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Climate Tribune

Locally led adaptation to climate change comes of age

The results of the Gobeshona conference were beyond expectations

Saleemul Huq

The eight principles of Locally Led-Adaptation by WRI, IIED, BRAC, SDI, GCA GLOBAL RESILIENCE PARTNERSHIP

Two years ago the Global Commission on Adaptation (GCA) was set up by a group of governments led by the Netherlands and the leaders of 22 other convening countries including Bangladesh with the former Secretary-General of the United Nations Ban ki-Moon as its Chair along with Bill Gates of the Bill and Melinda Gates Foundation and Kristalina Georgieva, then CEO of the World Bank and now head of the International Monetary Fund (IMF) as co-chairs. It also included a large number of Commissioners including the heads of UNDP, UNEP, WMO, etc, and dignitaries from around the world including Dr Muhammad Musa from BRAC Bangladesh. I had the privilege of being associated with the GCA to support its scientific work on the topic of locally-led adaptation.

The GCA held a large number of consultations all over the world with many different stakeholders and came out with its flagship report called 'Adapt Now' in September 2019 which was released at the United Nations in New York during the Climate Action Summit held there at that time. The GCA meeting at the UN in New York was chaired by the Prime Minister of the Netherlands along with Ban ki-Moon and Bill Gates and also present were Prime Minister Sheikh Hasina of Bangladesh as well as Dr Musa of BRAC and myself. The flagship report identified eight different Adaptation Tracks that would then become part of a Year of Action which would culminate in a Climate Adaptation Summit (CAS) to be hosted in the Netherlands in October 2020.

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Unfortunately, because of the Covid-19 pandemic the original date for the CAS had to be postponed to January 25 and 26 of 2021, and instead of an in-person meeting in the Netherlands, it was run as a series of online Anchor Events on the different Action Tracks held across 24 Hours starting with a high-level launch in the Netherlands hosted by their Prime Minister and Ban ki-Moon along with heads of government and ministers from many other countries. Prime Minister Sheikh Hasina of Bangladesh also spoke on the occasion. The high-level segment was noteworthy for being the first international speech by John Kerry from the United States of America after being appointed President Biden's Climate Envoy. He gave a powerful speech saying that the US is now back in the Paris Agreement and will be doing its best to also work on adaptation as well as mitigation.

As part of the CAS, an Anchor Event on Locally Led Adaptation (LLA) was hosted by Bangladesh on January 26. It was was inaugurated by the Prime Minister as well as ministers and then had inputs from many other speakers from many different organizations both from Bangladesh and around the world who all pledged to adopt and follow the 8 Principles of LLA that had been developed under the LLA Action Track. In the end, over forty international and national organizations pledged to adopt the principles.

Just prior to the CAS, we also held the annual Gobeshona conference which was the 7th year for the usual series of Gobeshona conferences which had been held at the Independent University Bangladesh (IUB) every January for the previous six years and was organized by the International Centre for Climate Change and Development (ICCCAD). In previous years we had several hundred people participating over four days with quite a few international participants, but this year because of the Covid-19 pandemic and travel restrictions we decided to hold it as a virtual event and hence also decided to make it into a global event on the theme of LLA.

When we reached out to our friends around the world inviting them to host and run sessions on their respective adaptation-related activities wherever they were located we got an overwhelming response and finally decided to hold 90 sessions over 24 hours each day, for seven days. This meant for every day we were having 8-hour sessions for the Asia Pacific region, followed by 8 hours for the African and European regions and then the Americas for the third 8 hours each day for seven days. We believe this may be the first such round the world 24/7 virtual event.

The results of the Gobeshona conference were beyond our expectations in that we have several thousands of participants from all over the world, not only joining in sessions but also interacting with each other in virtual chat rooms which we provided for them.

The results were a decision to launch the Gobeshona Network LLA and Resilience and to hold the Gobeshona conference on LLA every January from now on as a virtual global event and not revert back to the in-person format anymore. We also plan to make each annual Gobeshona conference into a review of progress on the ten year journey to promote and enhance locally-led adaptation around the world which was started as a community of learning and practice at the first annual Gobeshona Global Conference on Locally Led Adaptation in January this year.

I was also given the opportunity to present the outcomes of the Gobeshona conference at the CAS Anchor Event on LLA on 26th January to launch the ten-year journey to promote locally led adaptation.

Dr Saleemul Huq is the Director of the International Centre for Climate Change and Development (ICCCAD).

GOBESHONA
Global Conference 1
Research into Action on Locally - Led Adaptation

Held from 18th - 24th Jan, 2021

Gobeshona is a knowledge sharing platform, bringing together the national & international research community to encourage sharing, enhance quality and make climate change research more effective.

About GOBESHONA Global

This year, the annual conference focused on **'Locally-Led Adaptation'** to capture the knowledge from different countries around the world

The conference ran for **24/7 for a week**, across multiple time zones & geographical regions

Going fully virtual, allowed us to be responsible about OUR **carbon footprint**!

Participants were able to **network and collaborate** together to add value to each other's work and build momentum around the world with us.

"Think Locally, Act Globally"

PATRICK GEDDES, 1915

GOBESHONA Conference (in numbers)

1200+ PARTICIPANTS
Students, Early-Career Researchers, Academics, Development Practitioners (among others)

90 SESSIONS
On various themes, focused on Locally-Led Adaptation

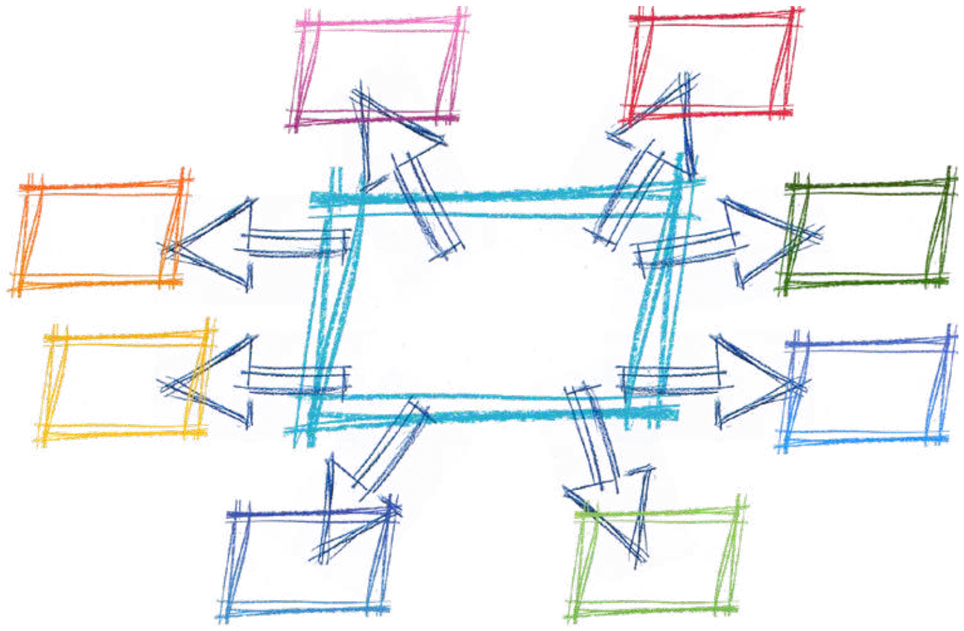
100+ PARTNERS
From Development Agencies, INGO/NGOs, Public Sector, Universities

20+ COUNTRIES
Across the globe, from multiple time-zones

CREATED BY: SAQIB HUQ, PROGRAMME CO-ORDINATOR, ICCCAD

In locally-led adaptation, "locality" and "leadership" remain unclear

LLA approach and solutions



PIXABAY

> At this year's virtual and global Gobeshona, it is clear how far-reaching the LLA approach has become

Danielle Falzon

Locally led adaptation (LLA) is quickly becoming an adaptation ideal. Progressive adaptation efforts increasingly aim to move away from top-down planning. Last year, former Secretary-General of the UN Ban Ki Moon launched the Locally Led Adaptation track for the Global Commission on Adaptation at the Gobeshona Conference in Dhaka. At this year's virtual and global Gobeshona, it is clear how far-reaching the LLA approach has become.

However, there seem to be inconsistencies in the meaning of LLA for different organizations.

With LLA action as the theme of the 2021 Gobeshona Global Conference, presenters from around the world took advantage of the opportunity to highlight their organizations' efforts in this area. It created a truly unique and much-needed space for emphasizing the importance of local actors in adaptation.

Presenters at Gobeshona seemed to agree that LLA involves a change from top-down planning that previously characterized adaptation work. That instead of planning taking place among non-local actors in international organizations and multilateral climate funds, it should take place among local actors, and that these local actors should lead adaptation.

LLA was praised by representatives of funders such as the Adaptation Fund and the Green Climate Fund, international organizations and NGOs such as UNDP and BRAC, and by national-level researchers and project implementers. It was discussed in the contexts of countries in the Global South in Africa, South and Southeast Asia, and Latin America, as well as in the Global North in Japan and Rhode Island (USA).

So, what is local? What is leadership?

For different types of organizations, locality and leadership mean different things. The Adaptation Fund and the Green Climate Fund have each launched initiatives to make funding more directly accessible to countries. In the past, this has been a challenge for countries that cannot meet the complicated requirements and to submit project proposals. Through "direct access" initiatives, countries would have increased "ownership" of projects and more say in how funds are spent, thereby increasing local leadership.

For international organizations such as UNDP, local leadership comes from greater engagement with actors in vulnerable countries. These actors can be members of climate-vulnerable communities or other national actors with ideas about how adaptation should take place. UNDP has launched the "adaptation innovation marketplace" in an effort to capture and support these local ideas and turn them into projects.

In Bangladesh, there are also organizations working to increase vulnerable community members' inputs in adaptation decision-making. BRAC aims to empower community members to become climate resilient on their own. The Tapestry project (implemented by several organizations) approaches LLA from an even more radical framing of local leadership. Their initiatives aim to engage with vulnerable community members' ideas about marginality in order to co-create transformative adaptation interventions that bring long-term structural change.

What do these vastly different ideas about locality and leadership mean for LLA?

When LLA means country control over the allocation of funds for some organizations, and transformative structural change that considers local power relations for others, it is clear that there is a lack of consensus on this ideal approach to adaptation. LLA begins to lose its meaning altogether.

In these LLA efforts, each organization seems to partially relinquish their control over adaptation to the set of actors that is one step more "local." Local becomes a relative measure rather than something with concrete meaning. Leadership can then mean anything from contributing ideas to having substantive control over an adaptation intervention.

The presenters at the Gobeshona conference often made claims like, "Local solutions are often the best solutions," and, "climate change is a global challenge that requires local solutions and innovations." If we don't know who is included in "local," though, we don't know who we should turn to for solutions. If "context matters," and "we cannot apply a cookie-cutter approach," then it seems that the people most impacted by climate change, who know their contexts, should have substantial influence in deciding how adaptation takes place.

Right now, contributions from local communities are mostly moderated by organizations that have their own interests and limitations. Depending on the organization planning the intervention, an LLA project may be collaboratively constructed with community members or may not include community members at all. Meanwhile, it is their futures that are at stake in adaptation efforts.

> When we talk about LLA, we must ask: where are vulnerable community members in this process? Are they the ones making decisions in leadership roles?

MARKUS SPISKE

According to the newly released "8 Principles for Locally Led Adaptation" from the Global Commission on Adaptation, the first component of LLA is "Devolving decision making to the lowest appropriate level." Apart from the derogative tone of "devolving," this principle also the "appropriate" level of decision-making up to interpretation. This can be used to justify keeping decision-making power away from local communities.

When we talk about LLA, we must ask: where are vulnerable community members in this process? Are they the ones making decisions in leadership roles? Or are they being used instrumentally in order to make interventions more effective or to extract innovative adaptation solutions?

LLA is a huge improvement over top-down approaches to adaptation. That organizations at all levels are thinking about how to more evenly distribute decision-making power is a positive change. However, the conversations around LLA at the Gobeshona conference revealed that we need an explicit discussion about power and agency in adaptation. The meaning of LLA must be made more precise.

True bottom-up adaptation would mean that vulnerable community members are in charge. That they ask for what they need, and they receive it. We must not let LLA become another hollow buzzword in climate change work. Ambiguities in its meaning must be resolved now to match the urgency of the climate crisis.

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My reflections on the first virtual Gobeshona conference

Susan Nanduddu

The first virtual Gobeshona conference, a form of adaptation to Covid-19, opened on the day internet was restored in Uganda following a nationwide shutdown for nearly a week. Thankfully, I had already registered and I found my way around into the Whova App, which I had been introduced to by the fourteenth Community Based Adaptation Conference. I have previously been to Bangladesh, largely to attend one of both conferences. It was a wonderful experience attending the 24-hour conference in a variety of formats; which reached all parts of the world including Latin America. Congratulations to the team that made it happen.

Did you know that we are officially in the UN Decade of Action? This decade calls for accelerating sustainable solutions to all the world's biggest challenges, including climate change. For most of the past decade, I was a student and facilitator of conversations about climate change adaptation. As part of my work, I identify doers (practitioners) researching or working on a relevant subject, and I invite them to share insights from their experiences in various spaces. The intention is to increase awareness about climate change, and share lessons of what works and what does not. Ultimately we hope to inspire individuals, households, and institutions to enhance adaptation action at various levels. As the last decade wound up, however, I thought about how to have a more practical experience as a 'doer', beyond being a facilitator.

One of the keynote sessions moderated by Prof Saleemul Huq at the conference was very inspiring to me. Expert Jean-Pascal van Ypersele shared plans to make Europe more resilient, climate prepared, and fair; based on a report by the Mission Board for Adaptation to Climate Change of the European Commission. In brief, Europe, known to many of us in the global south as a leader of the mitigation agenda; is taking bold climate adaptation steps. These are in three parts; to assist European citizens, communities, and regions in better understanding, preparing for, and managing climate risks; co-create solutions with 200 communities, and scale-up actionable solutions triggering societal transformations through 100 deep demonstrations of climate resilience across a number of European communities and regions. This sharing inspired me to do something in my personal capacity, with the community where I farm.

> Importance of Locally Led Action is devolving decision-making to the lowest appropriate level

Over the past decade, my husband and I have grown food for our family, with limited intention to sell. During the Covid-19 total lockdown, our garden fed at least six households for free. From the Gobeshona conference, I have been inspired to not only establish a coffee and banana garden on one acre of land, but turn it into a demonstration garden, and I invite my neighbor-farmers to learn from it.

Available research predicts that the coffee-growing areas will be wiped out in Uganda under a two-degree Celsius scenario. Yet coffee is a very important source of income for smallholder farmers. Establishing a demonstration will be my entry point for engaging meaningfully with the residents. I hope to leverage past experiences in engaging with 'new' communities, to build trust enough to have sustained conversations that will help us discuss the climate risks, and co-create solutions. Hopefully, we can attract financing to support investments towards resilience-building.

The Gobeshona conference also discussed principles of Locally Led Actions, one of which is devolving decision-making to the lowest appropriate level. This principle speaks to empowering those worst impacted to lead more adaptation; increase direct financial flows to local actors and for local actors to have more decision-making power or a genuine voice where others lead. In a community like mine with no registered community-based organisations, nor active Non-governmental Organisations, the decentralisation system is ideal for facilitating resilience building. The starting point would be for the village Chairpersons (the lowest level of decentralisation) to be knowledgeable and networked enough to facilitate these discussions where there is no deliberate climate finance.

It is worth noting that financing for adaptation action remains low and a very small fraction reaches the local level. Yet it is needed in order to accelerate locally led adaptation. A facilitator for one of the sessions at the Gobeshona conference rightly observed that "the days for top-down development are over". Project designers in boardrooms should consult with project area residents, not just facilitators like myself. The largest percentage of the residents in my community depends on their less-than-one-acre gardens to feed their families, while some provide labour on other people's farms for a livelihood. The whole village has no electricity. Access to water is largely from a few springs, or rainwater harvesting into low volume containers of less than 100 litres. It is largely the women and children who invest hours daily to collect water for household needs, which is both tiring and time-consuming. To expect irrigation under such circumstances, without investing in enabling technology, is to add a huge labour burden onto the women and children. These are the local actors that need to be consulted.

About one and a half years old coffee plant

SUSAN NANDUDDU

The Gobeshona conference expanded my perspective on these matters and I am grateful.

Lastly, I would like to reflect on the ten-year trajectory pledged by the conference. The Gobeshona conference will continue annually online until 2030. This conference has inspired me to project the same for myself at the farm. I am excited about the prospect of sharing results over the next nine conferences. Will I report success or failure at mobilising my neighbours to co-create adaptation solutions? Will I report that our coffee survived the disasters of the decade? Will I report two steps forward and some backwards?

My optimistic self looks forward to positives only, but only time will tell. ●

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The importance of learning about climate change from the Global South

Why ICCAD's Global Gobeshona Conference set an important precedent

Farhana Sultana

The Global Gobeshona Conference, held in January 2021, was a remarkable and breath-taking event in climate change knowledge exchange and public discourse. This is the first annual global Gobeshona conference, building off of prior years of Dhaka-based Gobeshona conferences organized by ICCAD that brought together many international and domestic participants.

This year the conference was virtual, necessitated by the COVID-19 pandemic but also the realization of a vision of a truly global conference that covers all continents of the globe and is inclusive of participants and attendees from around the world. International institutions, research universities, networks, NGOs, activist organizations, academic researchers, students, and local community members were all present.

The number of participants and attendees would be much harder to achieve in a face-to-face conference that in the past involved people travelling to Dhaka, Bangladesh. The global reach of the conference was truly astounding: 90 sessions over 7 days, running 24-hours each day with many parallel sessions, involving dozens of participants and thousands of attendees due to free access. The level of forethought, planning, and commitment that goes into something like this cannot be understated. As a past presenter at a Gobeshona conference in Dhaka, I attended this year's Global Gobeshona conference as an attendee instead, bearing witness to the event over a week of thought-provoking sessions.

The theme of this year's conference was on locally-led adaptation (LLA) across different geographic areas, whereby knowledge and lessons learnt were shared and debated from across the Global South and the Global North. The sessions were organized by different types of sessions (keynote speeches with many renowned experts and thought leaders, organizational sessions by various institutions and organizations, thematic sessions, and interactive networking sessions).

The remarkable feat of the conference was not only its reach but also in who spoke at the conference - ranging from world-famous names and leaders of organizations to local community members in remote areas who normally are often excluded from such conference spaces. Thanks to rigorous pre-planning that enabled the participation of average people impacted by climate change, with organized access to the internet, the conference demonstrated the importance of inclusiveness in ensuring that the voices of differently situated peoples were heard and heeded.

Translation facilities furthered this inclusivity. For instance, it was possible for attendees to hear and interact with presenters from powerful institutions such as UNFCC, GEF, SEI, WRI, and many others but also communities participating in LLA projects across countries in Asia, Africa, and the Americas. Among several impactful sessions, one that is representative of this inclusivity was the one organized by UN Women Bangladesh on women champions of climate change, which ensured that female participants in remote villages of Bangladesh were presenters on an equal footing to well-known speakers and organizations, with the session being held in both English and Bengali.

Given that climate change impacts the most vulnerable across the world, yet the voices of the vulnerable are always not heard or heeded sufficiently in high-level planning and decision-making, conferences like the Global Gobeshona Conference enhances opportunities to have different voices and positionalities to be present in spaces of global knowledge sharing.

This is particularly critically important when cross-continental sharing of information, experiences, ideas and processes are hindered due to lack of access to funds to travel to conference spaces or access to powerful instructions and actors. A free virtual conference that is based out of the Global South, inclusive of various types of voices across the Global South, is something that I believe should be learnt from and supported by those in the Global North and Global South. Otherwise, the goals of achieving meaningful climate adaptation or climate justice will remain that much more difficult. ●

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Indigenous peoples and local communities in locally-led adaptation

Increasing recognition of indigenous and local communities in tackling climate change is a ray of hope

PIXABAY

Afsara Binte Mirza and Ali Mohammad Rezaie

The most emphasized word of locally-led adaptation is 'led'. This notion acknowledges the crucial role of local communities to take effectual actions on the ground and tackle climate change persistently. These unrecognized leaders and frontline agents of climate change adaptation include indigenous peoples and local communities. Their lifestyle, culture, society, traditions vary from group to group within a country, however, the diversity accounts for sustainable management and preservation of their landscapes and seascapes. Despite having contributed the least to climate change and leading a 'low carbon' way of life, Indigenous peoples and local communities are disproportionately affected since they often live closer to the climate-vulnerable ecosystems; highly dependent on the natural resources; and low socio-economic conditions.

On a positive note, indigenous peoples and local communities' sustainable lifestyles, and traditional knowledge are coming to spotlight and gaining impetus to tackle climate change. The global recognition of their rights and contribution to the environment and sustainable development are also rising in the realms of science, policy and advocacy. Recently, the International Centre for Climate Change and Development (ICCCAD) organized its very first Gobeshona Global conference to showcase the knowledge, research and practices on locally-led adaptation from different regions of the world.

Several key sessions in GCC highlighted the urgency to incorporate traditional knowledge into project implementation and planning stages to enhance actions for locally-led adaptation. The session titled 'A new global initiative for action research', hosted by Adaptation Research Alliance (ARA) stressed co-production of knowledge between practitioners (such as indigenous and local communities) and researchers to build sustainable relationships and fight climate change more strategically.

The new research alliance also aims to collaborate with diverse stakeholders and scale up adaptation actions by researching on the ground to harness the synergy between traditional knowledge of indigenous peoples and science. While the session on 'Capacity Building for Promoting Local Adaptation Innovation through regional collaboration, hosted by Institute for Global Environmental Strategies (IGES) stated the increasing need to acknowledge and integrate indigenous practice and local knowledge with traditional science/research to have a more fruitful adaptation intervention. This was reflected in one of their research projects in India and Bhutan where local communities used their traditional knowledge to reuse crops residue to enhance soil function and reduce emissions for climate-adaptive agricultural waste strategy.

The session hosted by ICCCAD and WWF, 'People Protecting Landscapes and Seascapes' highlighted that indigenous people and local communities led ecosystem management and their sustainable conservation of biological diversity are consistent with Nature-based Solutions in addressing the adverse effects of climate change. The session stressed on the reciprocal relationships between the local communities and nature. It also highlighted how traditional and indigenous knowledge practised by the Indigenous Peoples and Local Communities (IPLCs) are inevitably nature-based and contribute to both climate change adaptation and mitigation.

Another session hosted by Participatory Research in Asia (PRIA), shared how indigenous youths are leading the way forward to integrate traditional knowledge into research practices. Indigenous peoples traditional knowledge and practices also contribute to deepen our knowledge on the current ecosystem, and can lead to a paradigm shift on nature-based development approach and economic feasibility.

It is anticipated that we are entering the epoch of Anthropocene where human actions are predominant in the biosphere and planetary systems. It not only implies the advancement of the human race but also entails transformative changes to reduce the negative impacts on atmosphere, nature and climate. Indigenous people and local communities are already ahead of the game in terms of managing and sustaining invaluable nature and adapting to changes in climate.

Thus, the time has come to recognize their contributions, learn from their sustainable practices and involve the local communities to collectively address the impacts of climate change. These inclusive actions in collaboration with national, regional and global levels actors can enable the pathways to protect nature and biodiversity; take an intersectional approach to include indigenous women, youth, elders, people with disabilities, etc to pave the way towards achieving Sustainable Development Goals; and enhance economic prosperity.

It is also prime time for the civil societies, scientific and political communities to work with local communities, IPLC leaders and diplomats to advocate for local knowledge and locally-led adaptation in the upcoming United Nations Climate Change conference, COP 26. It's time to work together for our planet. ●

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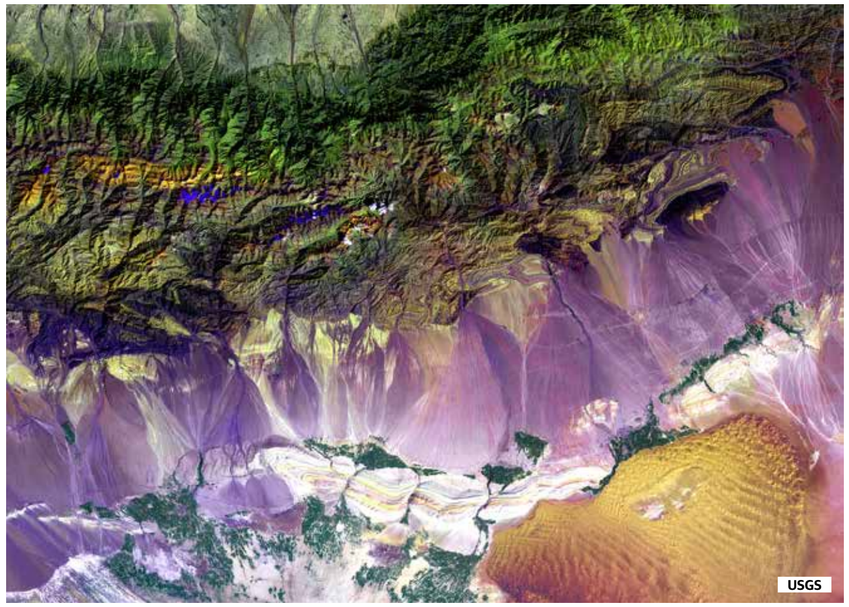
Role of climate services in locally-led adaptation: Insights from East America and Latin America

Climate services can be an instrumental agent in enabling locally-led adaptation

Towrin Zaman and Mélody Braun


USGS

Beyond the alarming long term impacts of climate change, one of the most important factors affecting decision-makers is the increased yearly and seasonal climate variability that they need to adapt to, especially at the local level. Communities are at the forefront of bearing the consequences of climate impacts and yet hold very little decision-making power. It is crucial to empower the local communities to marshal their own resilience against climate vulnerability. Climate services can be an instrumental agent in enabling locally-led adaptation through providing local stakeholders with decision-making tools.

Climate services are climate information and products that aid end-users in decision-making processes through enhancing their knowledge about climate impacts. These end-users can be stakeholders engaged in sectors such as agriculture, aquaculture or health, whose livelihoods are affected by climate impacts such as heatwaves, cold-waves, flooding or droughts. For example, if farmers or fishers receive a forecast indicating a high risk of extreme rainfall or temperature, they can modify their decisions on when and how to plant crops or spawn fishes.

In the recent Gobeshona Global Conference-1 in January 2021, climate services and their implementation in different sectors and regions were featured as a major theme in 6 sessions. Different organizations like Columbia University's International Research Institute for Climate and Society (IRI), Bangladesh Meteorological Department (BMD), International Maize and Wheat Improvement Center (CIMMYT), ICCCAD, the Bangladesh Academy for Climate Services (BACS), Oxfam, Concern Worldwide, WorldFish, to name a few, highlighted their use of Climate Services in locally-led adaptation across different countries.

The emergence of climate services in East Africa and Latin America

East Africa has seen an increased incorporation of climate services to its national policies in recent years. Enhancing National Climate Services (ENACTS), designed by IRI, is a dataset merging satellite and station data, developed with National Meteorological and Hydrological Services (NMOs) to improve availability, access, and use of climate information for local decision-making, across 17 countries of Africa, 1 in Asia (Bangladesh) and one in Latin America. The IGAD Climate Prediction and Applications Centre (ICPAC) accredited by the World Meteorological Organization (WMO), is in charge of delivering climate services to Eastern Africa, by strengthening the capacity of member states. ICPAC implements online interactive tools called 'Maprooms', such as the Meteo Rwanda Maproom, and trains institutions to use them. Participatory Integrated Climate Information Services for Agriculture (PICSA) is another unique approach of using participatory planning for local agricultural activities using locally-relevant climate information for capacity building of farmers and their decision-making.

In Latin America, a strong relationship exists between meteorological institutes and the agricultural sector. Agro-climatic committees, 41 of which have been formed throughout 10 Latin America countries with 450 participating institutions since 2014, strengthen communication networks and information exchange between different stakeholders including and not limited to ministries, NGOs, farmers, academia. In Guatemala, these committees support the Ministry of Agriculture Livestock and Food (MAGA) in delivering climate information acquired from the Central American Agricultural Council to farmers, regionally. Nationally, MAGA delivers climate information to municipality-level users through ministry representatives. The Agro-climatic Adaptation and Prevention Models project helped increase local knowledge on agro-climate risk through training technical assistants who in turn trained farmers.

The NextGen forecast approach, developed by IRI and implemented with Met Services across the world through IRI-led ACToday project, is an essential component to the development of climate services, which produces objective forecasts at decision-makers' timescales (weeks to years) in a format tailored to be useful to decision making in specific sectors. For instance, it can help farmers prepare for extreme weather events by giving them an early warning.

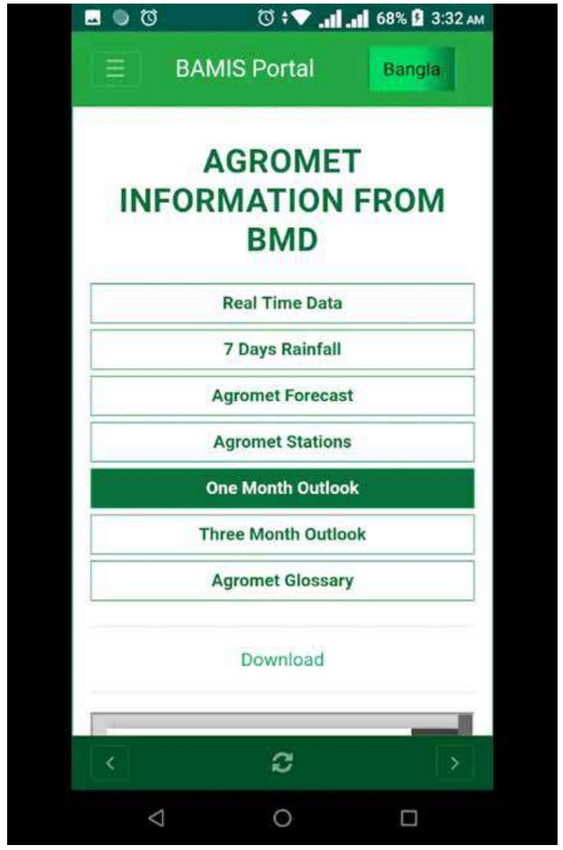
Climate Services in Bangladesh

Bangladesh Agro-Meteorological Information Systems (BAMIS) is a portal that disseminates climate information to 30,000 lead farmers after being translated and validated by the Department of Agriculture Extension (DAE) Agromet Technical Committee. This portal was developed by DAE under the Agro-Meteorological Information Systems Development Project.

Under the ACToday project, IRI and the BMD developed the ENACTS dataset and accompanied set of free online maprooms (http://datalibrary.bmd.gov.bd/maproom) in Bangladesh in 2019. NextGen seasonal forecasts using ENACTS data were developed with BMD in 2020. This information is tailored based on stakeholder needs for use by national users from different sectors with decision-making processes and ultimately support food security.

'Agvisely' is another Climate Services tool developed by CIMMYT using data from BMD and DAE through the USAID supported Climate Services for Resilient Development project. It integrates real-time numerical weather forecast model outputs with crop or fish advisories and automatically provides localized fish and crop species-specific advice to farmers and extension agents in Bangladesh's 491 sub-districts.

Index Based Flood Insurance (IBFI) is a type of insurance that triggers a payout using a predetermined threshold based on climate variables. For example, an insurance policy to protect farmers against drought might payout if rainfall levels are below a predetermined threshold within a certain window of time in the growing cycle. In Bangladesh, a number of index insurance pilots are focusing on floods with its first satellite-based agricultural flood index being piloted in 2019 jointly by Oxfam, International Water Management Institute (IWMI), the CGIAR Research Programs CCAFS and WLE, Green Delta Insurance Company (GDIC), Swiss Re, and SKS Foundation. BDT 2,617,200 (USD $30,850) and BDT 55,200 (USD $650) were paid after calculation as compensation to households in the two participants sub-districts Fulchari(Upazilla in Gaibandha) and Sughatta (Upazilla in Gaibandha) respectively, for flood damage to crops incurred between August and October 2019. IRI is also conducting complementary research to identify the most promising satellite datasets for flood insurance.



A screenshot from the BAMIS portal android app

> In Latin America, a strong relationship exists between meteorological institutes and the agricultural sector

BACS, founded by ICCCAD, IRI, CIMMYT and BMD, works to create and strengthen a trans-disciplinary network of professionals on climate services and contributed to capacity building through interactive training on Climate Services for Food Security (2018), Climate Services for Aquaculture (2019), and Index Insurance (2020). These trainings have helped communicate to the stakeholders the climate impacts affecting decisions, needs for climate information and processes to improve information integration into decision-making processes. BACS is the very first national climate services academy, with other countries trying to replicate this model to sustain the networks and communications around the issue of climate services.

Lessons Going Forward for Bangladesh

Bangladesh can take inspiration from the successful and exciting examples of integration of climate services into adaptation strategies in East Africa and Latin America. While Bangladesh has Agromet technical committees to validate climate information, regional agro-technical committees are yet to materialize. But they are worth replication with their success in including members from all sectors are yet to materialize and bridging the gap between the stakeholders.

While climate services tools like BAMIS and Agvisely can play instrumental roles in reducing climate vulnerability, it is imperative to ensure that they are available and comprehensible to poorest and the most vulnerable stakeholders (farmers, fishers, pastoralists, etc.) with a stronger focus on climate services through sectoral awareness and capacity building, policy integration, and funding allocated to the improvement, translation, communication and use of climate information. Moreover, even the best climate forecasts cannot predict future climate conditions with certainty, so it is crucial to increase users' ability to understand uncertainty and make the best possible decisions based on the applicability and the accuracy of the forecasts.

While tools like Index Insurance can help reduce the losses associated with the most severe climate hazards, a fraction of the poorest and most vulnerable people will be excluded from the safety net of insurance because it carries the burden of paying a premium regardless of how small the amount. As a result, insurance products should be considered in association with social safety nets and as part of a broader package of complementary strategies rather than stand-alone products.

While BACS has taken some important steps in capacity-building of farmers and local communities, it aims to keep raising awareness among local stakeholders and policy-makers about the importance of using climate services; and support the strengthening of the link between the producer of the information like BMD and the different sectoral users of climate services. As the same climate information can be adapted for use in different sectors to inform their decision-making process and reduce climate impacts, a strong network between all stakeholders is crucial. Only with collaboration and support of all actors can a strong climate services ecosystem be developed to enable locally-led adaptation in Bangladesh.

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Youth as a driving force for locally-led actions

Young people are seeking change and springing into action across the world

REUTERS

Samina Islam and Afsara Binte Mirza

Youths around the world are taking inspiring actions to fight the adversity of changing climate. One of the most prominent young climate activists of recent times is Greta Thunberg. Similarly, there are several proactive and motivated youths like Greta, who are not only insisting the governments to take immediate actions to tackle climate change but are also implementing innovative projects on the ground themselves. For example, in Barbados, 1,100 students from the Lester Vaughan Secondary School implemented a project to raise awareness among young people about the use of biodiesel as an alternative environment-friendly fuel for diesel vehicles. The project resulted in the collection of 3,943 litres of oil that would otherwise be disposed of in an unsustainable manner. 3,154 litres of biodiesel was produced and used for fuel diesel vehicles, which resulted in the reduction of approximately 6,000 tons of carbon emissions.

This is also evident in South Asia which was reflected by some youth leaders in late January, at one of the sessions of Gobeshona Global Conference (hosted by ICCCAD from 18th-24th January 2021) led by 'Participatory Research in Asia (PRIA)'. They shared their activities and experiences building community resilience through locally-led adaptation.

One of the youth leaders, Sameer Ahmed shared a social action project that he started for sustainable waste management through upcycling waste. Due to the Covid-19 lockdown, the trash generation was increasing. This caused a high ecological footprint and gave Sameer the momentum to initiate the project. His solution was to use waste as a resource for reducing and reusing waste. The approaches included storing fruits and vegetables separately, storing banana peels and sitting it in water and using it as fertilizers later. Sameer surveyed peers, groups of teachers and the general public through Instagram, which he found really innovative, as it also aided him to disseminate information on sustainability. Everyone needs to have the attitude to be agents of change. People are now practising Sameer's suggestions to reduce their waste, which was driven through social media. Thus, social media can be an instrumental platform to reach out to local communities that resonate with indigenous knowledge.

> In Barbados, 1,100 students from the Lester Vaughan Secondary School implemented a project to raise awareness among young people about the use of biodiesel as an alternative environment-friendly fuel for diesel vehicles

Lalita Prasida Sripad, another youth leader from India, shared her experiences in improving the living standard of her community, as they suffered from lack of access to clean water. Lalita discovered an innovative method to purify water which involved the usage of corn cobs. The method used a filtration mechanism with corn cob charcoal and powder. The filtration mechanism (set up stand) absorbed and removed 99% of Lead (Pb). In addition to being both sustainable and replicable, this affordable and easily available water purification strategy can be used on a domestic and industrial scale. This project could be applied at a large scale by taking the corn cobs and putting it to drainage. At the same time, it could be instrumental for agriculture usage and community to drink fresh water.

Most importantly, one of the major takeaways from the session was the Youth Manifesto - where six demands were raised for a prosperous and inclusive future for all. The demands included - youth as decision-makers; collaborative multi-stakeholder approach; mainstreaming climate adaptation in education; intersectional and accessible research; activating the family as a climate change-maker; and including the excluded for resilient solutions. This Manifesto was applauded by the panellists and participants and was encouraged to take forward.

Young people possess the right kind of attitude to bring systemic and sustainable change in their communities, and around the world. For the youths who want to be the agents of change, does not always require to do something extraordinary or exceptional; it can be done by re-thinking what they are already good at. Some youths are good at technology usage and computer programming, some good at art and literature, some are good at music and dance.

These young people can channel their talents and apply them for undertaking climate actions within their locality or for movements, and raising awareness or to demand robust actions from politicians and decision-makers. Older generations need to ensure that the voices of youth are heard and their actions are encouraged. The youth are already at the frontline of the climate crisis and thus their actions, ideas, suggestions and demands should be given priority today for a better tomorrow.

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Can disaggregated data help build resilience and ensure climate justice?

Impending need for disaggregated data for reducing risk from climate change

Fatema Akter

The impacts of climate change are not felt the same for the whole population of a given country. Women and children are identified as more vulnerable than men, furthermore, they are most undefended to the various effects of climate change. Therefore, the impacts of climate change and the risks within are very much gender-sensitive. To have specific knowledge of the proportion of the impacts, to address them, and further incorporate them into policies require disaggregated data on disasters. The action plan of UNFCCs so far does not translate the gender-specific action due to lack of disaggregated data.

Lack of disaggregated data on affected population based on gender, sex, age hinders precise steps and actions that need to be taken to reduce the risks and damage of the affected population. Therefore, to initiate a discussion for a global platform for sharing disaggregated data on climate change and disaster risk a UNWomen Bangladesh held a virtual event at the Gobeshona Global Conference 1 on 18th January 2021.

The discussion addressed the 26-national set of indicators drawn from the 73 global indicators that Bangladesh has agreed to produce on a regular basis for measuring gender dimensions of disasters and climate change. The session also highlighted the Sendai framework that is working for collecting disaggregated data on disasters and climate change and the challenges in the data collection process. The discussion table included distinguished experts in this field namely, Md Mohsin; Secretary Ministry of Disaster Management and Relief, Jessica Gardner; Gender Statistics expert, Duke Ivn Amin ; Director. Communication and Resource mobilization JAGO NARI, Branwen Millar; Programme Management officer (UNDRR), Inkar Kadyrzhanova; Regional Advisor on Gender and Climate Change UN Women.

To understand the importance of disaggregated data, we need to understand what it means. Disaggregation of data simply refers to the separation of data into small parts for the better purpose of analyzing trends, patterns or we can say for better insights which are not possible to find in aggregated data. For example, disaggregated data on disaster can help with generating better insights of affected people by hazards by providing data of location, by sex, by disability, by income.

Why do we need to have disaggregated data?

The availability of both qualitative and quantitative data on hazards and geographical tracks will facilitate countries with better implementation plans for disaster management and risk mitigation measures. Some of the key priority areas where we need disaggregated data are; vulnerability assessment, loss of life, loss and damage to the dwelling, use of shelters, access to safe water, impact on employment and education.

PIXABAY

Additionally, disaggregated data will help in identifying the left-behind groups in countries and their needs. This can be supported by involving them into the design; formulation; programming; and monitoring of national and local DRR strategies.

The demand for disaggregated data is rising worldwide. Countries are set with some indicators for understanding the data priorities- what are their available data, what data needs to be produced. Bangladesh has agreed to 23 such indicators addressing the various indicators of; Sendai framework; SDGs and national sectoral policies and strategies on climate change and disaster risk reduction. These indicators will further assist in collecting sex, age and disability data for forming a gender-inclusive disaster management plan.

It is to be kept in mind that both qualitative and quantitative data are required for a comprehensive knowledge generation. Information shared by Jessica Gardner pointed out that empirical data taken from a couple of years back shows that, "*women and children died 40% more than men during disasters*". But there remains some data gap due to challenges faced during the data collection process such as; (i)challenge in building capacity; (ii)short data collection periods(it is tough to collect data within a short time frame); (iii) lack of female trained staffs; (iv) local authorities are unwilling to release data to the national level;(v) rushed reporting of data. One of the speakers also addressed the challenges faced by the governments in the Asia Pacific region in regards to gender data gaps such as weak policy space and legal and financial environment, technical and financial challenges limiting the production of gender statistics and so on. To address the challenges UN Women and DRR working in 3 areas of creating a better environment, data production and data accessibility.

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UN Women has been a champion for evidence-based response and making the needs and capacities of women and girls visible, To address uneven capacity for the collection of sex-, age- and disability-disaggregated data (SADDD) and gender analysis across the region, UN Women proactively supports Member States and other humanitarian actors in collecting sex, age, and disability data and conducting gender analysis. The speakers at the event appreciated UN Women Bangladesh's leadership and the milestone in setting up the SADDD protocol and guidelines.

Even though challenges and barriers exist in collecting disaggregated data, Bangladesh has been doing exceptionally well in the disaster response. Now the country must invest in disaggregated data on disaster and climate change with the focus to include the marginalized and vulnerable people to have a stringent evidence-based response. ●

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Adaptation Research Alliance: A new global initiative for action research

Through targeted advocacy, creative cooperation and scaled resource delivery, the ARA targets to ensure that knowledge needs for climate change adaptation and resilience actions are effectively addressed.

Adaptation Research Alliance

Adeeba Nuraina Risha

The world of science relies on one basic element to drive it: research. All the different concepts encompassed in science, the complex systems and multiple caveats begin with research. This research paves the way for solutions, actions and implementations of the solutions. Across the globe every day, research efforts are continuously taken to obtain better understanding of any given phenomenon. However, there rises a question of research meeting action: Are we effectively using our understanding of an issue to address it?

Let's take the crisis of climate change as an example. There are several stakeholders at play including the global research community, which has been delving deep into the multifaceted concept of climate change, the political players and the actors in the frontlines such as local communities. In order to build coordination among these stakeholders, there is a need to drive and support investment in action-oriented research.

With this objective in mind, the representatives of 31 organisations spanning 194 economies have come together at the Gobeshona Global Conference on Locally Led Adaptation organized by International Centre for Climate Change and Development (ICCCAD) on 23rd January 2021, to declare their intent to co-develop the Adaptation Research Alliance (ARA), a bold new global partnership to catalyse and scale investment in action-oriented research for climate adaptation and resilience. The ARA believes that there is a growing need for adaptation solutions to be based on evidence in current times. However, the global research community is inadequately mobilised and lacks the comprehensive connection to front-line actors. The consequence of which results in research efforts being insufficient in meeting global demand for coordinated and actionable evidence to guide effective adaptation and resilience strategies that will reduce the impacts of climate change on the most vulnerable. Therefore, in order to address the risks and impacts of climate change, research has to be mobilised in a manner that is action and evidence based as well as trans-disciplinary and coordinated with practitioners in the forefronts.

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The mission of ARA is split in two ways. First, ARA aims to accelerate and scale investments in action-oriented research in developing countries that addresses the urgent need for knowledge on adaptation and resilience of the most vulnerable communities. Secondly, ARA intends to build capacity at all stages from research to action; strengthen research-implementation linkages, and promote greater learning. ARA will perform three key functions: advocacy, improve communication, coordination, collaboration and research mobilization and delivery. Through targeted advocacy, creative cooperation and scaled resource delivery, the ARA targets to ensure that knowledge needs for climate change adaptation and resilience actions are effectively addressed. It also ensures that progress that can be measured and proof of effectiveness of the previous and current adaptation interventions are also taken into account. In terms of developing countries, this includes investment for user-centric research that has the ability to promote long-term capacity building.

Simply put, the ARA is an initiative that links together researchers who are working on adaptation in different countries around the world and practitioners of adaptation. This in particular helps the most vulnerable developing countries across Asia and Africa who are at the forefront of tackling climate change on a regular basis. These countries are learning as they go, and this valuable knowledge can come in useful for other developed countries consequently when they face the impacts of climate change with time. This initiative facilitates this sharing of knowledge to ensure better planning and coordination to deal with climate change.

By 2030, the ARA hopes to see the research community as an integral partner to policymakers, practitioners and vulnerable communities, as well as support the implementation of user-driven solutions for adaptation and resilience from the global to local levels. The ARA will work together in the run-up to the 26th session of the Conference of Parties to the UNFCCC to co-develop the ARA and ensure that it sets targets for ambitious and realistic outcomes that enable adaptation and resilience research that is led by needs of the most vulnerable and develops solutions commensurate with the scale of the climate emergency.

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> Simply put, the ARA is an initiative that links together researchers who are working on adaptation in different countries around the world and practitioners of adaptation

The ARA has the potential to bring a systemic change for climate change adaptation through research. To develop programs that build networks to drive transformational change for communities and ensure that measures are taken to bridge the gap between research and action ARA can be a changemaker. In the global battle against climate change, this new approach holds the capacity to change the game for the better. ●

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Living with sporadic elephant trampling

How the Rohingya people have done the impossible

Tahmida Sarker Muna and Mahir Tazwar

Ukhiya and Teknaf subdistricts of Cox's Bazar are widely known for their lush green coastal forests as well as natural habitats for many wildlife species including birds and Asian elephants. About 35-45 Asian elephants are living in the forest of the southern part of Cox's Bazar, according to a joint survey of IUCN and UNHCR. Their migratory routes run through the present Rohingya refugee camp. It eventually led to a rise of human-elephant conflict in this region.

To describe the present condition of this forest, Dr Raihan Sarker, an associate professor at Chittagong University's Institute of Forestry and Environmental Science said, "Before the Rohingya population, the forest condition was bad. Now it's severely bad". A sudden increase in population and their need for firewood for cooking from the forest created problems for the Asian elephants in finding food, resting sites which eventually led those to travel through the camp settlement in search of food.

In October 2017, four refugees were killed nearby and up until 2019, 14 people from the Rohingya refugee camps in Bangladesh have been killed by sporadic elephant trampling. According to a survey of IUCN (International Union for Conservation of Nature), there are about 12 elephant corridors in the country. Among them, five corridors are in Cox's Bazar North Forest Division, three in Cox's Bazar South Forest Division, and four in Chittagong South Forest Division. Generally, Asian elephants are migratory in nature but the present condition of the corridors is not suitable for migration due to the construction of a refugee camp on the edge of the elephant sanctuary.

Before August 2016, around 300,000 refugees lived in Bangladesh. The natural habitat of wildlife got disrupted by the illegal wood consumption of the local community and refugees even before the last refugee influx of 2017. The situation got worse when Bangladesh welcomed more than 70,000 Rohingya in Cox's Bazar, who were migrated due to the ethnic cleansing in the Rakhine State of Myanmar in 2017.

Refugees cleared the forest land in Cox's Bazar and built their makeshift tents, within less than four months the whole area mushroomed into the most densely populated refugee camp in the world. Moreover, the continuous deforestation is alarming for the coastal resilience of the region (Imtiaz, 2018). As loss of vegetation increases chances of soil erosion, promotes landslides and disrupts biodiversity while affecting the overall climate change adaptation and mitigation systems.

To solve this conflict caused due to the shrinking forest area and a blocked migration path and foster "safe co-existence" between animals and sprawling refugee settlements, IUCN along with UNHCR adopted an initiative after an extensive joint survey. The success story of this locally-led adaptation initiative was presented at the session ´Disaster Management: Modelling and Initiatives in Diverse Setting' in the Global Gobeshona Conference, by Ehsanul Haque (UNHCR).

As part of the plan, they took various initiatives to incorporate local people in solving this problem, such as, the formation of 52 Elephant Response team, Training and motivating ERT team, 99 watchtowers and strengthening it to protect watcher, logistic supports. They provided hands-on training to the volunteers of the Elephant Response team by professionals so that they could handle any emergency. Each camp has its own watchtower.

The volunteers always keep in touch with the watchmen stationed at the towers. If any elephant gets spotted, they gather and try to drive it away by surrounding it. They keep one way open for the elephant to go out. At the same time, they alert the people using loudspeakers and whistles so that the refugees can know not to come out of their shelters.

Dummy elephants made by the refugees by using their old clothes were used to create awareness among the refugees. It promoted the sense that elephants are not our enemy, rather they are our friends. These interventions taught the refugees how to manage the crowd during emergencies and how to deter the elephant. Since the intervention, no harm has been recorded. Bio protection testing is still ongoing. In this process, thorny plants are planted to prevent elephant's entry into the campsites.

> There are about 12 elephant corridors in the country. Among them, five corridors are in Cox's Bazar North Forest Division, three in Cox's Bazar South Forest Division, and four in Chittagong South Forest Division

To reduce the dependency on forest and deforestation, SAFE Plus – a joint effort among FAO, the International Organization for Migration (IOM), and the World Food Program (WFP) is launched. It addresses environmental degradation through the distribution of liquefied petroleum gas (LPG) and stoves, reforestation, and improved livelihood opportunities. More than 850 Acres of degraded land have been managed for mixed vegetation. They have planted around 50 acres of such land and are maintaining those Planting sites. Communities are effectively engaged in these initiatives. Roadsides and institution plantations are also taken under this project.

Elephants have an equal right to live in their territory. These initiatives are not only for saving humans from elephants, but also for saving elephants from humans. As Cox's Bazar is located in a fragile and sensitive geographic location, long-term locally-driven conflict mitigation measures and plans should be adopted.

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Rohingya refugees attending a demonstration on elephant resistance arranged by the UNHCR and IUCN at the Kutupalong refugee camp in Ukhia on April 7, 2018 AFP

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Developing profitable rice production for food security

Despite achievements in the nutrition sector, the country is still facing many forms of malnutrition

SAQIB SARKER

Md Hafizur Rahman

Can producing a variety of rice ensure food security for Bangladesh? Diving into the issue, the International Rice Research Institute (IRRI) presented their research with their new upcoming rice varieties at the Gobeshona Global Conference under the theme of Food Security and Agriculture.

Bangladesh has achieved commendable progress in the nutrition sector. However, despite the achievements the country is still facing many forms of malnutrition. Different supplementation and fortification programs by the government and other nutrition stakeholders have been in place since liberation to improve the micronutrient deficiency in Bangladesh. In order to improve the poor nutrient situation, the Bangladesh Rice Research Institute (BRRI) is developing micronutrient enriched rice in partnership with IRRI.

The very first product of this partnership is vitamin A enriched genetically engineered Golden Rice. Research on other healthier rice for High Iron and High Zinc Rice is underway to combat Iron and Zinc deficiency, because Vitamin-A, Zinc, and Iron are among the most widespread micronutrient deficiencies concerning public health. And also, Golden rice is cheaper than local rice and it will also help be reduced micronutrient deficiency in our society.

Considering the adverse scenario of climate change, IRRI has developed a method of rice production known as puddled transplanted rice (PTR), to dry direct-seeded rice (DSR). The DSR can improve economic and environmental sustainability because it is formulated without flooding the field and through use of machine-aided sowing rather than transplanting that saves labour and water, cultivation costs, and can lower greenhouse gas emissions.

IRRI results also indicated that on 'high' and 'medium' landscape positions the yields of machine-sown DSR were similar to the yields of manually transplanted rice while it was 0.5-ton per hectare, lower compared with manual transplanted rice on 'low landscape position'. The yields of hand broadcast sown DSR were the lowest on all three landscape positions. Both cost savings and added net return from the machine-sown DSR were also highest in medium landscape positions followed by the high landscape and low landscape positions.

In Bangladesh, rice is one of the major foods in the agriculture sector and based on the climatic conditions of Bangladesh, the country needs short and medium-term crop production. Thus DSR can be an alternative initiative to produce rice in drought-prone areas to maximize profit for the farmers. Additionally, Golden rice production can prove beneficial to the Bangladeshi people who are suffering from malnutrition.

> Considering the adverse scenario of climate change, IRRI has developed a method of rice production known as puddled transplanted rice (PTR)

The current pandemic situation can reverse the gains in food and nutrition status of the country further; as per the estimated poverty rate expansion from 24-35% due to COVID-19.

From my point of view, rice marketing in Bangladesh is marred by a wide range of problems; including packaging, transporting, storage, distribution, and pricing. There is a comparative advantage in the production of high-yielding rice in Bangladesh but the flaws in the marketing system don't allow a fair share of price to the farmers. In this situation, it draws a grey line over the benefit of the marketization of such variety of rice in Bangladesh. The role of the Bangladesh government to handle such upcoming new varieties of rice needs to be strengthened.

In conclusion, considering the above situations, knowledge sharing and capacity building can be a major initiative to share the methods of producing puddled transplanted rice (PTR), dry direct-seeded rice (DSR) to the local farmers. It is also necessary to build awareness among the farmers to produce golden rice as it will assist them to reduce their nutrition deficiency. ●

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