

Adaptation: A step child in the climate regime

The low profile of adaptation is evident from the fact that only a miniscule share of proposals so far tabled by the western policy entrepreneurs for a post-Kyoto regime deals with adaptation as a policy issue. Mitigation remains the overwhelming concern in the thought-process of AICs.

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Adaptation to the impacts of climate change was regarded as an afterthought initially by the United Nations Framework Convention on Climate Change and the Kyoto Protocol. But by the late 1990s many of the G77 group, particularly the 43-member Association of Small Island States (AOSIS) and the 49-member LDC group pressed for more focus on adaptation. However, the Annex-1 countries (AICs) initially resisted this attempt, perhaps apprehending that a focus on adaptation would be an acknowledgment of responsibility and liability, since they were mainly responsible for global warming.

Adaptation has also been held back by intra-G77 disunity. OPEC, led by Saudi Arabia, continued to demand compensation for the economic and social consequences of a likely reduction in oil sales. It was argued that compensation from the AICs for investment in diversifying their oil-dependent economies should be regarded as an adaptation strategy. This standoff has untold consequences, affecting millions of the world's poorest who are in dire need of adequate support to cope with

climate change. However, the Bali Action Plan adopted at the thirteenth Conference of the Parties (COP-13) in 2007 broke this impasse.

- However, since COP-7 in 2001, adaptation has incrementally moved towards centre stage. Finally, at COP-16 last year the global community saw some major progress, including agreement to work out a detailed Adaptation Framework. One reason this apparent shift in focus from AICs is that they were not fulfilling their mitigation commitments. So, giving some concession was viewed as a more 'winnable' fight. Despite these concessions adaptation continues to remain a step child, as is evident from the following indicators:

- The track record of funds transfers to NAICs is dismal, particularly for adaptation. During the last decade, only about US\$500 million was collected by the UN system as adaptation funding, out of which less than half has been disbursed so far. Another estimate shows that about \$150 million has been disbursed under the three climate funds till mid-2010. There are estimates that the current level of climate finance is two orders of magnitude smaller than the estimated needs.



Adaptation to climate change yet to gain firm ground

Another estimate of allocation as adaptation funding stands at a mere \$3 billion only -- out of the committed \$30 billion. Actually, the global average funding for adaptation stands at around 25% only, but EU funding for it stands at 37%.

- The low profile of adaptation is evident from the fact that only a miniscule share of proposals so far tabled by the western policy entrepreneurs for a post-Kyoto regime deals with adaptation as a policy issue. Mitigation remains the overwhelming concern in the thought-process of AICs.

- The founding principle of the UNFCCC concerns "equity" and "common but differentiated responsibility and respective capabilities" was aimed at AICs to take the lead in mitigation, but this isn't the case for adaptation. Less attention has been directed as to who should pay for adaptation and how it should be delivered. Some of these relate to the distributive questions that are posed by the ethics of adaptation, which are "not only between burden-takers, but also between the recipients of benefits."
- The texts in the Convention and the Protocol

also discriminate between mitigation and adaptation. Unlike mitigation, which has a defined framework of actions, texts in adaptation focus on 'planning' rather than action. Even with the Cancun Agreements where substantial progress was achieved on adaptation, discussions on policies and measures to flesh out the Adaptation Framework still continue to focus more on facilitative type of actions, rather than on concrete adaptation projects, targeted to directly benefit the impacted communities.

- Both the Copenhagen Accord and the Cancun Agreements clearly spell out the need for 'balanced' allocation of \$30 billion as fast start finance between adaptation and mitigation, but there is no such clear indication of such balanced allocation in the \$100 billion long-term finance, except the statement that 'a significant share of adaptation finance will flow through the newly established Green Climate Fund.'
- Finally, as climate change is a major market failure, tackling it, particularly its impacts and hence adaptation should not be entrusted to the private sector. Was New Orleans after Katrina rebuilt with private money? Still there is no appreciable indication of assured sources of public funding for adaptation. On the other hand, indications are there that bilateral agencies and multilateral banks are trying to push for loans for adaptation projects in countries including the LDCs. Negotiators, particularly those of the LDCs, need to upgrade the legal basis of adaptation as a global responsibility.

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Addressing fresh water scarcity in coastal zone

Access to safe drinking water is one of the basic human rights. However, salinity intrusion in the coastal zone has already limited the accessibility of people to safe drinking water.

LUBNA SEAL

Fresh water scarcity is an increasing problem in the coastal zone of Bangladesh as it is turning into brackish and saline water gradually. Climate change exacerbates the problem through sea level rise, poor rainfall in winter, high rate of evaporation and cyclone and storm surge. Some human induced interventions like barrage in the upstream rivers to diversify the flow, faulty management of coastal polders and commercial shrimp culture and salt production have increased the salinity level of surface water many-folds.

Higher saline concentration in the surface water compels coastal people to depend more on ground water. Therefore, the ground water extraction for drinking and irrigation purpose has been accelerated. However, the water of shallow aquifer is also being contaminated by salinity intrusion. So, deep tubewell is the ultimate source of fresh drinking water for most of the cases. Nevertheless, the deep tubewell is costly to construct and therefore, it is quite often beyond the affordability of poor households. As the source of fresh drinking water in terms of deep tubewell water is far distant from poor households the children and women of

those households need to spend a quality time to collect water.

It has been found that quite often the poor households depend on sources of water adjacent to their homestead either from surface water or shallow tube well for drinking purpose and suffer from diseases derived from saline containing water. The salinity problem is more acute in the dry season when there is a less precipitation which is not adequate enough to leach salinity from soil naturally and dilute the concentration of salinity from surface water.

As an alternative source of fresh water, rain water harvesting is a common method in the coastal areas in Bangladesh. Number of NGOs has already put intervention in this regard. One of the most common methods of rain water harvesting is collecting the water into pond and purify it by pond sand filter method for making it safe for drinking. Apart from that, collecting water from rooftop into storage tank is also a popular method.

However, collecting water into storage tank only provides fresh water for a certain period (approximately 3 to 4 months) and the water holding capacity of the storage tank is most of the cases is very limited. But if rain water can be collected in open well from the roof top the

benefit can be both short and long term. In short term impact people can use a huge volume of harvested water as the water holding capacity of such a well is much higher than the conventional storage tank and in long term it is likely to recharge ground water aquifer in terms of diluting or replacing saline water.

"Harvesting rainwater and injecting into open well" could be a feasible method of alternative source of fresh water not only in the coastal Bangladesh but also for the drought prone and arsenic effected areas in Bangladesh. It is a cost effective method and has been utilised largely by "Participatory Learning and Action Network" Kerala, India.

However, there is no significant method under practice to combat salinity problem and ensure safe drinking water in dry season in coastal Bangladesh, although the salinity problem is more acute in winter when there is low flow condition prevailing in river water and is not sufficient enough to counter the salinity ingress into it. The writer explores the method of desalinisation of surface water, which is a very simple laboratory method, but can put a magnificent corrective impact on coastal Bangladesh.

The method is to put a container in the middle of a bigger one and cover them with a paper which can trap heat (like foil paper or cling film), keeping in mind that there should be no gap between the paper and the bigger container. Then to keep a small weight in the middle of the paper so the water can be trickled down to the smaller container, keeping the whole system in the sunniest place in the surrounding of one's homestead or at the roof top.



Salinity intrusion in coastal areas is a natural consequence of flooding.

The method is cost effective as it comprises natural evaporation and condensation method. This method has also some commercial benefit. If it is practiced in a small scale at household level, the salt produced in the large tank during the evaporation can be used for household cooking and if it is practiced in a large scale the salt produced may bring commercial benefit.

Access to safe drinking water is one of the basic human rights. However, salinity intrusion in the coastal zone has already limited the

accessibility of people to safe drinking water. Moreover, the coastal area under salinity coverage is likely to be increased in the upcoming years due to climate change. Therefore, to ensure safe drinking water by creating alternative sources in the coastal zone should be the top priority of the government, NGOs, scientists and other stakeholders.

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MEDICAL WASTE

Ignored field of environmental management

Government should promulgate and implement laws and regulations regarding medical waste management. It has to take the whole responsibility...

ABDUL HAMID

ONE estimate shows that some 5.2 million people (including 4 million children) die each year from waste-related diseases all over the world. Thousands of tons of waste are generated everyday in our country. These include household waste, industrial waste and medical waste among many others. Household waste can be handled easily as this is less dangerous to public health and easily recyclable. But things are different for Medical Waste (MW). Medical waste is defined as any solid or liquid waste that is generated in the diagnosis, treatment or immunisation of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals.

Although majority of the MW is no more dangerous than household/municipal waste, the hazardous waste, if exposed to the people or environment in an untreated form, would pose various kinds of danger. MW contains both general waste (app. 75-80 per cent) and infectious wastes (app. 20-25 per cent). According to

Environmental Assessment and Action Plan For Health, Population and Nutrition Sector Development Program of Ministry of Health and

Family Welfare 2011 about 89,945 kgs of MW is generated everyday, out of that about 22,486 kgs are infectious. Another estimation shows that about 36,000 tons of medical waste is generated every year in Bangladesh, out of this approximately 7,200 tons are hazardous

Lack of awareness, appropriate policy and laws, and apathy are responsible for improper management of medical waste in our country. The process of collection, segregation and disposal of medical waste is not performed according to recommended standards, and concerned people are exposed to the danger of such waste. Safe disposal of medical waste is essential and is handled in a very professional way in many countries. The impacts associated with improper Medical Waste Management (MWM) can affect public health directly and indirectly. It can cause HIV and hepatitis infection, among many other diseases.

In most of Bangladesh, including its capital Dhaka, traditional and outdated systems of waste management in health facilities is practiced and improper waste disposal leads to pollution of the environment and creates



Careless disposal of medical waste is an environmental problem and health hazard.

health hazards. It was, and still is, a common practice of Health Care Establishments (HCE) to dispose their waste into ordinary dustbins without any hesitation. As found in a field survey of 2005, only few, about five, private HCE of Dhaka used to collect their waste systematically, they used to segregate sharp and infectious waste and send them to International Centre for Diarrhoeal Disease and Research in Bangladesh (ICDDR,B) for incineration at a rate of Tk 70/kg.

In the legal side of MWM issue, there was no formal legislation before 2004 except a manual compiled by the Directorate General of Health Services, Ministry of Health and Family Welfare

in 2001. In 2004, the Ministry of Health developed a guide book named Hospital Waste Management Pocket Book for the nurse, medical thechnologist, ward master and other related staffs. But it has not been updated till today, with the changing technology in medical service and also changing strategy in the MWM world wide. In 2008, Medical Waste (Management and Processing) Rule 2008 was promulgated by the government. This Rule was prepared by Department of Environment (DoE) through the participation of Ministry of Health and Family Welfare (MOHFW), Ministry of Law(MOL) and Ministry of Environment and Forest (MOEF) for

processing and management of medical waste in Bangladesh.

Though the training for improved MWM was started in 2005, it was not of much significance as there was lack in the perception of the importance of MWM. National Implementation Coordination Committee (NICC) was formed by MOHFW in 2007 for MWM, but it was not of significance as there was no legislative arrangement to base its implementation strategy. Though DCC is working with Project in Agriculture, Rural Industries, Science and Medicine (PRISM) under MOHFW it has no legal basis of its own. DCC has outsourced the management of medical waste to PRISM Bangladesh. But the problem is PRISM Bangladesh does not have resources, neither has got any assistance from any source.

- Although the MWM system has developed it does not mean that no further development is possible. To further improve MWM system, we have to consider the following
- Raise awareness in common people and educate and train the medical staffs about medical waste issues
- Proper waste management strategy is needed to ensure health and environmental safety from medical waste
- Segregation of medical waste should be done at the point of generation. Different colored bags should be used for collection of hazardous and non-hazardous waste
- Safety measure must be taken in handling hazardous waste. Gloves,

masks aprons, etc. must be used during handling of medical waste

- Hazardous medical waste may be collected from different hospitals and treated centrally. Methods of treatment should be selected carefully
- For the proper management of MW new and new incineration centers may be established.
- The existing medical waste management system currently serves a limited number of HCE. New facilities should be established in different parts of the country and the existing facility should be expanded

Above all, government should promulgate and implement laws and regulations regarding medical waste management. It has to take the whole responsibility for the proper disposal. Disposal of medical waste is a growing environmental problem in Bangladesh. Until recently, the management of medical waste has received little attention. It is evident that most of the health care institutions do not segregate their generated waste and dispose of their domestic waste at the same site as normal civic waste.

The generation of medical waste in Dhaka has been increasing in quantity and variety, due to the wide acceptance of single-use disposable items. Efforts have to be made for minimisation and recycling of some medical waste prior to final disposal, if not infected or contaminated.

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