Agrobiodiversity of Haor and people's led climate Adaptation





Picture compilation of Haor diversity and people's led climate adaptation

Compilation

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Agrobiodiversity of haor areas and people's led climate adaptation

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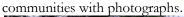
Dedicated to

The Hoar hardworking people, who are conducting research continuously to combat climate change crisis using their Indigenous Knowledge and local resources



Introduction

Bangladesh is divided into thirty agroecological zones. BARCIK known as 'Bangladesh Resource Center for Indigenous Knowledge (BARSIK)' is working on the issues of agro-biodiversity protection and rural development in seven agroecological zones of Bangladesh. Haor region is one of these important agroecological zones. However, BARCIK has been working in Haor area of Sunamganj since 2007 and gradually it expanded its working areas in Madan and Kalmakanda areas of Netrakona. However, flash floods and hilly landslides create major crisis in Haor area. The people in this region has to deal with these disasters through practicing various climate adaptation practices and conservation related activities to uphold their existence. The book is written based on those climate change adaptation practices and activities of the







If Bangladesh is divided into six parts, Haor wetland covers one part of it. According to Bangladesh Water Development Board, there are about 423 Haors in 539 unions of 57 upazilas in seven districts of Bangladesh namely Sunamganj, Moulvibazar, Habiganj, Sylhet, Netrakona, Kishoreganj and Brahmanbaria. During the rainy season, this wetland spreads to about 24,000 sq. km areas. Rice, fish and stone-sand are the natural resources of this region. This region produces about 20% of the total rice produced in Boro season in Bangladesh. There are mainly two forms of Haor. During rainy season boats are the mode of communication and during the autumn one can go everywhere on foot. The region is rich in natural and cultural heritage including deep water rice varieties.





Haor village, Hoar life

The Haor villages are elevated above the wetland and swamp. There is less space for village settlements. Many dubbed these village as Hatibandha village. It is at these villages where the legendary songs and folk tales of Bengal were born. If the very characteristics of Haor village are not protected agrobiodiversity and climate justice will not be ensured.



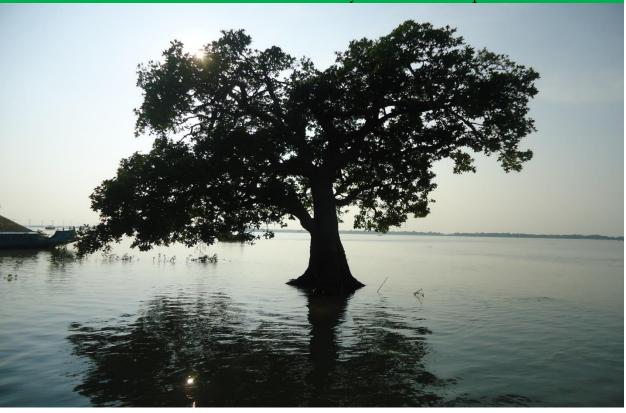


If the right of mass peopd on Haor wetland, agriculture land and natural resources is ensured it will assist them to combat climate change crisis through practicing new adaptation strategies.





Hijol and Koroch trees are the exclusive food cycle of Haor ecosystem and ensure environmental balance. This food cycle should be protected.





Weland resources and fishes are the main characteristics of the Haor. This wetland resource is not only the basis of traditional occupation and fulfills nutrition and protein but also contributes in overall food system.





Boats: The means of Communication

Boats are one of the modes of transportation in the Haor wetlands. It is said that the boat is the part of the life of the people in the downstream. These boats play important role just not for traveling, but also for the transportation of agricultural crops and food in Haor areas. Boat is the means of communication in Haor area.





Livestock including cows are part of Haor's agricultural life. Once Haor area had vast pastures and cowsheds. Presently, grazing land has decreased and there is a shortage of livestock fodder as well. Commercial agriculture has reduced the use of livestock in agriculture.





Disasters in Haor and Climate Crisis

Hilly landslide, advance flood and less rainfall some times create disastrous situation in Haor areas. In the meantime, thunderstorm, hailstone and cold injury occur in the areas intensifying their problems. Besides, Hilly sand is another disaster for the people living in the bodering areas of Haor.



Land Preparation and Paddy Sowing

Most of the household members of Haor area spend busy times in a year during Boro crop cultivation and harvesting of those crops including threshing rice and transportation. These times festive mode is observed in the area as all of them gather together being busy with their crops and grains.



Crop Harvesting season





Deep water rice such as Tepi, Rata, Boro, Churak, Hatibandha and some vegetable grow well in Haor region. Besides, the bill and wetland of Haor's homes for various species of small fishes. Considering that awareness is being created among the community to protect agricultural biodiversity and the practice of seed conservation and livestock.

Increased Awareness on Biodiversity Conservation and Climate change adaptation

Impact of climate change is increasing in Haor area.

Hilly landslides and advance floods are increasing, along with less rainfall in some areas.

Therefore, various adaptation strategies have been developed to address the climate change impacts.





Adaptation practices emphasizing on wetland environment
The adaptation practices have been developed considering the wetland environment, ecosystem and living organisims of Haor areas



Mass planning through active participation of all is one of the condition for good works. Thus, mass planning is formulated with the participation and opinion of occupational groups, gender and different ages of people. The plan formulated locally is shared with the members of civil societies es of people.



Planning and Active Participation





Training & Workshop on Agrobiodiversity and climate Adaptation

Training workshops on the protection of agrobiodiversity and climate adapations are being organized at village level. Community people learn about seed conservation, organic pesticide, nature based agro practices, organic farming and disaster risks reduction etc.. Thye also learn about social descrimination and right based issues which create positive impact on their life.





Farmer led Haor suitable croo-grain research and varietals selection strengthens the climate tolerant agriculture practices. This research initiative play vital role in making the availability of rice and crop not in Boro season but also during Aman and Robi seasons.

Farmer-led climate tolerant agro research and practices









Agriculture practices to combat climate change impacts











It is possible to reduce the pressure on a single crop by increasing crop diversity, crop rotation and crop cycle and in the same time this will play role to withstand the multifaceted pressure of climate crisis.





Dais method vegetable cultivation and Kundal crop diversity







Seedbank: The hope of Haor

Haor crops are destroyed every year due to landslides and advance floods including seed resources. Community-based seed banks provide hope to the people of Haor because the seedbank provides them opportunity to conserve and exchange seeds with each other. They can collect seeds from the seedbank if seed resources are destroyed due to different disasters.





Indigenous knowledge practices in seed conservation





Indigenous climate adaptation practices

Flood and water logging are one of the crises of Haor area. In this regard, floating or dry seedbed is one of the important adaptation strategies for the Haor. Apart from this, there are some other adaptation practices which provide means for the Haor people to adapt to the changed situation in crop cultivation.





Family based indigenous climate adaptation practices





The practice of organic method in Agriculture

Making organic manure, vermin compost, gardern rotation and use of organic pesticides as well as all types of organic practices are useful for the Haor agriculture.





Haor wetland suitable tree nursery

The number and species of trees suitable for Haor wetlands like *Hijal, Karach, Varun, Mankanta, Kadam,* cane are constantly decreasing. These trees significantly play important role in the protection of the life, nature and environment of Haor region. Most nurseries do not have native tree seedlings suitable for Haor areas. From this backdrop, nurseries have been created with seedlings of plants suitable for Haor wetlands.



Haor bordering villages and crisis

The Haor areas of the country are located on the borders of Meghalaya, Assam and Tripura in Northeast India except Brahmanbaria and Kishoreganj. In this case, the villages in the bordering areas face severe problems from hill slopes and sands. Due to this agricultural land and source of water are destroyed. It has been seen that erosion also occurs due to these hilly surges. In order to solve the crisis, the upstream and downstream development plans must be developed incorporating the issues of the bordering villages.





Water crisis and Struggle in Haor bordering area Water crisis at the villages of Haor borderbelt areas is immense. The Mountain Rhyme is the only source of

drinking water. The Haor people use indigenous filtering method to make the water suitable for drinking.





Protecting Mountain Rhymes through temporary dam
The Haor people voluntarily try to protect the mountain rhymes through making temporary dam using locally available materials to ensure water flow.





Inter-countries solution required to prevent Hilly sand agression

It is an urgent need to protect the villages located near Indian borderbelt from the agression of Hilly sands through inter-countries dialogue or Bangladesh-India joint River Commision.







Tree plantation and Green Wall

Planting Haor suitable tree and nourishment of those trees can play role to protect the environment and life and livelihoods of the Haor people. The row of trees protect people from strong surge of flood and in the same time these try provide home for the wild animals and birds.





Planting trees and cane on the road, dam and fallow land benefits the Haor people financially and the woods and fruits of these trees play important role to benefit the People in Haor.





Repairing Roads and Infrastructure voluntarily

Repairing roads and infrastructure damaged due to disasters volutarily by youths and other contributes improve life, livelihood and overall agriculture development of Haor area.





Campaigns and Connection to protect Haor's life and nature

Through regular meetings, events and day observation awareness has been created among students and youths and their participation to proect Haor's life and nature has been ensured. In the same time, through display, billboard setting and visible initiatives BARCIK has been assisting in mobilizing differen social activities.





Green future, Green youth Children, students and youths are involved in the protection of Haor's life, nature and livelihood.





Senior citizen's Right Protection

There is not only children, youth and women but also senior citizens play vital role in agriculture and practice of local knowledge. The protection of senior citizen's rights enables them to actively participate in development intervention.





Gender equality ensures food security

The role of both men and women in Haor agriculture is very significant. The work and contribution of women is neglected and not recognized. Women are left behind due to social descrimination. Equal dignity of both men and women and recognition of women's works can ensure and strengthen food security.





Family farming and its expansion

Haor wetland and agriculture is the heritage of family farming. Everyone including children and aged people somehow participate in the family farming in Haor area. But due to change in rural society and its infrastructure the new generation in the family are detouched from family farmring.





Uncultivated plants and Conservation of food diversity

The land and wetlands of Haor are sources of uncultivated plants. The conservation and popularization of these food sources ensures nutrition and health treatment for the Hoar people.





Environment friendly Technology and Energy security
Haor energy crisis is increasing. The use of environment friendly oven has increased which reduces pressure
on energy and keeps human health sound.





Campaign for Right protection The crises and problems of Haor have been presented through regular community right based campaigns







Exposure Visit

People from different areas visited Haor areas to learn about the good rural initiatives and practices and exchange materials and experiences and Haor people also visited other areas to enrich their knowledge





Right to Health and Culture

Cultural tradition of Hoar is pride of Bangladesh. The protection of this culture can be strengthened through protection of life and ntuare. In the same time the mental and physical health of the Haor people can be ensured.









Appropriate policy for Haor areas

Regular campaigns and policy advocacy are being organized demanding appropriate intergrated policy for Haor areas with local government, policy makers, universities, research institutes and civil society





Global Climate fund should be allocated to protect the life, livelihood and nature of Hoar in Bangladesh Active participation of Hoar people should be ensured in determining the climate loss and damage of the Haor areas





Hoar people are not responsible for climate change! But they have to combat the climate change for upholding their existence

All should come forward to help and speed up the initiative taken by these people to combat climate change!

We should be united to protect the life, nature and livelihood of the haor people

