

## Improving the living environment

MOHAMMAD ABDUL AWAL

**H**OUSING is the third basic need of human beings, after food and clothing. It is not the individual house alone but a habitat with other facilities like hospitals, schools, prayer halls, play ground utilities and other recreational facilities. In other words, it's the environment with all support facilities for comfortable living that constitutes housing.

Unfortunately, such living environment is either absent or insufficient in our city life. The condition is degrading day by day due to unplanned development and migration of people from village to cities, resulting in rapid growth of city population. Big cities like Dhaka, Chittagong and Khulna are no longer habitable. These cities have become concrete jungles of high-rise and low-rise buildings, with very little space in-between. The roads and other infrastructure have become inadequate for bearing the load of the city dwellers. The utility and service departments have failed to meet the demand of the huge population. Besides 35% to 40% of the city dwellers live in slums and sub-standard houses.

A seminar on "Making Dhaka Livable" was held at Hotel Sheraton in 2006 under the auspices of the World Bank. A paper was presented by Mr Sadiq Ahmed and others in which the authors mentioned that Dhaka with a population of 34,000 per sq km had become one of the most densely populated cities in the world. The rapid urbanisation is putting pressure on the cities' city's limited land and weak urban services, and poor city management, low efficiency, and corruption in service provision are accelerating the problems. Urban traffic is reaching nightmarish proportions, often causing massive delay in movement, with associated productivity losses. Water and air pollution poses serious health risks. The rising slum population is contributing to serious human and law and order

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problems.

The participants also made some comments and suggestions on this. As one of the participants, my suggestion was to make the whole country livable. If we want to make Dhaka livable, we need to make the whole country livable; otherwise, it will be impossible to do so because of the one-way migration of people from the different parts of the country towards the capital.

So, if we want to improve the housing and living environment of Bangladesh, we have to stop or reverse this migration first. Then, we have to prepare a master plan for the whole country and implement it, like many other countries in Asia. If we take the example of Singapore, the master plan was

prepared during 1970's and implemented during the last four decades. Before that, Singapore was like many other third world countries, with crumbling city slums and kampongs with no sewerage system. It is very difficult to believe that people used to sell cooked food on the footpaths and streets of Singapore. The number of taxi drivers without license and insurance cover was higher than that of licensed ones. Cows and goats used to move around roadsides for grazing.

But what a turn around during last four decades! Singapore has become one of the cleanest and greenest cities of the world, with wide roads and express-ways allowing free movement of people from one end to the other within

30 to 40 minutes. Modern apartments with more than 50% open space are standing all over Singapore. The Singapore government has already ensured at least one apartment for every adult citizen. In 2005, there were ten thousand excess flats lying vacant.

Now, what should we do for improving housing and living environment in Bangladesh? Many of you may agree with me that first of all we should formulate a countrywide land use policy to determine how much land we shall use for housing, how much for mills and factories and how much should be kept reserved for agriculture to produce food grains. No more residential plots should be allotted to any individual for constructing private resi-

dential buildings. The government should take the responsibility of creating affordable housing for the people. We, private developers, can combine our efforts to accomplish this huge task.

Next, we should prepare a master plan for the whole country as I mentioned earlier, including Structure Plan (SP) and Detail Area Plan (DAP). Necessary rules and regulations for city development have to be prepared by the concerned ministries and passed by the government. One such planning and construction rule, called "Dhaka Mohanagar Imarat Nirman Bidhimala," had been prepared and passed in 2006 and amended in 2007 and 2008, and was based on Floor Area Ratio (FAR) and maximum ground coverage. I believe this rule should be implemented in all the cities of Bangladesh immediately to stop further degradation of the living environment.

To stop this migration of rural people to cities, we may think of developing Compact Townships (CT), where there will be low-rise buildings for common people, with hospitals, schools, markets, recreational facilities and modern sanitation system. Bio-gas plant for cooking and solar energy for lighting can be considered. Supply of safe drinking water also has to be ensured. Most importantly, it will include rural industries for creating jobs for these rural people. One such CT can be built in each of the 4491 unions throughout Bangladesh. By doing so, we can stop the conversion of agricultural land to residential land. Besides, much land will be freed up for cultivation. Pressure on Dhaka and other large cities will be relieved as well.

Above all, we should change our self-centered mindset to people-centered mindset, and set a goal from national perspective with vision and mission. Besides, a public awareness campaign is very essential for conservation of nature and the environment.



Engr. Mohammad Abdul Awal is Managing Director, The Structural Engineers Ltd.

## Flood, geography and expectation

SK MASHUDUR RAHMAN

"This is the worst flood on record"  
"This is the coldest winter on record"  
"The hottest decade in recorded history"

Every month it seems there is some new natural disaster to contend with. These natural events are thought to be the consequence of global warming. If global warming is occurring, these natural disasters are only minor compared to the consequence of changing agricultural patterns which could lead to widespread famine, and melting ice caps and glaciers, which could raise the sea level and cause flooding. Bangladesh is a tropical delta with the southern coastline touching the Bay of Bengal and the mighty Himalayas stretched on the north. Due to such geomorphological formation it is a country that has been intrinsically associated with natural disasters. Its geographic vulnerability lies in the fact that it is an exceedingly flat, low-lying, alluvial plain covered by over 230 rivers and rivulets with approximately 580 kilometers of exposed coastline. As a result of its geography, Bangladesh frequently suffers from devastating flood.

In Bangladesh floods are recurrent, some normal and annual flooding is important to the people and economy. However severe floods of high magnitude can have adverse impact on the economy and even cause loss of life. With increase in population, rapid urbanization, growth of infrastructure, other economic development and poor maintenance flood risks have been increasing. In fact catastrophic floods can have major adverse consequence on the long term development of the country. Many doubt if it is possible to develop a modern economy without properly managing the disaster risks posed by flood. Bangladesh has experienced more than a dozen devastating floods since independence not to speak of the similar or more acute earlier ones. During each flood scores of people have been killed and damages to crops, enterprises and infrastructures occurred in billions of US dollars, severely disrupting the economy and reducing potential GDP by a few percentage points.

Flooding in Bangladesh is a recurrent phenomenon and normally it hits our country from July to September each year. Right this moment our country is passing through that crucial and vulnera-

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ble time. Mentionable that about 60 percent of our country is flood prone, while about 20-25 percent of land area is inundated during monsoon in a normal year. Flood prone areas can be divided into three major parts:

North and Eastern part  
Central and South Central part  
Southern part

Northern part covers the area of old Himalayan piedmont plan area to Barind tract including a large part of flood plain land. In this belt Sirajganj, Pabna, Bogra, Lalmonirhat, Nilphamari, Kurigram, Rangpur, Gaibandha, Chapainawabganj, Rajshahi and Natore are the most vulnerable districts. Due to the proximity to Jamuna river Sirajganj, Bogra, Kurigram and Gaibandha constitute the most risk zone. The large inland depression, commonly known as Haor basin, is located in the north eastern part of Bangladesh. During the monsoon,

the basin receives huge discharges of a large numbers of rivers flowing down from the hills of Assam and Meghalaya and takes the form of a vast inland sea with only the villages and some old levees remaining above the normal flood level. Three districts of the haor area are the most flood prone -- Sylhet, Sunamganj and Habiganj. A huge number of people suffer from flood, shelter, safe drinking water crisis and sanitation problem during flood.

Central and south central part covers the area of active Jamuna flood plain, north Mymensingh piedmont, high parts of old Brahmaputra floodplain, north Mymensingh piedmont basin, lower parts of old Brahmaputra, north and south Dhaleswari river, southwest part of Jamuna, part of old Brahmaputra, old Ganges, active Ganges flood plain, Arial beel, Modhupur tract and its Northern hills. The main vulnerable districts are Dhaka, Manikganj, Jamalpur, Sherpur,

Tangail, Netrakona, Mymensingh, Kishoreganj, Munsiganj, Rajbari, Faridpur, Madaripur, Narayanganj, Gazipur, Narsingdi and Shariatpur. Of these Manikganj, Jamalpur, Tangail, Netrakona, Faridpur and Madaripur happen to be the most affected.

Southern part covers the area of active Ganges flood plain, Ganges-Kobadak project area, Khulna and Chittagong coastal plain and off-shore islands, low and high part of Meghna estuarine floodplain and Comilla basin. In this belt the most affected districts are Magura, Jhenidah, Khulna, Comilla, Feni, Noakhali, Chandpur and Brahmanbaria.

People in these regions face specific problems that greatly hamper their capacity to respond to natural disaster like flood. These are -- no emergency flood forecast system; severe lack of awareness about the negative consequence of flood; lack of an information system to coordinate

a unified response to the flood; lack of available resources to meet both emergency and long term needs; lack of available rescue boats and other materials; limited number of beneficiaries are selected; lack of temporary livelihood shelter; inadequate number of water purifying tablet or saline and alum; inadequate management effort in the case of pregnant women, the disabled, aged or widow.

For mitigating the flood related damages and sufferings in the affected areas some strategies can be followed, viz, constructing or reconstructing embankments immediately, setting up human and cattle shelters, community based clinics and also taking initiative for embankment friendly large scale tree plantation, setting up tubewells and sanitary latrines on the high land, conducting disaster related awareness programmes, encouraging peasant for eco-friendly paddy cultivation, providing boats to ease movement of affected people, distributing hurricane lantern and gaslight instead of candle and fire box. Side by side we have to focus seriously on the community based preparedness programme for reducing damages.

The writer is a development worker.



## Cutting hills: Why and why not

**Hill cutting is known to be rampant in Khagrachhari district and in the Chittagong metropolitan city itself. It is known to all that human (especially poor) dwellings near the hill slopes are in danger of landslide that killed a number of persons last year. If extending the city towards the north engulfing the hills and hillocks cannot be stopped at all, we can just follow the norm prevailing in East Asian rapidly developing countries like Singapore and Malaysia.**

ABDUS SATTAR MOLLA

**B**ANGLADESH is mainly a deltaic plain of the Ganges and the Brahmaputra river systems. However, we have some tertiary upland in the northwest and some hills and hillocks in the southeastern area. Hills, plains and river basins -- all are created naturally, unfortunately, the mankind realizes their essentiality at least after doing much harm to the natural ecosystems.

What is the actual use of such uneven land masses? The Great Creator says: "And He has cast great mountains in the earth lest it might be convulsed with you, and rivers and roads that you may go aright" (The Quran: 16.15). Scientifically we still do not know how mountains and hills arrest probable convulsion and ensure stability to the earth. But we know for certain that such elevated land increases the surface area of the earth and also that there are some special types of flora and fauna that exclusively grow and survive in these high lands. So cutting or razing them to ground obviously destroys those species that one way or other help our own survival.

Realizing the importance of hills, the Government of Bangladesh formulated some rules to protect them. Since hill razing is often associated with building human dwellings, the rules mainly concerned building construction. The Building Construction Rules 1996 have specific provisions regarding the permission procedure for hill cutting. Of these, Rule 27 states that in addition to the fees and designs as required under the Rules, the applicant must also submit: a) clearance or NOC (No Objection Certificate) from the environment department; (b) topographical or contour map of the hill; and (c) detailed design showing all the necessary development plan, protective measures etc.

Following all these rules, nobody can actually raze hills and build houses.

Then why some people are still up and doing in razing hills? The people who cut hills have their own logics to show. The main reason they show is that humans need plain land to cultivate crops and build houses. Since we, in Bangladesh, are too many people we have more rights (!) to raze hills for our survival? Conserving natural hills, forests and the biota may appear luxury to them. Some even may claim that they are developing 'real estates' (buildings) out of the natural unreal (!) and virtually unused (fallen!) wealth. I am tempted to quote few lines from a letter published in The Daily Star in January this year. "Even if all the hills of the CHT and Sylhet are razed there should not be significant change in climatic conditions in Bangladesh" (Md. Ashraf Hossain, Razing hills, 25/01/2008). The letter writer's known only purpose of conserving hills would have been to protect the prevailing climatic conditions through increased rains that to his understanding was not contributed by hills. Therefore he found no reason for the government's enacting laws against razing hills and asked the government to review the situation and repeal the Act and encourage public and private sector to develop plain land to cater to the need for farmland.

I appreciate Mr. Hossain's concern for more 'farmlands' for the country's increasing population. He has given the notion quite freely (without prejudice) and asked for scientific explanation from the public who knows. I have tried here to provide some explanations and specifically mentioned two points: 1) hills have increased the surface area substantially and made more rooms for growing 'forest crops', if not cereals; 2) these harbour certain species of plants and animals that would otherwise become extinct.

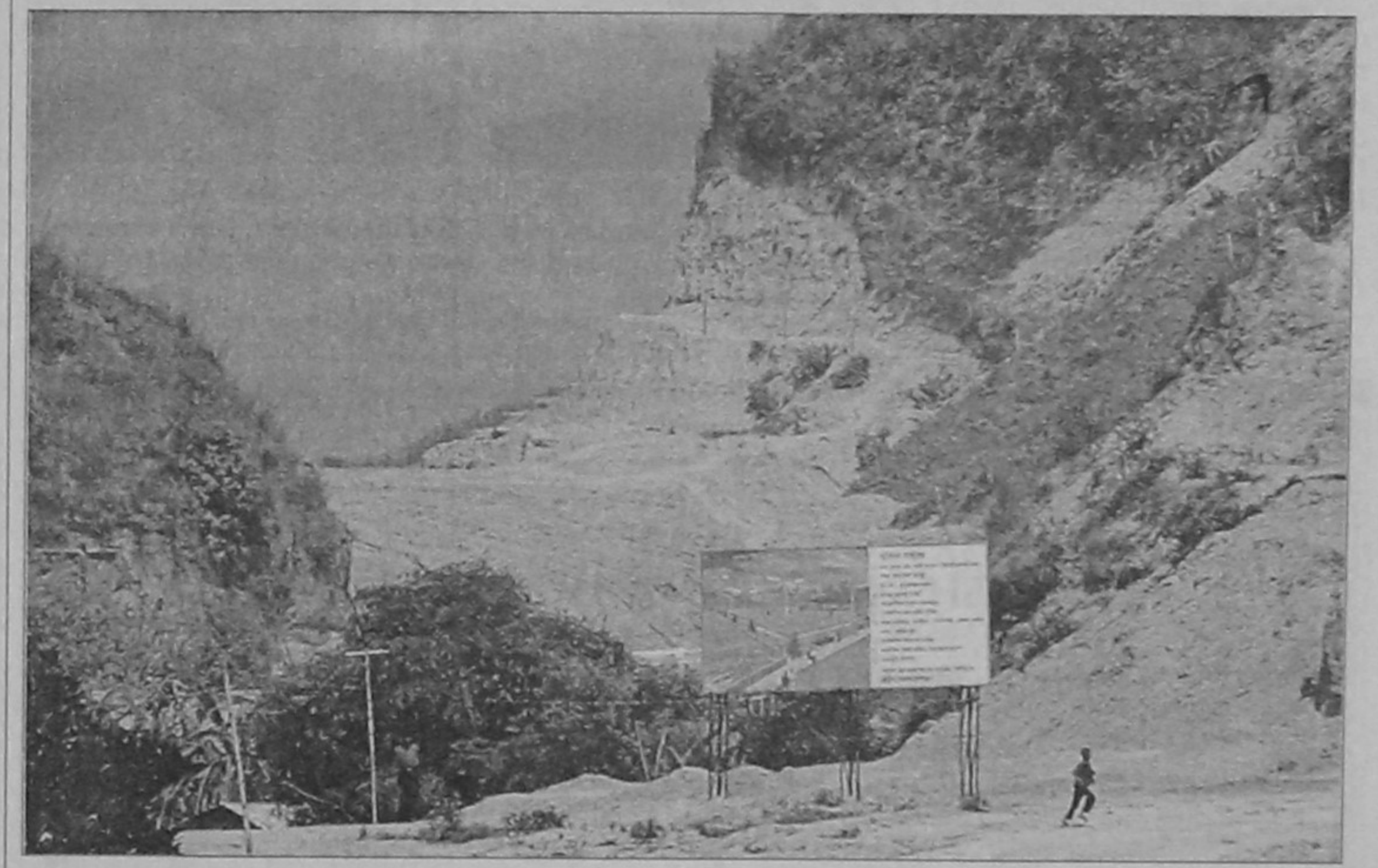
Regarding extinction of biota, we have lost a number of animal species who were forest dwellers. We have lost much more plant

species and grew some monoculture forests in some smaller specific locations. Thus we are making a bloom of humans in expense of many other species only to die like the well-known algal bloom that dies down in few years. We can't and should not proceed towards such an end. We need to slow down our own growth rate and arrest the razing of hills as a contributory factor.

Hill cutting is known to be rampant in Khagrachhari district and in the Chittagong metropolitan city itself. It is known to all that human (especially poor) dwellings near the hill slopes are in danger of landslide that killed a number of persons last year. If extending the city towards the north engulfing the hills and hillocks cannot be stopped at all, we can just follow the norm prevailing in East Asian rapidly developing countries like Singapore and Malaysia.

was sent to University Malaya (UM) in 2002 for some training in curriculum matters. I noticed some buildings of UM were two storied in one side and four storied on the other. The 'real estate' developers there kept the hillock intact and built the building over the uneven land. The same is true for raising buildings in Singapore. In the National Institute of Education, most buildings are three storied in the centre and six storied on the sides of the hillock. There are a number of engineering schools in Nanyang Technological University in Singapore where some buildings are in the valley, some in the slopes and some others over the hillock. There is no engineering problem in raising buildings over uneven land base. So let us be wiser and build houses over uneven land in Chittagong at least to save people from landslide and in other areas, conserve hills and forest just to save ourselves (if you have no feelings for other animals and plants) in the long run.

The writer is a PhD researcher, NIE, Singapore.



## CLIMATE CHANGE

## The US experiences the pinch

**The Mississippi, was in fury causing havoc to properties, crops and lives in many parts of the States in its stretch. This was the worst flood seen by the people in 15 years. Flood waters from Mississippi have destroyed, according to one estimate, two million or more corn and soybean fields in Iowa, Indiana, Illinois (Senator Barack Obama's constituency) and other key growing states**

MOHAMMAD AMJAD HOSSAIN

**U**NPRECEDENTED hot weather in temperate climate the United States has taken the people unawares and made life difficult. It is the effect of climate change Americans are experiencing. From spell of scorching heat to tornadoes to heavy thundershowers as well as flood and draught have been occurring in many parts of the vast country.

The recent hot spells in the northeast have been accompanied by severe storms. Northern Virginia experienced 100 degree Fahrenheit accompanied with humidity last month. Texas, however, recorded the highest temperature of 106 degree F. In the south most of California has witnessed unseasonably hot weather in the first week of July. Now many parts of the country were also experiencing flood.

One of the three biggest mighty rivers of the world, Mississippi, was in fury causing havoc to properties, crops and lives in many parts of the States in its stretch. This was the worst flood seen by the people in 15 years. Flood waters

from Mississippi have destroyed, according to one estimate, two million or more corn and soybean fields in Iowa, Indiana, Illinois (Senator Barack Obama's constituency) and other key growing states. It has damaged miles of rail track and bridges. This will reduce earnings at rail roads, barge companies and trucking firms, apart from agriculturists. Some 40000 people evacuated 30 lost their lives. Some observers hold the opinion that the cost of this flood disaster could end up with that of 1993 Midwest floods. The damage amounted more than 20 billion dollars in 1993.

The effects of flooding in these corn growing areas are being felt by consumers also elsewhere as the prices are soaring. It is likely that food grain prices will further rise making lives very uncomfortable. According to Reuters, nearly 300 miles of the Mississippi river were closed to commercial traffic, disrupting shipments of grain, coal and petroleum as well as trans-continental shipments of goods from ports of west coast.

On arrival from farewell trip to Europe President Bush had imme-

diated meeting at the White House with federal disaster officials and assured flood affected people short and long-term help. The President also announced a grant of about 4 billion dollar, out of which 2 billion in emergency and requested congress to use a supplemental appropriation bill to replenish a federal disaster relief fund in anticipation of other natural disasters. This action by the President reminds callous response by the federal government when Hurricane Katrina hit gulf coast in 2005. Bush administration had received severe criticism that time.

Many believe, these climate change occurrences of tornadoes, floods and wild fires will have severe impact on the economy of the United States which is already in recession. It may also have its impact on world economy.

The developed nations, of course including the USA, who are more responsible, must do something worthy now for survival. Time is running out.

Mohammad Amjad Hossain, a former Bangladesh diplomat, writes from Virginia.