At first, it was challenging to convince stakeholders including Union Parishad and government line departments, to consider their initiative as a priority. When the MPs engaged locally elected Union Parishad members to verify the prioritized needs, using their newly developed advocacy skills, the scenario improved gradually.

By raising real issues with concrete evidence to the local government institutions and mobilizing influential leaders, the MPs started to be heard. Secondly, they struggled for their acceptance by the government agencies. To ensure acceptance and recognition, they mobilised support from NGOs and other lo-

cal leaders. They ensured the presence of powerholders and decision-makers, including local administration and government line departments, as a guest in each of the meetings or sessions run by the MPs later. This helped in developing relationships with wider stakeholders and they supported the MPs as change agents. "There was a time when few of them would raise their brows and they would say why we women were there in the meeting and visiting the senior government officials. But now they respect us, even the Upazilla Nirbahi Officer (Sub-district Administrative Officer) asks us to sit beside them in the meeting," said Sufia Khatun.

"Why are we working? We work because the need is there. The need is everywhere in these coastal areas. So, all sub-districts should have such groups who will raise voice for the women, take space in decision making. Nonetheless, the climate-vulnerable community will not be able to advance. And, we are the evidence that we can," said Sufia.

So, the principles of LLA should be initiated with the belief that the community can take actions. The local people have the capacity and strength to lead the decision-making process. The government and the non-government sector must go with the mindset of

'empowerment'- which means everyone has power to some extent to make a difference in the world. Every person at the local level irrespective of gender, class, economic status or educational background deserves to feel empowered inside.

Additionally, it is most important to come with the knowledge and practices rooted in the culture. And especially for climate change, the climate-vulnerable people themselves are the pioneers in adapting at their best through their daily life actions and reactions, as demonstrated by MPs. And, this is probably one of the key order conditions to build a Bangladesh resilient to climate change and other environmental challenges as Vision 2041 depicts. ●

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# Influx of intra district migrants in search of life

Stories from the coastal belt of Bangladesh

Moumita Sen

I have been living in Dhaka since my birth. My family migrated to Dhaka from a small city in the 1970s in search of better job opportunities. They were neither forced nor displaced by any kind of emergency or crisis, rather big cities' pull factors might have worked for them. But most people in Bangladesh, who move at various scales are usually influenced by diverse reasons; pull or push factors; economic opportunities; local unrest, or environmental risks.

While working in the Pani Jibon Project with Helvetas Swiss Intercooperation, I have come to know various migrants' stories from Bagerhat and Khulna, who migrated due to severe disruption of social and economic functions by repeated cyclones and tidal surges. These unbearable miseries of local migrants never came to the limelight, nor did they get any attention or support from local authorities. Here are

three stories from the ground.

## Living life on the edge

The story is about 30 years old Noorjahan, displaced from Gabtola, a riverside village under Morrelganj Upazila in Bagerhat district. In search of a better living, her family moved to Dhaka and somehow managed a job in a garment factory.

They could not stay long, considering the high living cost in Dhaka, they had to move back to their village. Her husband picked up his previous uncertain and unstable fishing as the only livelihood. Noorjahan stated, "During the last ten years, I had to change my home six times in search of a better life and stable livelihoods."

Neither her father nor her husband owned land of their own. They were living in floating homes in cities or at someone's abandoned space in the village. "We always lived in someone else's mercy as we don't have any. The

fear is always there to be thrown out any time," Noorjahan shared.

After her return to the village around 2007, the area was severely smashed by Cyclone 'Sidr', and she lost almost everything she had relied on. After the recovery period, she somehow started with the bare minimum she had. But, life had a different plan for her. After two years, the village was severely attacked by 'Aila', the tidal surge flooded

all of Noorjahan's belongings.

She had to step under the open sky again and restart from ground zero. Noorjahan is not working anymore after the cyclone because of the unavailability of menial works in the village. Before the Aila, she used to work as a soil leveler, or any other work available. She also started raising ducks, which was flooded away by Aila. She shared that there is a long process of distributing labour



Neither her father nor her husband owned land of their own. They were living in floating homes in cities or at someone's abandoned space in the village



Seasonal migrant workers are going to work in the brickfields of Jessore district as day-labourers from Bhasandal village under the Gulishakhali union in Morrelganj Upazila, Bagerhat

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work in her village, as there are not sufficient opportunities for all.

There is a system of lottery by which one can be hired for work. Her name did not show up this year, and that is why she did not find any work. "So, these days my husband has to bear all the household costs alone", she added. Being a fisherman, her husband tried to cover the living costs alone by catching fish in flooded water in the village, besides that he sometimes repairs boats outside the village. Noorjahan was a victim of involuntary displacement even though she constantly tried to adapt to a new environment and struggle.

## Regaining life through multiple journeys

Riazul is a 37 years old man from Bhasandal under the Gulishakhali union in Morrelganj Upazila, Bagerhat. Like other villages in Bangladesh, agriculture was the main livelihood option for the community. His father had no land to cultivate and used to work as an agricultural labourer in other people's land.

Due to an accident, he had to stop working. The village tolerated extreme cyclone Sidr more than a decade ago,

still carrying its effects, and damages can be spotted including human lives. Riazul's family is one of the victims of that disaster. He was already in a bitter situation because of his fathers' accident; in addition, Sidr made it worse. "The villagers were not rich, but people could live with whatever they had," Riazul remembers. "There was plenty of fish in the wetland. We could fish enough within 10-15 minutes of our

casting nets", he added.

After Sidr, trees were uprooted and vegetable lands were destroyed, either inundated or turned saline and barren. Riazul said, "My life would be quite smoother if the cyclone had not hit us and damaged our fishing pond. I would not need to be in such a frequent move and engage in hard manual labour work if I could restart my fish farm." After Sidr, they took a loan of Tk30,000 to re-

build their house. He took a further loan to restart their fish farm. However, they could not gain any profit.

He had to migrate to other adjacent districts and work two long years, to overcome the damage and loss of this cyclone. After clearing all debts, he moved back to his village. Now, he frequently goes to bigger cities like Chattogram on and off and works there as a day labourer in construction work. "When I come back to

the village during the off-season, I drive a motorcycle to carry passengers to the city points like Khulna, Bagerhat," Riazul said.

#### The essence of living in different cities

Sometimes, life turns out in such a strange way, that we do not perceive whether we move forward or step back. Shiuli is one of the witnesses of life circumstances. She was born and brought up in the village of Bhandarpur under



Seasonal migrant workers are going to work as 'soil digging workers' in the Satkhira district from Bhandarpur under Koira Upazila in Khulna district

Koira Upazila in Khulna district.

Her village is in the lap of the mangrove forest Sundarbans. She shared, “My poor family married me off when I was only 13 years old.” In the early 2000s, at the time of her marriage, her husband had no land of his own and he used to be a rickshaw puller during the dry seasons in adjacent cities.

During the rainy seasons, when all the areas got flooded, he jointly with

other people used to go to the Sundarbans to catch fish and to collect timbers. The government’s restrictions on logging and fishing in the Sundarbans negatively affected her husband’s income. Since income sources in the village became very limited, her husband started seasonal migration during the harvesting season and rickshaw pulling.

In 2008, Cyclone Nargis struck the village and smashed away everything. Shiuli with her daughter went to Jashore, where her husband was working as a rickshaw puller. They lived there for a couple of years until her husband decided to move to Khulna city with the hope to increase income. However, they could not sustain their life in Khulna because of high living costs and returned to the village. Once back to the village, Shiuli had to face more challenges.

She recalled, “There were lush green

But we are yet to settle our life. Together with my husband, we have now been struggling for the last 17 years to find a stable life with a regular income,” she said.

These stories are filled with incidents of successes, failures, and mixed experiences of individuals’ lives after deciding to live differently. The stories neither tried to establish a thought against or favour of the concept of migration nor tried to conclude any line for climate-induced migration. Migration is a process, no one can limit this. An administrative boundary may provide tremendous opportunities and prospects, even then people will migrate. Different factors work for different migrants in a dissimilar way. That is why it is always very difficult to draw a single line.

The coastal region always remains under the potential risk of climatic

he managed to clear all his loans. Riazul states, “The fear always exists of the unpredictability of weather when the next cyclone or flood attacks the area and flashes away everything and puts us at square again.”

Shuili has a different point of view. She had partial successful migration. Everything worked out well when it was within a small town, but big cities did not turn out all aligned. With time this kind of people like to move further away, corresponding to the so-called stepping-stone pattern, from smaller, nearby towns to larger, more distant cities or even abroad.

After experiencing unsuccessful migration one after another, Noorjahan tried to find a survival strategy to live again and smile with an empty eye, states “I do not know how long we can survive like this”! Migrants like Noorjahan or Shiuli do not know, what will happen next, they keep moving. These stories are just picked up from the ground among thousands unattended.

These scenarios depict what may happen after a family migrates from a rural to an urban area with a bigger hope to survive. For marginal people, there is no end in migration, whether it is successful or unsuccessful. They cannot decide to migrate, rather they are somewhat forced by climate alteration, socio-economic degradation, or just the sake of survival.

Major societal and governance challenges arise when there is a huge influx of migrants in urban cities. The loss of identity or belonging to a place can have a decisive impact on a human’s life. These people are still searching for their identity, well-being, and life. In this context, the Government of Bangladesh acknowledged environmental migrants in urban settings in the Eighth Five-Year Plan.

There is a long way to go to understand the discourse of climate-induced migration. Before reaching any conclusion or making any policy-level decision, it would be wise to explore and analyze more to bring out the real picture from the field and to find out the most effective way to deal with it to ensure resilience and well-being for the climate-vulnerable community. ●

***The stories are taken from the study “Insights on Human Mobility in the Context of Climate Change: Action Research Conducted in the Southwest Coastal Belt of Bangladesh” by OKUP and Helvetas Swiss Intercooperation.***

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## In 2008, Cyclone Nargis struck the village and smashed away everything. Shiuli with her daughter went to Jashore, where her husband was working as a rickshaw puller

paddy fields before. The whole village has turned into wetlands because of tidal surges and cyclones. The soil has turned saline and barren. Instead of the paddy crop that was standing earlier, now you can only see puddles. Cultivation is not possible anymore. So some people are trying to cultivate shrimp in these new puddles.”

Her husband failed to find any suitable work in the village. He spent all his savings. Even Shiuli became frustrated in raising ducks or hens as she could not feed them. Growing vegetables in her homestead were also difficult as the soil was very saline. Then, Shiuli and her husband decided to work together in various brick kilns in Magura and Jashore. They continued working for six months leaving their daughter with her grandparents.

They were not in a comfortable situation leaving their daughter alone in the village. “My situation forced me to marry off my daughter at an age 15 to release some burden from our shoulders, just like my parents did”, Shiuli shared. “We kept moving from one place to another, grabbing occupation one after another.

events and natural disasters throughout the year. Livelihood opportunities, sense of place, and risk perception are considered, thus influencing the decision of migration. Although the new environment offers probable benefits, at the same time imposes unanticipated challenges. From the stories, it can be realized that migration is not generally the preferred choice rather it is a reactive action.

From Riazul’s story, we saw that his coping strategy is taking up loans. Most affected households take loans to invest in livelihoods activities like livestock rearing, fish farming, crab fattening, or agricultural production to recover from the misery. Despite having several experiences of unsuccessful migration with such bitter experiences, Noorjahan took the risk of giving her life another chance. She and her husband were involved in temporary livelihood options like the reconstruction of the road, soil levelling, repairing embankment undertaken by the government after a sudden onset event.

The seasonal migration of Riazul has been considered “successful” because

# Climate change adaptations are effective when joint initiatives are taken

Community-level bridge construction needs collaborative actions from the LGI and NGO sectors



A 'wooden bridge/culvert' constructed jointly by the Local Government Institution, NGOs and Local Community in Godaipur village at Paikgacha upazilla in Khulna district. It is one of the examples of the implementation of the RRAP by collaborative and joint action at the local level

KAMRUZZMAN KHAN

M M Jakaria and Md Kamruzzaman Khan

**D**ue to climate change, extreme weather events like tropical cyclones, water-logging, tidal surges, storm surges, river-bank erosions, salinity intrusion in water and soil have been

increasing in both magnitude and frequency in recent years. This irreversible change has been causing severe damages to the physical constructions like roads, bridges, and culverts, etc in the coastal area. The constructive actions will be effective and sustaining if those are done jointly with the initiative from the Local Government Institutes and

NGOs/private sectors.

Godaipur village at Paikgacha sub-district in Khulna district is one of the most climate vulnerable villages because of its location adjacent of the Sundarbans. This area experiences different types of slow onset and sudden disasters almost every year because of the climate change impacts. As a result, a

huge number of physical constructions like road, bridges and culverts etc. have been damaged in recent years. After Sidar and Aila, the frequency of tropical cyclones has increased and several disasters occurred by the last ten years including Cyclone Mohasen, Fani, Bulbul and Amphan.





Recently, the local government Institutions (Union Parishad) has focused on investing in the reconstruction of those bridges and culverts through Risk Reduction Action Plan though it lacks resource/fund to meet the high demand from the community

Aftermath of cyclone Amphan in May 2020, large extents of the physical establishments especially bridges and culverts have been damaged in the union. High water pressure resulting from severe high tides, and extreme water flows have incurred severe damages to the bridges and culverts in the communities and are in need to be reconstructed. Recently, the local government Institutions (Union Parishad) has focused on investing in the reconstruction of those bridges and culverts through Risk Reduction Action Plan though it lacks resource/fund to meet the high demand from the community. Hence, a joint initiative in imperative and evidence of successful implementation jointly by LGI and NGO (PJP project) has been detailed here.

There are 1,365 households in Godaipur village, most of which belong to disadvantaged groups. Agriculture (home-stead gardening and nursery, fishing and fish farming) is the main occupation of the people in this area. This village is connected with a bridge to Bohorbunia Bazar and this is the only direct thoroughfare to the local market, with no other alternative. Fazlu Morol, a smallholder farmer from Godaipur village stated, “I was not able to sell our agri-products in time which adversely affected in my income and livelihood.” Another smallholder farmer from Godaipur Purbo Para, Rashida Begum, said, “I have suffered a lot during the rainy season for last 4-5 years. I was not able to bring my home-stead garden-produced monsoon vegetables to the Godaipur Bazar myself. I had to sell to the local Foria (buyer) at lower price.”

This is to note that the village usually gets waterlogged during the rainy season. The community used to travel a long way through a bamboo footbridge over the canal for their daily purpose

(ie schooling, access to market etc). “It was very difficult for me to go to the school. Twice my books and notebooks were destroyed while crossing the river. Many of my classmates have had this problem,” Md Rakib Hossain, a student of Godaipur High School shared his experience.

Since 2018, the community got mobilized to address the climate change adaptation including the revitalization of the Ward Disaster Management Committee’s (WDMC)s, conduction of Risk Reduction Action Plannings (RRAP) at the union, ward and community level. In 2019, the UP had taken the RRAP



Now thousands of people from the village are well-connected to the Union and other areas, with increased access to market, education, and health centres

from this community and ward into consideration. Md Javed Ali, Member, Godaipur union Parishad said, “During the finalization of the Disaster Risk Reduction Plan, we included 3 schemes of the Ward No-8 (Godaipur village) and implemented in 2019-2020 financial year. But, we could not step that much because of limited fund.” Due to the limited UP-budget, UDMC was not able to implement the scheme from that RRAP in that year.

Then, Panii Jibon project had approached the LGI for a joint initiative. And, the UP had agreed to implement the schemes in the current year through the co-financing method. Mst Razia



to market, education, and health centres. “Now I can bring my vegetables to the market and get a fair price. The bridge plays a crucial role to my income generation,” Rashida Begum, a smallholder farmer from Purbo Para in Godaipur village shared.

It is also important to have the participation of local people and the government to ensure optimum utility and benefit from these interventions. For an intervention to sustain, it is important to ensure local ownership for maintenance of the constructions timely. Thus, it is imperative that LGI, NGO/Private Sectors and communities are engaged, in the implementation and management of the infrastructures. ●

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# Rozina's journey

How one rural Bangladeshi woman became a self-sufficient and resilient farmer



Moumita Sen

**A**griculture has always played a dominant role for Bangladesh in the way of socio-economic development. More than 80% of the people live in rural areas and depend on agriculture currently and a significant percentage of farmers are still marginal and landless. These people's lives and socio-economic conditions are often affected by the impacts of climate change, making them vulnerable.

Various kinds of initiatives have been launched to support vulnerable people such as homestead gardening to increase food production, ensuring nutritional security and generating extra income at the same time. Homestead gardens are classified as a small area of cultivated land adjacent to the home. This is utilized for producing vegetables and fruits, a quite widespread practice in Bangladesh contributing to the food sufficiency of a family.

Despite frequent practice, the scenario is completely different in the coastal belt. Growing vegetables and fruits are not easy and sometimes impossible because of cyclones and their

after-effects in this region. The soil remains submerged during certain portions of the year and gets contaminated with salt following saline water intrusion after cyclones.

Mariam Akter Rozina lives at Baropir village under Khaulia Union of Morrelganj Upazila, Bagerhat, a village, adjacent to the Sundarbans. She has been living alone with her children since her husband abandoned her. "It is very difficult to live as a single woman in a society like ours," Rozina said. She belongs to a class of extreme poor, moreover, now she must bear all family responsibilities on her own. Her dwelling gets inundated every year on an average of three to five feet during April to October due to high tide and remains submerged for a minimum of a week with saline water.

"Every year, during the monsoon, my home, and the surrounding area goes into the water and remains submerged more than one week. I cannot live in water with my kids and need to find some temporary place to pass these days," Rozina said. During this time, every year she and her children move around and look for other places to live as it is impossible to cook and do all other household chores.

Usually when they are temporarily moving her family including her children lives on a nearby embankment with their utensils, and livestock. She is unable to rear duck, hen, goat, sheep, or a cow for a longer period, due to high salinity, furthermore she could not produce household vegetables in her yard, just like other dwellers.

In 2018, Rozina was a part of a study by an international NGO with the support from a national NGO, to explore households that suffer from tidal inundation, waterlogging, and salinity during the summer and rainy season due to multi-dimensional climate-induced disasters. She has been identified as one of the victims, who suffered housing problems, malnutrition, monetary crisis due to tidal inundation, waterlogging, salinity encroachment.

The households were facilitated with a household-level adaptation plan, prepared with the view to promote actions for the households to make them resilient. They were supported with external funds and advisory support for homestead plinth raising considering the highest tidal level.

They were also supported for homestead vegetable gardening through organizing training and workshops. Women farmers were trained in vegetable production and provided with excellent quality vegetable seeds for summer and winter planting. After all this knowledge-sharing training, they were also supported with technical assistance to start the gardening.

After raising the homestead plinth, Rozina had started homestead vegetable gardening and hen rearing with all the support she received. Then she started cow rearing with her initiative. She has been growing red amaranth, onion, garlic, potato, chili, bitter gourd, spinach, ghee Kanchan, turnip, cowpea, sweet gourd for the last two years.

During the last winter season in 2020, she sold winter vegetables for Tk13,300 and the total vegetable selling cost for these two years is Tk48,000 from her homestead gardening. The estimated production cost was only Tk5,600. She has started hen rearing during 2019, starting with just two hens and now increased to 18 hens.

By this time, she had sold 32 hens for Tk9,600 and 123 eggs for Tk984. She started cow rearing with one cow

and now she has three cows. Within these two years, she earned Tk1,10,124 which is Tk5,005 on average for each month after fulfilling nutrition and minerals demand for her family consisting of three members. According to Rozina, "Now we can live in our home all the year-round, because of the raised plinth, it has saved us from submerging. I am working and earning all through the year and my family does not have to buy meat, vegetables, and eggs from the market anymore."

Seclusion and subordination of women are common practices in Bangladeshi society, and most prominent in rural areas. Women have always been engaged in domestic work, caregivers of the child, and expected to play the role of obedient wives. Many rural women are excluded from the information about life outside their homesteads and immediate surroundings. Poverty and illiteracy have contributed more. Women like Rozina set an example of resilience by taking full responsibilities for her family even being a single mother.

Extreme poverty forced Rozina to go outside and earn money. But now Rozina can successfully take care of her family's responsibilities with her earnings. Financial security gives her the position of decision-making in her family and even in society from time to time. Involving more women in agricultural activities like homestead gardens can lead the path toward women empowerment in rural setup. Many marginal women have been contributing to household economic well-being nowadays. "It gives me satisfaction that I can provide a happy and healthy life to my children," Rozina states.

Mariam Akter Rozina is one of the most successful women farmers in her village. She regularly sells her vegetables, fruits, and eggs. Besides, her family does not need to buy fruit, eggs, and meat. She is a self-sufficient and resilient farmer, who neither needs to move nor is forced to move due to climate-induced disaster. She can recover her situation after any sort of disaster caused by nature or humans. ●

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# Locally led adaptation: Way forward

Unpacking local knowledge for solutions

Ashish Barua

As per Sustainable Development Goals (SDG) progress report 2020, the level and progress for Climate Action in Bangladesh compared to other South Asian countries is quite good. Bangladesh has a substantial amount of important policies and plans that support Climate Change adaptation, this includes the Perspective plan 2021-2041- which

manage the risk and challenges faced by the country due to climate change. Most programs by government and non-government agencies highlight Locally Led Adaptation (LLA) though in practice, much still needs to be improved.

There is no debate about the importance of community engagement. No doubt, the people suffering with the problem of climate change impact can bring the best solution, as they are already coping with the changed context and adapting to the impact it has on their lives. Local communities also feel they should be heard, their practices must be better respected and the needs and demands at the local level should be better addressed. This is true that the answers are there on the ground. If we look at the LLA practices at disaster-prone coastal areas like Khulna, Satkhira and Bagerhat, we find several encouraging practices adopted by the vulnerable community. But the question is how to capitalize on these good practices and integrate them into development plans and wider outreach?

As far as climate change is concerned, there is a mindset that science and technologies will produce a solution that relates to climate change mitigation. What about climate change adaptation then? The climate-vulnerable communities are already adapting to the changes, for example in water supplies, food security and livelihoods in diverse ways. Therefore in the individual and local context, they are the best decision-makers for climate adaptation planning and

financing.

The efforts of community practice were highlighted at the Climate Adaptation Summit's Locally Led Adaptation Anchor event hosted by Sheikh Hasina, the honourable Prime Minister of Bangladesh. The event was watched live by over 4,000 people. Around 40 organizations from different corners of the globe already endorsed the Principles for LLA. The 8 principles of LLA are; 1) Devolving decision making to the lowest appropriate level, 2) Addressing structural inequalities faced by women, youth, disabled, and excluded ethnic groups, 3) Providing patient and predictable funding that can be accessed more easily, 4) Investing in local capabilities to leave an institutional legacy, 5) Building a robust understanding of climate risk and uncertainty, 6) Flexible programming and learning, 7) Ensuring transparency and accountability, and 8) Collaborative action and investment.

The principles have been well-articulated by the facilitating actors and the endorsing organizations have developed actions and indicators accordingly. However, the potential challenges are how the principles will be translated on the ground and what it means to the local people of the community. The solution is not only to develop the actions but also to apply them at the local level and most importantly the way the local people think, suggest, and decide.

This is a challenging approach and strategy of both the government and non-government actors. Community



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takes building Bangladesh resilient to climate change and other environmental challenges as one of the strategic goals to make the vision 2041 a reality. Furthermore, the National Plan for Disaster Management, Standing Order on Disaster, Bangladesh Climate Change Strategy and Action Plan(BCCSAP), Disaster Management Act, which reflect on Community Engagement in planning, implementation, and monitoring are all comprehensive strategy adopted to



engagement, participation and local leadership are terms sometimes over-used, although several good practices and evidence exist on the ground. This is the right time to challenge ourselves, to reflect on our existing practices, step back if necessary and redesign our activities as needed to address the climate change on the ground.

For example, let us take the first principle of LLA 'Devolving decision making to the lowest appropriate level.' How do we apply it? The local people are usually consulted, the process of decision making is facilitated. To reach the lowest appropriate level we refer to inclusive approaches. But, if we ask ourselves how many cases are there; that the local people really decided for themselves; if the excluded people were part of the initiative; the rate is low. Still, there is the practice of tokenism. What do we need to do then?

First, we need to investigate the existing practices. One of the potential approaches is 'Most affected, Most participated.' Each decision and action taken has consequences and they affect each individual be it men women, rich or poor, children or elders differently. . We must analyse how the decision and action might affect people and how the individual might deal with the consequences. We need to ensure that the 'most affected' people are taking the 'most space' in the decision-making process. We must promote a structure where one person is not given more power than another and the affected people can participate equally for their final say about a decision. What is true participation then? We need to flip our lens in this case. It is quite simple but a tough process, 'No decision making means No participation'. When we talk about LLA, we have to make sure that the local people are making the decisions themselves rather than nodding along with the decisions made or facilitated by others. The key is that the affected people are mostly taking decisions for climate change adaptation at the local level.

Next, let us reflect on the other side of the box. Why has participation not been in decent shape to date? Why has

it been talked about for long, but still there is a gap? Both public and private stakeholders commit, lay out a number of principles and approaches to address it but are they held accountable for their actions? Are we holding ourselves accountable? Do we account ourselves for what we are committed to? Though upward accountability to donors and government exists, downward accountability is missing in most cases.



When we talk about LLA, we have to make sure that the local people are making the decisions themselves rather than nodding along with the decisions made or facilitated by others

As per principle, the actors are accountable to the local people for their actions. 'Brave Accountability' is very much needed to challenge unjust ac-

countability in practice. We must be accountable for all our actions as well as holding others to account for injustice. We must promote a sense of responsibility - being accountable to ourselves and to the local people equally. It means we should look for solutions and ways through getting to the centre of the issues and addressing the needs of both impacted and responsible people. It must embed the 'do no harm' so that the decisions taken are relevant and avoid unintended negative consequences. It can be done through diverse ways, for example, establishing a mechanism for reporting back to the community we work with, enabling the making petitions to the responsible authorities by the local community people, and making data and information available wherever possible.

To carry out the task correctly we must challenge ourselves to evolve our mindset. The principles of LLA start with the belief that the local people have the capacity and strength to lead the decision-making process. The actors must go with a mindset of 'empowerment,' meaning that everyone has the power to bring a change to the world. Every person deserves to use the power from within and most importantly use the knowledge and practices rooted in the culture. The local people can contribute their knowledge towards science and technology rather than digesting imported knowledge only. And especially as we talk about climate change, the climate-vulnerable people themselves are the pioneers in adapting at their best through their daily life actions and reactions.

Similarly, we need to unpack all the principles of LLA and translate them into the local level; and only then will we be able to build a Bangladesh resilient to climate change and other environmental challenges as Vision 2041 depicts. ●

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