

# Earth Day 2000: A reminder

Global economy has been put on a collision course with the Earth's ecosystems. In our mad dash for cash, we have wrought heavy damage on the environment. The time has come for a rapid transition to an environmentally sustainable economy lest we should inflict permanent damage to the natural systems we need to survive. Earth Day 2000 (April 22) comes as a strong reminder to that effect, **Quamrul Islam Chowdhury** writes

YOU can adjust to changes in the temperature relatively quickly. But our ecosystem on which human survival depends cannot adapt promptly with any rapid change in temperature. The world is forecast to be hotter by three degrees Celsius. When the quantity of all the gases that can cause global warming, which have accumulated in the atmosphere since the Industrial Revolution, are taken into account, the total increase in heating is now estimated to be about 2.5 watts per square metre. It is equivalent to about one per cent rise in the brightness of the sun.

One bad decision by a leader in any one nation can take us all to the brink of total destruction. Professor Mhammed Yunus of Grameen Bank says: "Most often we forget that we are riding on a spaceship. We want to be treated like the First Class passengers. But our real position here is not of passengers, but of crew. All of us collectively are responsible for running this ship and keeping it in its best working condition. We have no 'button' to push to draw attention of an airhostess to make our journey comfortable. Either we work together to make ourselves comfortable or we suffer together."

So far we have travelled along the wrong path. The World Watch report charts a disconnect between the current growth in the world's economy and the health of the Earth's falling ecology. The number of cars, people, and fishing boats has boomed, but at the same time forest cover, farmland per person, and rivers and catch have plummeted. The destructive trends that sparked the first Earth Day in 1970 continue to cause massive ecological decline, finds the report.

Large-scale forest clearing and urban sprawl, among other pressures, continue to destroy fragile habitat. One in four vertebrate species (birds, mammals, reptiles, amphibians and fish) is on the verge of extinction or is now extinct.

An out-of-control population boom has nearly doubled the number of people on the planet since 1970, placing unprecedented pressure on land and water resources. In that same time the share of cropland per person has been almost cut in half, and one out of six people are now chronically hungry.

Rapid use of fossil fuels has released 160 billion tonnes of carbon into the atmosphere since 1970 by comparison, 110 billion tonnes were released between 1751 and 1970. This rapid build-up of greenhouse gases has contributed to record temperatures world wide, which may be a factor in recent weather disruptions. In 1998 damages from storms cost a record \$93 billion US dollars.

The report examines seven key moments that have helped define the current state of the environment, including invention of the automobile, the agricultural embrace of monoculture crops by companies like McDonalds, and India's back-

lash against family planning in the face of enforced birth control.

In looking to the future, the report offers an outline of events-past and future that could turn the negative trends around in the next 30 years. These shifts include the worldwide rise of citizen groups in response to corporate and government shortcomings, the potential for the Precautionary Principle to play a major role in the outcome of climate negotiations, and the world-wide spread of micro-power-small-scale renewable energy that is increasingly providing off-the-grid energy in countries from the Dominican Republic to Zimbabwe.

Because of the climate change, a sea level rise by one metre will inundate 17.5 per cent of the land in Bangladesh which is already a land-scarce, densely-populated coastal country. The whole of the Maldives would go under water. The Intergovernmental Panel on Climate Change (IPCC) forecast that developing countries with higher population densities would be the most vulnerable to this change. It would result in significant adverse impacts on many ecological systems and socio-economic sectors, including food supply and water resources and on human health. In some cases, the impacts are potentially irreversible. Within few meters of sea-level, a major portion of Bangladesh is threatened with inundation, intrusion of salinity and increased frequency of cyclones.

Moreover, the floods that are a very common phenomena in Bangladesh, and are expected to increase. The consequences of climate change may seriously hamper our economy, particularly that of the coastal areas. Global climate change transcends geographical boundary and affect every nation big or small alike. Worried Ministers, Diplomats, Scientists and Journalists from across the globe village felt an urgency of immediate action to limit and reduce emissions of GHGs and for all Parties to sign the Kyoto Protocol to combat global climate change.

But, the Kyoto Protocol, even after 2 1/2 years, is yet to enter into enforcement. The negotiations on global climate change, the most serious problem facing mankind, is yet to enter into its last stage. The global negotiators must find a solution to the impasse and move towards CHGs reduction targets and timetables. The climate science is becoming stronger and experts worldwide call for urgent action. The Kyoto Protocol reached at the Third Conference of Parties, (COP-3) of the United Nations Framework Convention on Climate Change (UNFCCC), held from December 1-10, 1997 in Kyoto, offers one of the greatest challenges and also an enormous opportunity to take urgently necessary practical and tangible steps to reduce the threat of global climate change.

COP-3 was billed as the most important meeting on environmental and

sustainable development since the Rio Earth Summit held in 1992 by the leading members of global negotiations. But the developed nations are yet to look beyond Kyoto.

Against the call of the global experts for a 20 per cent cut of CHG emission by year 2010 of 1990 levels, the reality is quite gloomy. Despite several rounds of negotiations to cut it over the last eight years since Rio there has been over 12 per cent increase. Industrialised countries being the main sources of CHGs emissions are the major culprits. The historical responsibility, for carbon emissions therefore lies squarely with the industrialised North. Most of the developing countries like Bangladesh contribute very little, and amounts to the global emission. But it is these countries that are at the receiving end.

US President Bill Clinton has said, "I am convinced that signs for climate change is real. Although we do not know everything, what we do know is enough to warrant responsible action." But he has stopped there and has not acted. What is more interesting is that the global negotiations and practical compromise has so far been blocked by a group of industrialised countries led by the US, which contributes 20 per cent of global CHG emission or heat trapping gases with only four per cent of World population. Japan, the host country of Kyoto Summit, was accused of poor leadership and its incapability to put forward their own significant CHG reduction target. Japan, along with some other countries, however, wanted to ensure the participation of all countries to a legally binding Kyoto Protocol. The Group 77 and China, who are the most vulnerable to the impact of climate change such as sea-level rise, extreme weather events, threat to food security and mass migration, are yet to develop a common position.

But this particular issue has the best chance to bring all the SAARC member countries, including Bangladesh, into a mutually close together. This subject should bring the whole world together. This is the area where the rich powerful nations can not ignore the smaller powerless nations.

The bodies of the South including Bangladesh must have a firm commitment to secure per capita entitlement to a common global resource -- in this case the atmosphere. Anything less will be unacceptable and would grievously harm the future economic and environmental interests of Bangladeshis and people living in the developing countries of the South. We must stick to the most important principles of global environment policy -- the principle of common but differentiated responsibility -- which was central to negotiations at Rio in 1992.

At the first COP in Berlin about five years back, it was agreed that industrialised countries which largely contributed to the global CHG emissions, would commit themselves to

legally binding and timed targets. But the US subtly shifted its stand with Bill Clinton who declared that his country would not sign a legally binding convention unless developing world participated in the process of reduction in CHGs emissions. A potential bargaining tool for the South to challenge the inequitable sharing of global common natural resources is slipping out of its hands. The industry-trade union alliance under the leadership of the US government has been on the offensive on the issue, fuelled by a USD 13 million advertisement blitz which clearly underlines that their life-style is not negotiable. They are now pointing fingers at the developing countries, mainly China, India, Brazil and Mexico. But the South including Bangladesh cannot mortgage the future of the people of the developing countries.

Global climate change is threatening the delicate balance among ecological, social and economic system and their environments. Besides, carbon dioxide, many other gases also have a greenhouse effect. These include nitrous oxide (laughing gas), methane, ozone and chemical used in refrigeration in various, industries and are referred to CFCs (chloro-flouro-carbons).

In Bangladesh, winters will tend to be shorter and warmer. Summers will be longer and hotter. Rainfall will be irregular. The rate of evaporation will increase.

Rainfall would rise by 7 per cent to 11 per cent yearly. Temperate winters may be wetter and summers drier. The tropics would also become wetter. Sub-tropics, already dry, could become drier.

Because carbon dioxide is a natural fertiliser, plants will grow larger and faster, weeds will also get bigger, plants will be susceptible to pests. Many species of plants will become extinct. Grassland and desert areas will expand. Forest areas will shrink. A warmer climate may increase agricultural lands in the poles suitable for wheat cultivation.

There will be a rise in the sea level because of the expansion of the Bay of Bengal when water temperature increases. Melting of mountain glaciers from the Himalayas will contribute to a sea-level rise as well causing increased flooding in flood plains.

Increase in soil erosion, desertification, deforestation, tropical storms, hurricanes, unusual tidal waves and flooding.

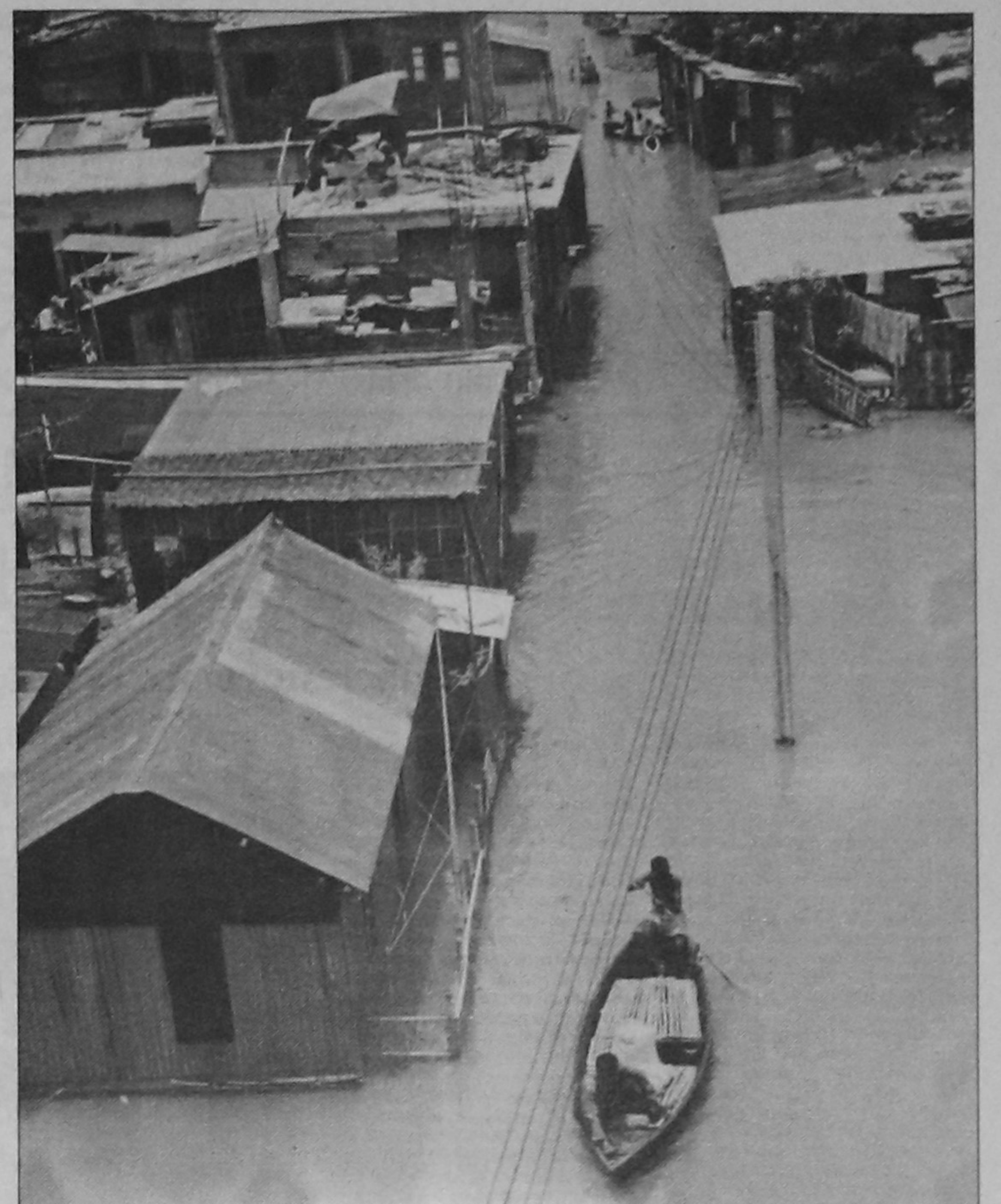
Studies in Bangladesh find that climate change and sea-level rise will affect not only the coastal areas but the whole of Bangladesh. The north-west-

ern part of the country is particularly vulnerable to drought conditions even under a low climate change scenario. The whole coastal zone is extremely vulnerable to salt-water intrusion even under a low climate change scenario. The already-threatened Sundarbans mangrove forest will be even more at risk due to climate change. The importance of climate change even on high development scenario will be to negate all positive benefits of development, particularly the infrastructure and agricultural growth.

Studies forecast a 31 to 35 per cent decrease of Aus yield, 19 per cent decline in Aman yield, 11 per cent reduction in Boro crop while Wheat yield will be decline by 22-30 per cent.

We have to develop drought tolerant, saline tolerant and water tolerant varieties of crops as well as introduce other suitable crops to face the climate change. We have to identify animal species in the natural mangrove forests. In newly accreted coastal lands, mangrove species need to be planted for improving coastal afforestation. Massive afforestation programmes across the country is required to increase sink. Switching over to alternate energy like wind power, solar power, bio-gas, plants is essential. Fuel-efficient technology in industries, power generation and transport should be introduced. Measures have to be taken to combat natural disasters like floods, cyclone and tidal surges. Bangladesh clearly needs support of the global community. Bangladesh must rediscover elements of its traditional way of life, unique culture and avoid repeating the mistakes made by other countries and should learn from the experiences of others for our sustainable livelihood.

The UNFCCC in 1992 says developed and developing countries should try to work together to solve the global warming problem within a system called Joint Implementation (JI). Now, JI is being defined as outlined by the Norwegian government. They argue that cut-



Frequent floods ... a tell-tale sign of climate change

Instead of the USA. In other words, the USA need not change anything and can yet meet its carbon emission reduction targets by investing in JI projects in Bangladesh. But these Arguments have been met with stiff resistance from the developing countries. However in Berlin COP, a five year experimental phase called Activities Implemented Jointly (AIJ) was accepted in which no credits would be given. As a result, the Northern companies and countries have shown little interest and the experimental phase, ended in 1999, has not gone anywhere. The USA and several

and the ultimate change will affect every nation on the Earth. Therefore mitigation on just our side would not solve the problem. Eighty per cent of the global emission of carbon dioxide is from industrialised countries where 20 per cent of world population live. Hence these industrialised nations must act first to solve this global problem. Bangladesh should strongly lobby for global execution of CHG emission cut as stipulated in the Kyoto Protocol 2 1/2 years back.

In order to prevent dangerous anthropogenic interference with the climate system, the

1970, people in most countries celebrate this informal and non-governmental day dedicated to the environmental health of our planet.

Earth Day 2000 is focused on the peril of global warming and the need to accelerate the transition to the solar energy era. The aim is to create an informal global constituency for the super-efficient use of renewable energy sources as the best way to implement the Kyoto Protocol on Global Warming. People of most of the developing nations are yet to have an access to clean and safe drinking water and irrigation water. Thus,

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international agencies are now pushing for an approach that combines the idea of the Norwegian type of JI and carbon emission trading. So far developing countries are opposing the idea. But very recently, a few developing countries have been wooed by the USA and Norway.

Costa Rica is the first country to show interest in an emission-trading programme proposed by the USA. Clearly, Bangladesh should think twice before deciding on this type of carbon trading.

Global climate change transcends geographical boundary

first step should be to enforce the Kyoto Protocol, the legally binding obligations for significant and early overall reductions of carbon dioxide and other CHG emissions for Annex 1 countries, i.e. industrialised nations.

Whenever progress has been made on a global environmental problem -- such as ozone depletion -- it has been due to a world-wide outpouring of public sentiment. In Bangladesh, NEMAP is a shining example. Earth Day can be a central element in the campaign to mobilise an aroused citizenry. On April 22 of each year since

energy, climate change and right to water will be the first major tests of the 21st Century. If we can win the battle globally and nationally, then only the celebration of Earth Day will be meaningful.

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## Silver lining in the dark clouds

Climate change is not simply a long-term environmental problem for which we need not bother in the short term, but a major developmental problem. It has the potential to completely destroy all our development efforts over the last few decades within a few years. But, if we can move with foresight and skill we may be able to discover the silver lining in the dark clouds of climate change on the horizon, writes **Saleemul Huq**

WHILE it is true that in the long term global warming and sea level rise will have a devastating impact on Bangladesh, it might be possible to use this fact to our advantage in the short and medium term. This needs to be done at several levels. First, it is necessary to recognise the climate change impacts and that dealing with them are not a special type of environmental problem only but is something that is fundamentally tied to the country's sustainable development. Therefore, the issue needs to be dealt with as a problem of national importance to our overall development and not just as an "environmental" problem.

At the most basic level Bangladesh is likely to be impacted by climate change by a number of factors including droughts, floods, cyclones and long-term sea level rise. In the short term this means that we are likely to be hit by more and more natural disasters in the coming years. The first and most effective measures would be to improve our disaster preparedness. Thus dealing with (or adapting to) climate change in the long term can bring immediate benefits in the short term to protect people and property from adverse natural calamities.

In the longer term we need to incorporate the need for accounting for climate change into our development strategies and plans and incorporate the issue of adaptation to climate change onto our development plans. A preliminary study along these lines has recently been undertaken with support from the World Bank. It has identified several areas of long-term planning which incorpo-

rate adaptation to climate change including coastal zone management, water sector planning and agriculture sector planning. This study is a pioneering attempt to assess the long-term strategic value of adaptation to climate change and how to incorporate it into the national planning exercises.

At the level of international negotiations the opportunity for Bangladesh to make an impact is great but will require consistent and hard work from both the government and non-government sectors. The rationale to take up an independent negotiating stance in the case of the Climate Convention is that Bangladesh is going to be one of the (if not the most) highly impacted countries to climate change. Hence we have a moral right to have our voice heard in the international fora.

Secondly, whereas in most international negotiations our practice of following the G77 lead may make sense, in the climate change negotiations it does not, since there is not a common position. Within G77 there are the oil exporting countries (such as Kuwait and Saudi Arabia) who are opposed to any emissions reductions at all, there are also large countries who depend on coal reserves (such as India and China) who want to protect their right to burn their coal reserves while still others have mixed positions and negotiating strategies. In terms of negotiating positions Bangladesh's interests would lie most closely with the AOSIS countries who are faced with literal extinction if global warming continues and sea levels rise as predicted. It would, therefore, make sense for Bangladesh to develop its own position regarding the in-



Deforestation ... courting with disaster

ternational negotiations and to seek to influence others, first within the G77, and then outside our position. Our moral position is so strong that Bangladesh would be accorded due deference if we could articulate our positions clearly and skillfully.

One important negotiating point that has arisen recently, after the Kyoto Protocol allowed the concept of carbon trading, is the issue of how to allocate or distribute the quota

of each country to emit GHGs. In a totally equal world it would be logical to expect each individual human being to have an equal share of the global atmosphere (or in other words a per capita allocation of the right to emit GHGs into the atmosphere). However, given the inequity of the world and the huge emissions from the developed countries it is highly unlikely that they will give up their existing shares of GHG emissions. However, a compromise formula could include a combination of per capita allocations

with existing shares which would go some way towards allowing a more equitable distribution. This has been expounded by the Global Commons Institute in the UK under the title of "Contraction and Convergence" in which the countries of the world as a whole agree to reach a global maximum of GHG emissions by a certain date in the future (say 2050) and all countries have to make their efforts to reach that target of emissions. This will enable countries which do not emit at their full quota of GHG

emissions (such as Bangladesh) to sell their quota to other countries who are unable to meet their targets on their own (primarily the developed countries). This is potentially a very lucrative trading arrangement for Bangladesh which could put into the shadow the levels of development assistance we receive at present. However, it should be noted that this is still a minority view and will need a great deal of advocacy and international lobbying before it will have any realistic chance of success. Nevertheless the rewards for Bangladesh would be so great that it may be worth pursuing even if the chances may seem to be slim initially.

Finally, the issue of adaptation, which has been mentioned before, is now beginning to get a lot more attention and will have increasing funding support in future. This will come not only through the CDM as mentioned above but also through the Global Environment Facility (GEF) which has so far funded only mitigation projects under climate change. They have recently allowed two projects on adaptation, both for small island states (one in the Caribbean and the other in the Pacific). If Bangladesh learns to play its cards right, it, too, can raise funds from the GEF for work in adaptation.

In order for Bangladesh to take advantage of the opportunities from the international negotiations on climate change it must do a number of things. Firstly, it must recognise the issue to be of prime importance to the country in the medium and long term and prepare for it accordingly. In the short term it needs to recognise the opportunities it opens up and use its own resources to maximum benefit to take advantage of those opportunities.

The following are some specific steps that can be taken immediately:

**Adaptation measures in-country:** Bangladesh needs to follow up on the excellent work done already on raising the issue of climate change and involving the whole country in

the planning exercise for dealing with the impacts and consequences of climate change. The recent conference on environment organised by expatriate and Bangladeshi environmental groups in Dhaka in January rightly pointed out that climate change was one of the most serious environmental problems looming on the country's horizon. This fact needs to be used to involve people in thinking about dealing with this situation. This will not only help Bangladesh cope with any adverse impacts of climate change in future but will also show Bangladesh as an example to the rest of the world in how to deal with these issues.

**Negotiations:** Bangladesh needs to take a much more serious and strategic view of the global negotiations on climate change and use its known expertise and talents to maximum effect. A number of steps can be taken to make this more effective, including appointment of a senior chief negotiator to head a team of governmental and non-governmental experts who will attend all the relevant meetings and carry out a proactive lobbying and advocacy campaign. The chief negotiator should preferably be a veteran diplomat (perhaps a senior serving diplomat or recently retired one) who has the necessary negotiating skills and knowledge of international negotiations (which are largely diplomatic and not technical). He should be backed up by the requisite technical people from the environment ministry as well as other relevant ministries and agencies. Bangladesh experts in IPCC should also be co-opted into the team.

**Research:** In order to be taken seriously in any international negotiations it is absolutely essential to do one's homework before hand and be prepared with the requisite analysis and information. Without such back up we are reduced to holding our hands out to be offered whatever the others wish to give us. We have to move

beyond the "begging bowl strategy" to one which is cogently argued on both moral and practical grounds and which we have done the necessary analysis to prove. In order to do this it may be necessary to commission experts both within Bangladesh and abroad to do specific work for us.

**Financing:** Any such action will, of course, require financing. Ideally the government of Bangladesh should be convinced of their need and thus fund this strategy from its own resources it will not cost more than a few crore taka over the next few years. However, even if the government cannot pay from its own resources it should be possible to obtain some seed funding from selected development partners who are sympathetic to our cause on this issue (e.g. UK or USA).

The issue of climate change is not simply a long-term environmental problem for which we need not bother in the short term, but rather a major developmental problem facing the country which has the potential to completely destroy all our development efforts over the last few decades within a few years. Hence it is something that has to be taken seriously for our own long term development needs.

It is also possible for Bangladesh to play a much more significant and pioneering role on this issue internationally if we are able to harness our considerable human resources on this issue and develop a viable and focused strategy for the international negotiations. Such a strategy has the potential to bring substantial funding to Bangladesh within a matter of only a few years. Thus, if we can move with foresight and skill we may be able to discover the silver lining hiding in the dark clouds of climate change looming on the horizon.

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