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Title:

How can OLD and CR play role in mitigating impacts of climate change damage: Bangladesh Perspective

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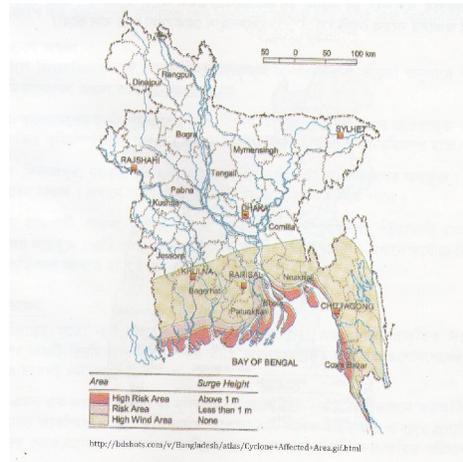
Abstract:

Bangladesh is considered one of the worst victims of global climate change due to her geographical location, agrarian economy and high population density. Increased temperatures will add more problems for the country. While a torrent of melt-water from the Himalayan glaciers flow the rivers, causing soil erosion of coastal zones, including Sunderban mangrove forest, are being threatened by rising sea levels. Furthermore, saline water will creep into agricultural lands from the coastal belt leading to reduction of crops and rising temperature may bring new infections and bacterial diseases in the country. Bangladesh non-formal programs from Open university(BOU) and newly launched Community Radio(CR) stations simultaneously can play a vital role to reduce the problem.

At present BOU has strong media coverage throughout the country and its non-formal educational programs through national TV and radio have emerged as a very popular and blissful program. Apart from this, recently community radio(CR) is also introduced and started their activity in full swing in the country. Its acceptance is increasing day by day. Through broadcasting non formal programs on climate change issues, BOU and existing CR stations can get a meteoric success in building timely awareness and minimizing the impacts of climate change. In this connection, BOU needs to strengthen its radio and TV programs involving leading experts in climate change research. BOU authorities may include and Interactive Community Radio (ICR) set within its Media Centre for regular and timely broadcasting program. It is believed that, if ICR add with BOU's current facilities then its effectiveness will be increased in manifold. Present Government of Bangladesh is considering BOU's ODL and CR as country's development tools. In this backdrop, government is considering to provide educational channel with terrestrial TV facilities at BOU's Media Centre so that 24-hour uninterrupted educational programs can be broadcasted. The government wants to flare CR stations across the country. Side by side, BOU will strengthen its radio facilities for its targeted people. I do believe, country's devastating climate change impact will get a new lease of life if we successfully use BOU's present ODL facilities and existing CR stations. The paper will discuss how the nation can get utmost help from BOU & CR in this regard.

Introduction:

Bangladesh is a densely populated country. Accordingly Washington-based Population Reference Bureau 2007 report, Bangladesh has ranked seventh among the most populous countries with its 149 million population this year. Country's population increases by about 2.5 million each year. Most of the people of the country are living in rural, coastal and remote places where climate change impact is very high. Majority people of Bangladesh are some how directly or indirectly affected by coastal floods, tidal surges, river bank erosion, salinity, tropical cyclones etc. With the rise of sea level up to one meter only, Bangladesh could lose up to 15% of its land area under the sea water and around 30 million people living in the coastal areas of Bangladesh could become refugees because of climate change impacts.



Most vulnerable places yellow marked in Bangladesh map

Agriculture, industry, Infrastructure, livelihoods, marine resources, forestry, biodiversity, human health and other utility services will suffer severely because of the same. Gradually we are being confined to multiple environmental hazards. In this aspect, BOU, its offices, students and teachers as well as countries existing CR stations may play a tremendous role to reduce the problems.

Climate Change Impact in Bangladesh:

Bangladesh is one of the top listed vulnerable countries that will be seriously affected by climate change. Increased temperature will add more problems for the country. While a torrent of melt-water from the Himalayan glaciers flows the rivers, causing soil erosion coastal zones, including Sunderban mangrove forests, are being threatened by rising sea levels. Furthermore, saline water will creep into agricultural lands from the coastal belt leading to reduction of crops and rising temperature may bring new infections and bacterial diseases in the country.

Year	Sea level Rise (cm)	Temperature Rise (oC)	% of Changes in Precipitation(base 1990)
2 nd IPCC Projection (World Bank 2000)			
2030	30	+0.7 in monsoon +1.3 in winter	-3 in winter +11 in monsoon
2050	50	+1.1 in monsoon +1.8 in winter	-37 in winter +28 in monsoon
3 rd IPCC Projection (Agarwal et. al 2003)			
2030		+0.8 in monsoon +1.1 in winter	-1.2 in winter + 4.7 in monsoon
2050		+1.1 in monsoon +1.6 in winter	- 1.7 in winter - +11.8 in monsoon
2100		+1 in monsoon +2.7 in winter	-3.0 in winter - +11.8 in monsoon

Predicted changes in temperature and precipitation. source: coast trust, Bangladesh

Rivers of Bangladesh are snow-fed during winter and if there is no snow in the Himalayas, our major 56 rivers will die during the winter months. Around 100 rivers are already dead for various environmental reasons.

In recent days, the economies mainly those are agriculture base are shivering due to climate change impacts in Bangladesh. Now the damage of coastal and rural areas of the country are so high which appear as the top headache for the government. Official said, Bangladesh is top of the Global Climate Risk Index-2009, followed by North Korea and Nicaragua.

Another sources said, because of climate change impacts, global warming could delay, the start of the summer monsoon by 5 to 15 days within the next century and significantly reduce rainfall in Bangladesh. Rising global temperature will likely lead to an eastward shift in monsoon circulation which could result in more rainfall over the Bangladesh, Myanmar and Indian ocean. It could result in longer delays between rainy seasons and intensity the risk of deadly floods by leading to a significant increase in average rainfalls in some coastal areas of Bangladesh. That could have a major impact on agriculture, human health and the economies of the region.

Predictions suggest that climate change could mean that by 2050, 15 million people may be made environmental refugee in Bangladesh.

In 2012, a DFID report said an additional 6-8% of Bangladesh will be permanently under water and flood-prone areas will increase from 25% to 40% by 2050.

The global warming threat was felt in 2007, when the country was affected by a serious of devastating weather events. Two unusually severe floods and category five cyclones 'Sidr' occurred in the country, killing 3,300 people and leaving about two million people homeless in the coastal zones.

Region	Percentage
Bangladesh	40
Asia (excluding Bangladesh)	20
North America	20
Europe	10
Africa	5
Australia and New Zealand	5

Approximate percentage of storm surge impact (Source: Murty and El-Sabh)

Sidr, Aila and Mohaasen the recent natural calamity lashed in the coastal belt of the Bangladesh with much devastation. The country has suffered a financial climate change loss about TK 1,020 core and a production loss of crops of nearly 3.75 lakh tones of land had been submerged due to the cyclone Aila. This natural calamity also came as consequence of climate change.

Case study :

Abdul Khalil(60),a day labourer in the coastal village of Patakhali under Satkhira District, spends sleepless nights with his wife and five children in a flimsy 8×6 ft hut which he built from the rubble of his house, destroyed by Aila,a tidal surge that struck the southwestern coastal of Bangladesh on May 25,2009 with devastating effect. Twice a day, during high tide, the land surrounding his tiny hut becomes a pool of water. From a distance,Khalil's hut look like a dot in the water. He compelled to take shelter on nearby shoddy embankment place with other thousands family.

One Md. Abu Baker Siddique,Headmaster of Patakhali High School of Padmapukur Union in Shyamnagar Upa-Zilla said,since Aila,his school,marooned in a sea of saline water,has remained closed.Siddique is upset with the mismanagement of the embankment.He said,'this embankment which protects 32000 people cropland has not been maintained or repaired for a long time.The embankment is no longer a safety net.'

Mohaasen,a devastating recent tidal surge that struck north coasts of Bangladesh on 17 May,2013 carried colossal impacts.Jahanara Begum(62),a house wife in the coastal village of Lau Para of Taltali Upa-Zilla of Borguna district explained,'on the day of Mohaasen,the water started swelling before noon.The wind was also blowing with a little rain.I was cooking.Then all on a sudden,I saw water flowing over the embankment.In many places,the flimsy mud wall quickly collapsed.I grabbed my sons and struggled against the water to get on the embankment.I saw my house washed away.Now my family also is homeless along with thousands family.'Halimon, Khokon Howlader and Gazi Mahmud inhabitant of same area were day labourers on the shrimp farms.After Mohaasen,they have no work.They now survive on the five kgs of rice get as relief for embankment repair work.However,they say this is not enough.

Present scenario of a vulnerable place (on mid July,2013):

Borguna,a district of southern coastal belt and its adjoining area is a place where climate change impact is so high.Here climate appeared before the local people as devastating

face. It is a common phenomenon of the area. A statistics said, due to climate change impact, about 400 fishermen of this southern district have compelled to leave their homestead in recent years. Some 68 hectares of fertile land of the district now have made barren due to saline water. That is why, the production of harvest have reduced to 3 lakhs and 37 thousand acres land in recent years of that district.

Female of southern coastal belt have been suffering from so many complications. Now they are compelled to bring safe water from far plunge places because their home marooned with saline water. Besides, Reproductive health of women of the regions now badly affected because of their hardship. The women are compelled to do multiple hazardous works. The scared people of coastal areas now trying to leave their ancestors home land. Day by day this trend is increasing.

BOU's role in climate change impact :

Over three lakhs students make BOU as a mega university of the country. It imparts education through ODL system. Now it uses radio, TV and printing books as media of education. BOU considers CR as its education device. Through simultaneous uses of these medium BOU can aware its learners, their families and the people those who are living vulnerably in the country's rural and coastal belt areas. BOU has 12 Regional Resource Centres (RRC) and 80 Co-ordinating (CO) offices. Of which four RRC and eleven CO offices are located at coastal belt areas. Almost 83 thousand students and over 600 tutors have enclosed with the offices. Day long, BOUs 116 officers and staff of the areas are giving all out supports to the concern students and tutors of the areas. Almost of the students of the areas are living in coastal belt where life is very vulnerable.

At present, BOU and existing CR stations can play a leading role during natural disaster period through using its present facilities. Without delay, under the patronization of BOU, both side meeting should be held in this connection. We hope, during meeting multiple realistic work plan can come out from experts. Later it will be implemented. As a protagonist organization, BOU may take some actions in this connection under its Corporate Social responsibility (CSR) program. It is possible because BOU is a rich organization and have adequate powerful youth force.

In the fiscal year 2013-2014 BOU announces above 200 crore taka as its annual budget. Of which, above 50 crore taka allocated for its development sectors. Under CSR program BOU can put apart 5 to 10 crore taka from its yearly development budget as allocation for mitigating climate change impact.

SI	Name of coastal belt RRCs	Name of coastal belt CO offices	Students enrollment	BOU's total staff of the areas
1	Khulna	1. Satkhira 2. Bagerhat	15,853	31
2	Barisal	1. Bhola 2. Patuakhali 3. Borguna 4. Pirojapore 5. Jhalokhathi	37,580	40
3	Chittagong	1. Cox's Bazar	3,351	7 (out of 49)
4	Comilla	1. Noakhali 2. Chandpur 3. Feni	26,194	38
		Total=	82,978	116

The RRC and CO offices of BOU where climate change impact is high source: BOU

Of which,BOU can undertake some pre and post damage humanitarian works for the people those who are seriously affected by the climate change impact.In this aspect, BOU can play a pioneering role through incorporating its offices,students,tutors,local public representatives,dignitaries and other related people in this connection.Besides,BOU can use its formal and non-formal educational program to reduce the problems.

Apart from these,BOU can select some young and energetic teachers and students those who are interested to work for the vulnerable people.Later,with the selected persons,BOU can organize climate change related adequate training,workshops,seminars and other awareness programmes for the affected people.After training BOU will give them related logistic supports.During natural disaster,these trained people will stand beside vulnerable people of respective areas.Local CR stations, public representatives,dignitaries,youth force may add with these efforts during disaster.

Apart from this, BOU can use its two popular medias(radio & TV) for the hazardous people.Round the year,BOU can broadcast adequate non-formal awaring programmes through its existing radio and TV for climate change affected people.Awaring books,leaflets and posters may add with this efforts.

Besides these efforts, BOU can set-up Community Radio(CR) device in its those RRC and CO offices where natural calamity occur repeatedly.These stations will cover 25 km area.Within the area the device may broadcast many awaring programmes for the concern local people.By these multiple way BOU can contribute tremendously and appear as a blissful organization before the nation.

CR Effectiveness in Climate Change Damage:

Community Radio can be use as an effective tool during, after and before climate change disaster. CR is such a powerful device by which people can get there most necessary information instantly by their own language. It may give necessary information before disaster to the local people by which men can get opportunity to escape themselves from natural fury. This radio will be helpful in spreading warning, taking precaution, minimizing damages and mitigating sufferings through information shared before, during and after a disaster. The government can set up the device in countries coastal and rural areas as development tool. A CR station can broadcast its programm around 25 km area. "Within the area it can help the vulnerable people in multiple ways. The stranded people also can get moral support from CR station during natural disaster time. The officials of the CR station can give information to the vulnerable people as what they have to do, what they should do and what they did not do during climate change related complications through their program. Miseries of the people those who are living in vulnerable position can be reduced through their program. Apart from these, the authorities of the CR station can organize climate change related training program for the local people those who are facing natural disasters consecutively. In many way they can aware the local people.

Through broadcasting direct action program a CR station can appear before the local people as a unique leader. It effectiveness has proved in our neighboring countries as



Nepal, Sri Lanka, India, Thailand and Afganisatan.We can share experience in this field with those countries for getting batter result.

Present CR status in Bangladesh:

After 12 years massive movements on CR from many strata eventually government has convinced to give permission for setting up CR station in the country. In 2008 the government finalized the rules and regulations on CR station installation. Under the rules in early 2010 the government invited application from concern organizations. About 179 organizations responded and applied for licenses on CR broadcasting. Finally In 22 April 2010 the government has approved 14 applications and have given license them to set up CR station in the country.At present all the approved CR stations have been keeping on their operations in respective areas.Very recent another two CR stations named Cost

Trust of Bholra and DUS for Hatia have got licence for operation .Among the CR stations nine have installed at coastal and remote areas of the country.All the CR stations have been ensuring empowerment and right to information for the rural and disadvantage people.They are broadcasting altogether 120 hours program per day on climate change information,education, local entertainment and development motivation activities.Around 536 youth & youth women are now working with those stations throughout the country as rural broadcasters.

The reality of today is that the bondage between the community people and local-level community radio stations are getting strengthened day by day.CR has now become their part of life.After seeing the success of the CR stations, government considering to issue another 100 licenses for establishing CR stations in the country by December, 2013.Hope that; most of the CR stations will set up rural and coastal areas of the country where the people have been living in vulnerable position.

Budget of a CR Station:

The simplest community radio set up can consist of a low-power transmitter harnessed with an antenna, a tape recorder and a microphone.

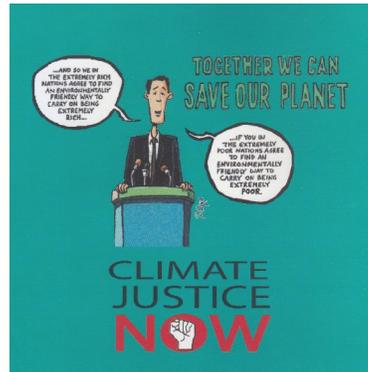
According to UNESCO note book only 7,500\$ is needed for installing a CR station.

Recommendations:

1. To solve the problem, Govt. & non-Govt.realistic effort should be taken
2. More cyclone centres should be built at vulnerable places.
3. River dredging and high embankments are needed for aggressive and rough rivers.
4. More awareness programs should be taken for the vulnerable people by the Govt.concern offices.
5. Related information, poster,leaflets and books should be deal out to the concern people so that they can be aware during disaster periods.
6. The radio,TV and non-formal programs of BOU should be strengthen.
7. BOU can install CR in its coastal belt offices as educational tools so that people can get various information from the device.
8. More social responsibilities should be taken by existing CR stations in this connection.
9. To mend and look after existing embankment round the year.

Conclusion:

Please consider the paper is a 'SOS' message from Bangladesh to the global citizens. Our climate change related present damage as high as Himalayas. This paper didn't depict the whole real pictures of Bangladesh. Before long, these impetuous damage should be stopped by global help. Otherwise, the country will face more surprising damage. The Himalayan glaciers are melting, sea level is rising since the world is getting warmer- our coast line, green villages, paddy fields, schools, hospitals, markets are sinking. Our 80% land now under flood, drought and saline water. The country now at stake. Please let's not think, the problems as an individual problem of any country or nation. Let's think, it is a global common problems. We have to face the problems efficiently as 'Citizens of the Global Village', from now. I firmly do believe, along with others, ODL and CR also can play a significant role to combat the deadly problems.



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