

Disaster Mitigation: Structural and Non-structural Policies

by Zillur Rahman

Appropriate and comprehensive policies in mitigating the sufferings of the people from recurring disasters in the coastal areas of Bangladesh are preconditions for initiating effective physical, economic, social, environmental and infrastructural measures.

DISASTER has been defined as an event, natural or man-made, that seriously disrupts the normal functions of the civil society, thereby causing human and material losses of such severity that the affected community has to respond by taking exceptional measures nationally and/or internationally. The damages and destruction sometimes are of such magnitude, that exceeds the ability of the affected society/community, country or region to cope with using its own resources. In this situation the traditional concept of relief and rehabilitation should be discarded. The fundamental question dominates as to how we can better adapt relief and development process to ensure a greater synergy between the two. The second question is how to achieve the different objectives of humanitarian and human right actors in a proper mix that honours the common principles of both.

Government Policy: Appropriate and comprehensive policies in mitigating the sufferings of the people from recurring disasters in the coastal areas of Bangladesh are preconditions for initiating effective physical, economic, social, environmental and infrastructural measures. The people in the coastal belt of Bangladesh live with their lives and assets, at risk in the tropical cyclonic high-risk areas because of their livelihood. The rich alluvial soil and sea fisheries, plantations and forest products of the world's largest mangroves attract people for employment, income and livelihood in a land-hungry country like Bangladesh. It is therefore imperative that policy makers should accept this reality and take policy interventions which could reduce the risk, vulnerability and ensure long-term sustainability both economically and environmentally. In a country like Bangladesh where man-land ratio is very adverse, per capita income is very low, resource base is meagre — it is highly unlikely that substantial resources will be available to divert to cyclone protection projects away from agricultural, educational, industrial and in-

frasturctural development projects. Therefore, disaster mitigation policies should be integrated with national development policies.

The modern concept of mitigation lies in the disaster management. A nation which has raised its capability in disaster management has successfully reduced the hazards of risk. From this point of view, the disaster management policy is crucial in the whole exercise of risk minimisation activities. It is worthwhile to understand the process of disaster management before embarking on set for initiatives. These are: an accurate definition of the disaster threat; identification of the effects which are likely to be caused by the threat; assessment of the resources available to deal with the threat; organisational arrangements which are required to prepare for respond to and recover from disaster events; and how national disaster management policy interlocks with other national policies especially national development and environment protection policies (Disaster Management). A Disaster Managers Handbook — Asian Development Bank).

In the light of the above it may be mentioned that the Master Plan Study and the follow up project preparatory study have identified the Risk Area (RA) and High Risk Area (HRA) of the coastal area taking into consideration of the definition of disaster (cyclone combined with tidal surges) and combined effect of destruction on both human and animal lives and assets. This demarcated HRA stretching over 45 thanas and 318 unions in 12 coastal districts with population of 7.5 million needs to be officially declared by a legislation. Due to accretion, erosion, population density, land use pattern, settlement pattern and properly designed embankment construction, the HRA may change in the future. This needs to be monitored, studied and HRA may be redemarcated.

The tropical countries in the Asia-Pacific region are prone to disasters. The Bay of Bengal region historically has been visited by series of cyclonic storms

associated with high water surges which caused destruction on the path from time immemorial. This atmospheric phenomenon unpredictably will occur from time to time without any predictable time gap. Such events cannot be stopped but disaster management and preparedness from national levels through regional level to community and village to household levels can minimise the loss of life and property including environmental degradation quite substantially. Following the UNDP Technical Assistance Project the Government of Bangladesh has set up Disaster Management Bureau (DMB) at the renamed and reorganised Ministry of Disaster Management and Relief (MDMR). The institutional arrangement for disaster management and coordination at pre, during and post-disaster periods fortunately has been very elaborately established at the national, regional (district), local (thana) and community (union) levels. The functions, jurisdiction and coordination activities of various institutions during normal time, pre, during and post-disaster times have been unambiguously delineated. Yet there is much to be done.

Generally the government policies pertaining to disaster management may focus on the following elements while framing comprehensive national policies. Transparently speaking all national disaster management policies should emanate from the source 'The Disaster Management Cycle'. These elements and the relevant policies which flow from them are as follows.

Prevention: Such measures, aimed at preventing or reducing the effects of catastrophic occurrences having harmful effects on community, their property, land and means of subsistence. In the project preparatory study the

community expressed their preferential priority to construction of coastal embankments besides cyclone shelters or kilas, obviously to protect their wealth, agricultural land from salinity so that they can go back to their economic activities. Therefore, a clear government policy on priority basis should be taken for construction of embankments of appropriate height, slopes and compaction based on data of water surge, level and tidal constituents. These embankment slopes should be planted by involving the community through benefit-sharing system. This green belt will act as barrier, wave and wind breaker resulting in protection besides environmental and economic benefits. The NGOs should be involved in this programme. The Bangladesh Building Code (BBC) has been prepared recently (there being none in the past) which should incorporate the standard modifications recommended by the consultant for the coastal area in the BBC.

Mitigation: Action should be taken in the form of specific programmes to reduce the adverse effects of disaster on nation and community viz cyclone shelters, kilas for saving livestock and raised road, embankments etc. The creation of these facilities as part of government development programme needs coordinated planning, implementation and institutional arrangements for normal and emergency time use, their operation and maintenance. Central government is to take clear policy in this respect before the project is implemented. Government should initiate policy guidelines in the appropriate development of institutional arrangements.

Preparedness: Measures which are taken generally immediately prior to and following disaster impact. People should be made aware of the warning system and act accordingly to respond to the call. The CPP

spect, Bangladesh has elaborate institutional arrangements viz, NDMC, IMDMCC and DMB at the apex levels, District Disaster Management Committee (D-DMC) at districts, Thana Disaster Management Committee (T-DMC) at Thana levels and Union Disaster Management Committee (U-DMC) at community levels. At present, all these institutions seem to be sleeping giants waiting to rise at the time of occurrence. DMB currently appears to be an institution responsible for maintaining an inventory and information system. DMB needs to be activated to perform the functions it has been assigned with and in turn the lower tier institutions be energised. Action plans, creation of task force, and training programme to make the key persons in the system, community, individual household prepared for and aware of the disaster, disaster plans, inventories of resources, and the training of personnel should be made as a continuous programme. What are the things community should do to get them prepared to go to shelters or any other safe havens (burying underground drinking water, food covered with plastic etc) should be taught.

Response: Measures which are taken generally immediately prior to and following disaster impact. People should be made aware of the warning system and act accordingly to respond to the call. The CPP

volunteers both male and female, social workers, NGO and other government line agency frontline workers should work together to motivate the community, individual households about the danger of the storm surges and cyclones, and for the measuring of warnings and their willingness to move to shelters. DMB as an apex body of the chain of disaster management institutions should come forward with programmes to reactivate both upper and lower tiers of the system.

Recovery: This is both short-term and long-term process. Both the central government and the local governments, community and individual households must have developed recovery plans both short-term and long-term to put the social, economic and environmental system back to gradual normalcy. One important social phenomenon universally observed is that after every severe disaster, the nation and especially the affected community stand as one forgetting their differences in social, economic, political and religious colours. This is an immense opportunity that the policy makers at the national government should seize for recovery cost effectively. Unfortunately every time, this opportunity is not availed in the past. At least 70 per cent of the population in the coastal area are wage earners in agriculture and fisheries. Absentee owner-

ship in these two main economic activities is the reality.

The government may initiate reform policy both in the field of agriculture and fisheries to provide ownership to the vast number of households who are in poverty syndrome. Additionally, the central government can develop appropriate policies to make access to credit and lumpsum household basis insurance coverage which help build recovery quickly immediately after the disaster. These two measures are very important. Most of the ponds are contaminated with salinity after the cyclone. Desalination measures should be ready immediately after the cyclone.

Development: Besides these disaster management measures, an integrated economic, social and environmental development programme for uplift of the area harnessing the coastal and sea resources, should be developed, say, styled as Coastal Area Development Projects/Programmes which eventually would change the economic and social status, settlement pattern, urbanisation, infrastructures leading to self-mitigating capability. All the sectoral programmes in the area should be interfaced with disaster mitigating projects so that lopsided development does not take place.

Policies Relating to Multi-purpose Cyclone Shelter Project

a: Central government should immediately announce the policy of education, both primary and secondary levels and health coverage for the coastal area based on which will be the number of buildings

to be used as schools, health clinics during normal time and as safe havens during emergency.

b: The bottom up process of need assessment, community preference, coordination and programme development at thana and district levels through U-DMC, T-DMC, D-DMC to related ministries, LGED to steering committee and back to LGED for implementation etc should be in principle approved by the central government.

c: IMDMCC should be empowered to coordinate the programme interministerially.

d: Site selection should be coordinated at the district level and the principle developed should be strictly followed. The initiative should be taken by the U-DMC through T-DMC to District Site Selection Coordination Committee or D-DMC. No donated land should be taken because it does not ensure proper siting, ownership and after use. Adequate compensation and quick acquisition should be arranged.

e: Very often the project suffers from shortage of fund. Adequate and smooth flow of fund should be ensured. The project should be included as core project and fund from ADP should be released twice in a financial year. Special Account in the Bangladesh Bank in consultation with the World Bank may be resorted to.

f: Coordination, monitoring and review system of the project should be strictly developed.

g: Auditing and accountability should be ensured.

h: Decentralised decision making in respect of project implementation is to be ensured.

Experience of a Heart Surgery Patient

"**A**BU Faruque and a heart surgery." This is the last thing I wanted to be loaded with and in that mood, I avoided serious considerations for surgery despite recurrent heart area discomfort. My grounds, I thought unassailable given that I have been doing fine over the last 8 years of discomfort, and I have gone round the world in getting medical opinion with the hope that someone will authoritatively say that I do not need surgery. Now the chapter is over and by Allah's wish and blessings I am back to Dhaka, 7 days after a five-block heart surgery. Here is the experience which I wish to share with all those who at this very moment are undergoing the agony of decision-making.

Let us admit that in our country, there is an acute demand for heart care and medical assistance in the form of expert cardiological advice. And surgical teamwork is absent. Whoever I speak to about the matter suggests US or Cromwell of London or Birla of Calcutta or Queen Elizabeth of Singapore. A heart patient suffers from the ailment and the pressure of taking decision with its multi-dimensional manifestations in matters of funds, accommodation, travel, family, food etc. Where do we go and get reliable advice at the affordable cost. What about blood contamination problem? If surgery is essential it would better be done at a place where the angiogram work has also been done. Who would be the surgeon. What about logistics like visa, foreign exchange, accompanying persons, stay for a prolonged period etc. Such decisions virtually rely upon the quality and quantity of family support. My problem in the US was my

daughters are married and only my wife could help with a short support from one of my daughters. No doubt my wife wanted me to go to US for final decision. Anyway, we decided to visit Kachi, close to Colombo in Madras. The opportunity for tourism was really an attraction and I thought I would get a pass from the doctor yet. The heart centre was new and relatively unknown except that I read an excellent article on the facilities and quality of service there in a newspaper. Well, we were there and the angiogram was done and reflected a progressive deterioration in my heart condition.

I was suggested to seek a second opinion. So we were in Calcutta, visiting Dr Debal Sen. I shall never forget that dialogue. Dr Sen went through the angiogram and elaborated later the stress my heart has endured despite a congenital defect (revealed to me for the first time). He was explaining as if I were a baby, drawing sketches and like that. Anyway the conclusion was that Allah has been very kind to me so far that I had not have a heart attack but in my condition it could happen any day. The cure, either an angioplasty with a special attachment (I forgot the name) because of the peculiar bend in one of the arteries from birth and cleaning the block of the second artery, I asked for his advice. He said taking all factors and the possibility of recurrence after an angioplasty he would recommend an early surgery. He said at least now we are clear about the status of my heart and the action that needs to be taken. The question is where?

Initially the consensus was to get it done in

UK/US/Singapore/Manila or the Birla Heart Centre. My brother was going back to Manila and agreed to do all the needed there or in the US. My wife sitting in US wanted me to come to US for the surgery. My premonition was a nearby place where people are known and my family members from Dhaka could be present. I could convince my family about Calcutta and requested them to arrange admission in Birla. But I was told that Dr Shetty of Birla Heart Care was going on a long leave. On the spur of the moment, I decided for Centauri. The tussle with my family reached a climax. And I was informed that Centauri was arranging their specialist visiting surgeon Dr Bhattacharya to come over from Bombay for the surgeon. We were told that Dr Bhattacharya is the leading heart surgeon in India and perhaps in SE Asia today and comes over to Centauri only once a week to do special cases — and that my case was not really a difficult one and I would get released by 8 to 9 days after admission. I opted for 27 April for surgery. My family flew over to Dhaka to join me.

Dr Sen was in Dhaka during 19-23 April and was kind to visit my home and explain everything in details. His presence and warm approach (even exceeding the American standards where he has been educated and trained) assured us that not only I am going to the safest pair of hands but in a warm environment in which the Chief cares for the patients and was sincerely trying to help the people of this country.

So we arrived Calcutta on the 24 April and visited Centauri on the 25th. Centauri, located on the Albert Road, close to the Hindi High School and

the Belle Vue clinic was small but highly functional and extremely clean. The surgery and angio rooms and the recovery rooms reminded one of the highly functional US specialist hospitals.

The admission and tests followed. Somehow I was not nervous. May be the warmth of the staff and the language affinity helped. Twenty-seventh arrived and I was trolley to OT. Dr Bhattacharya came and was talking to me and after that I don't remember. When I woke up I enquired when was the surgery going to be done? And the Matron told me it has been finished. I just could not believe it. Hardly any pain or discomfort except I was thirsty and very sleepy.

I was told that there were 5 blockages small and large, and Dr Bhattacharya had removed them all, lest they create problems in the future. And he has used veins from my mammary area exposed during the surgery and there was no procedure on the thigh. This was absolute front edge technology. A fitting response to my rate from the surgeon himself. And for me I hardly felt that I had undergone such a major surgery. No pain and discomfort were there. Of course, the long 8-inch scar was highly sensitive. But I could do almost everything and eat the food I love.

This is my story for my countrymen. I must elaborate one thing. Centauri's regular surgeons (Dr Tushar Dhruv and Dr Debol Sen) perform surgeries on all 7 days a week and Dr Bhattacharya comes from Bombay only on weekends. He is rather expensive and difficult to get.

Abu Faruque

Metropolitan

Tk 500cr rehabilitation plan for cyclone victims

The government has undertaken a massive rehabilitation programme at a cost of Tk five billion (500 crore) for the cyclone-affected people of different coastal thanas and offshore islands of the country. reports BSS.

This was disclosed by Water Resources Minister Abdur Razzaq while exchanging views with journalists at Cox's Bazar Circuit House yesterday.

Razzaq said as part of the rehabilitation programme, repair works of the damaged embankment has begun and initially Tk 12.20 crore has been sanctioned for the reconstruction of 52 complete and 515 kms partially damaged embankment of Chittagong and Cox's Bazar region.

State Minister of Land Rashed Mosharraf, Mohammad Ali MP and Prof Aye Thin MP, also addressed the press briefing.

We are distributing relief goods in two ways. Some 25,000 bundles of CI sheets have been disbursed by the army while other relief goods and house-building materials are being distributed under the direct supervision of the local member of parliament and thana nirbahi officers," Mannan said.

He also said that 2000 more cyclone shelter centres will be constructed in the coastal regions.

Referring to the reconstruction of damaged educational institution and other places of worship in the district, the minister said Tk twelve lakh has already been allocated in this regard.

Chief of the Air Staff Air Vice Marshal Jamal Uddin Ahmed attended the ceremony as the chief guest and distributed certificates among the successful student officers.

Besides officers from the Bangladesh Air Force, officers Pakistan and Sri Lankan air forces, Bangladesh Army and Navy took part in the course.

Addressing the inaugural ceremony, the Mayor urged all to work unitedly to ensure safe motherhood through building mass awareness.

Mannan, who has been entrusted with the responsibility

to monitor and supervise the relief and rehabilitation programmes at Sandwip, said this when he paid a visit to Chittagong Press Club yesterday.

Referring to the rehabilitation of the cyclone affected people, the minister said at least ninety tubewells will be installed in each thana of the coastal regions to ensure pure water supply in any natural disaster.

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Weather

Rain, gusty wind likely

Rain or thundershowers with temporary gusty or squally wind may occur at many places over Khulna, Chittagong and Barisal divisions, and at a few places over Rajshahi, Sylhet and Dhaka divisions during the next 12 hours till 6 pm today, reports UNB.

The Met Office said day temperature may remain unchanged over the country during the period.

The country's highest temperature was recorded 33.5 degree Celsius at Dimapur and the lowest 18.8 degrees at Kutubdia.

The sun sets today at 6:42 pm and rises tomorrow at 5:11 am.

Maximum and minimum temperatures recorded in some major cities and towns yesterday were:

City/Town	Temperature in Celsius	Humidity in Percentage	
Max	Min	Morning Evening	
Dhaka	32.0	21.3	73 88
Chittagong	31.2	21.4	75 78
Rajshahi	33.3	21.3	84 95
Khulna	32.6	20.5	79 98
Barisal	32.4	20.0	74 80
Sylhet	31.0	23.4	100 80
Cox's Bazar	30.2	20.8	89 77

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