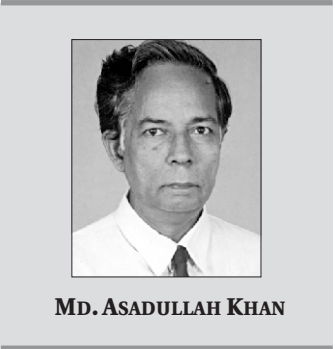


Fish crisis looming large



PERHAPS the only reason that governments around the world have been slow to respond to environmental crisis is that the earth is still producing plenty of goods -- enough fibre, grain and fish to support six billion plus people. Many are malnourished, of course, but that's primarily a matter of bad distribution. However a closer look at the trend is disturbing. There is a difference between current production and capacity. Undeniably true, Bangladesh now faces worst ever fish crisis because of environmental degradation mostly caused by humans.

According to FAO (Food and Agriculture Organisation) statistics, the world's fish harvest has now risen from 49 million tons in 1965 to over 110 million tons today. FAO statistics also indicates that, around 60% of the world's various commercial fish stocks are now being harvested near or beyond sustainable levels. Judging from the seafood sections of the western supermarkets, there would seem to be plenty of fish left in the oceans, but this appearance of abundance is an illusion, says Sylvia Earle, former chief scientist for the US National Oceanic and Atmospheric Administration. Earle fears that an international armada of fishing vessels is on the verge of exhausting a store house of protein. Appeared to be infinite. Giant high-tech vessels roam the world's waters, scooping up their once bottomless bounty. Environmentalists call the vessels the "strip miners of the sea".

Spanish-owned ships are most often accused of using illegal, fine-mesh "wall of death" nets that capture anything above fingerling size, much of which is thrown overboard. Nearly every trawler crew, even the most conscientious, disposes of unwanted species by throwing them back into the sea. The rejected fish called "by-catch" amount to an estimated 27 million tons a year,



Not so environment-friendly shrimpculture at estuaries.

BITTER TRUTH

It is true that because of excessive use of fertilizers and pesticides in the agricultural lands in the country food production has trebled but the harmful silt and run off from the high land streaming into rivers namely the Padma, Meghna, Rupsha, Buriganga, Shitalakhya and a host of other rivers have created spreading dead zones -- devoid of fish or any marine life. Because of the alarming nature of river pollution, there has been a precipitous decline in Hilsa fish catches from the Padma and Meghna.

more than 25 percent of the total caught worldwide.

Reports indicate that by-catch is the main cause of depletion of the sea population, which has fallen so precipitously that the European Union in the recent past cut the annual catch quota by half, from 314,000 tons to 156,000 tons. It is reportedly learnt that European fishermen operate so-called beam trawler using a net arrangement that is devastating in the shallow waters they usually fish. In this kind of trawling, heavy chains are dragged over the sea bed to drive fish into the nets, destroying shellfish, worms, sea urchins and other bottom dwelling creatures. Precisely speaking, these boats have "transformed fishing into an ocean-going strip-mining industry".

Consequently, if overfishing continues, it could hurt poor countries, because their people rely more heavily on fish for protein than do rich world dwellers. Overfishing is not the only human activity that is jeopardizing life in the oceans. Coastal pollution, habitat destruction, filling in wetland and building dams are adding to the crisis. But it is overfishing, the NDRC (Natural Resource Defence Council) report says, that constitutes the most urgent threat and demands the most immediate action. Shockingly, the economic and technological barriers that have kept overfishing within bounds appear increasingly shaky. Should these barriers collapse, commercial extinction would escalate into biological catastrophe. Some of the world's most demanding and prized fish are already on the verge of extinction.

Leaving aside the sea wealth that hardly came up to meet the protein demand of our (Bangladesh) populace, people in the country feel increasingly alarmed at gradual depletion of the indigenous species of fish that were once raised in ponds, haors and beels.. Aquaculture in the country could put food on many tables but poor management has produced ecological devastation. Our

riders, haors, beels and ponds had an abundance of fish and these have either dried up or have been seriously devastated by several factors, namely silting of the river bed, contamination of water bodies by toxic chemicals, unplanned use of insecticide on crop fields, to name a few.

Compounding the crisis is the aggressive practice of shrimp farming especially in the south western part of the country, through intrusion of saltwater in the once known sweet water ponds and water bodies that were used for raising indigenous species. Worse, some kinds of pond and river fishery now face total obliteration and as one statistics indicate some 52 kinds of indigenous varieties out of 120 have, in the meantime, been extinct. Many of the country's formerly productive fisheries, namely Halda river in Chittagong, haors in the Sylhet region and Cholon beel in the northern region are seriously depleted.

Some rivers and water bodies in Chittagong region that could once boast of having 70 varieties of fish are now almost depleted with extinction of 54 species in the meantime because of heavy concentration of toxic chemicals discharged into the Karnaphuli and adjoining rivers by Karnaphuli Paper Mill (KPM), Karnaphuli Rayon Mill, Karnaphuli Ceramic, Karnaphuli Jute Mill and Karnaphuli Forat Carpet Mill. KPM, it is learnt, discharges about 70 tons of toxic chemicals in the river every day.

Though less familiar but the havoc wreaked on the nitrogen cycle is worth recounting here. Through the use of fertilizers, the burning of fossil fuels and land clearing, humanity has doubled the level of nitrogen compounds that can be used by living things. But this is much more than can be efficiently absorbed by plants and animals in land and water and recycled into the atmosphere. These excess nitrogen compounds wash into fresh -- and saltwater systems, where they produce dead zones by stimulating suffocating growths of algae.



Availability of fish is not as abundant as before

Even more devastating is what we have done to the water cycle. So large is the human demand for fresh water for different purposes that many great rivers like the Yellow River in China, the Nile in Egypt and in Bangladesh rivers like the Padma, Meghna, Dhalewshari, Madhumati and old Brahmaputra partially dried up or lost original course because of formation of sandbars on course before getting to the sea. Moreover, building of dams, small and large in the country and elsewhere in the world has played a role in creating water stress. Many such obstructions for flood protection, road construction and shrimp culture have converted many of our rivers into a series of interconnected lakes. Such a water system has dire consequences for thousands of species adapted to free-flowing water.

People in large numbers have gone to fish farming as a solution to meet the dwindling stock of fish either in rivers, haors or in the coastal off shore lands. Shrimp farming is particularly damaging to the tropical world's mangrove forests, coastal necklaces of dense low-lying trees that nurture marine life, filter water and soften the sea's constant battering of the shoreline. Much of the world's shrimp is raised in ponds gouged out of these thick mangroves.

It would be fine if growers could use a pond over and over again. But the population density eventually fosters diseases that can knock out a shrimp population in a matter of days. So after a pond has exhausted its usefulness, usually within three to six years, growers move along the coast, further destroying mangrove forests and rice fields to make room for more ponds.

Large-scale shrimping hurts people as well as the environment. To avoid becoming just another environmental headache, aquaculture needs standards. Raising fish species alien to the local habitat should be discouraged, since escapees drive out native fish or infect them with disease. Tilapia or African Magur or alien Pangas variety has upset our system

because many of them are carnivorous. Without the fingerling size fish moving up and down the lake or any water body and mixing the waters, some layers of the water body are becoming stratified and depleted of oxygen.

The biologically richest stretches of oceans are more disrupted than the richest places on land. Continents still have roadless wilderness areas where motorised vehicles have never gone. But on the world's continental shelves it is hard to find places where boats dragging nets haven't etched tracks into sea-floor habitats. However, there are countries that have established reserves in which fish are actually left alone. Marine life tends to recover in these areas, then disperse beyond them, providing cheap insurance against overfishing outside the reserves. But they are not many in number.

It is true that because of excessive use of fertilizers and pesticides in the agricultural lands in the country food production has trebled but the harmful silt and run off from the high land streaming into rivers namely the Padma, Meghna, Rupsha, Buriganga, Shitalakhya and a host of other rivers have created spreading dead zones -- devoid of fish or any marine life. Because of the alarming nature of river pollution, there has been a precipitous decline in Hilsa fish catches from the Padma and Meghna. The country of rivers, haors and baors, once an abundant store-house of silvery protein is now facing acute fish crisis and we have to import fish from Myanmar and India. The country's vast majority of the poor people are starved of the most essential but cheap protein. Isn't it high time to think of immediate measures to check this depletion?

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Recurring floods in Bangladesh

Has there been a change in the lives of marooned people?

MAHBUBA NASREEN

PEOPLE have observed the sufferings of millions during the two consecutive floods of 1987 and 1988. The two floods made it really difficult for the poor to strive, survive and resume their livelihood after suffering the ravages. In 1992 there was no such severe flood in Bangladesh but the memories of the two severe floods were still alive in the minds of the people. The vulnerable population, mainly women, asked the researchers what result they would expect against their information. No particular answer was possible to provide. However, it was hoped that their existing flood coping mechanisms would be strengthened if the policy makers pay attention to the people's own responses to floods.

The research result shows that flooding was one of the main concerns of most rural households, life where was precarious even in non-flood conditions. It has also been observed that during flood people die from many causes: drowning, water borne disease, lack of medical facilities, snake bites, electrocution, starvation and flood-related accidents, for example, land slides, collapse of house or injury from floating debris. Most deaths occur due to sickness or lack of proper and timely treatment. Flood devastates all types of agricultural activities, crops, livestock, fisheries and forests in addition to houses and other infrastructures. The loss of livestock, upon which Bangladesh farming households depend for cultivation, meat, milk and income, is grave. The destruction of fodder cause severe animal malnutrition and many die.

It has been explored that the problems of floods affect rural women more severely than men because of the wider range of responsibilities that they have for their households and those responsibilities keep them tied to their households more strictly than their male members. Those responsibilities, including food processing and cooking, cleaning, collecting water and fuel, bearing and rearing children,

looking after livestock and household income generation, become much more difficult to perform under flood conditions. Despite this heavy burden, which women bear in extremely difficult circumstances, they demonstrate considerable fortitude and ingenuity in their attempts to maintain the life of their households.

Most of the problems women faced, in the flood refuge or even at homes, were related to their gender identity, for example, insecurity, lack of toilet facilities and of being exposed in public. However, despite the severe problems the poorer women faced, for example, in obtaining fuel or procuring food, cooking and making platforms, they used their experience to good effect. It was also the poorer women who contributed more than men to solving the different problems consequent upon flood. These are only some of the research findings which have been shared by the young researchers with GO and NGOs. However, the researchers tend to become frustrated seeing that there has been little impact of the research findings on the lives of the poor people. People including women and children are still drowning, dying from snakebites or suffering from water borne diseases (The Daily Star, July 30, 2007). None of these are new phenomenon with the increase of flood water. Why then we are proud of managing disaster if we fail to support or aware people with proper guidance?

Although there have been many discussions and criticisms levelled at government policy, they have dealt mainly with what should not be done rather than what should be done to control or mitigate flood. Discussions have focused on solutions to flood problems. Suggestions have included building and proper monitoring of embankments, roads and regulators, along with other efforts such as: dredging silt from the major distributaries of the Ganges, quick drainage by building adequate number of culverts, bridges along roads, improvement of flood forecasting and warning, regional co-operation to construct storage reservoirs along the

major river basins, afforestation, barrage re-excavation of water bodies, river training and controlling the estuaries.

People in Bangladesh have developed many strategies to cope with floods through their experience of living with it. Due to socio-economic differences, some people have the ability to cope better than others. Any steps in flood management should incorporate the indigenous methods used by the rural poor as a way of improving their chances of survival. Rather than trying to control or prevent flooding, measures should be taken to manage flooding. Unfortunately policy makers in Bangladesh have shown little or no interest in the socio-cultural conditions of the majority of the population. Instead they have given attention cordon approach which is not concerned with the problems of the majority of the people.

The floods of 1987 and 1988 and cyclones of 1991 were the turning points in the GOB's approach to natural disaster response. The concept of 'disaster management' was introduced which included all aspects of planning and responding to disasters, prevention and preparedness measures, emergency response and post disaster rehabilitation. The government has also established an institutional framework that comprises both national and local level organizations. The government has prepared a guidebook, standing orders on disaster, with aim of maintaining proper coordination among the relevant ministries and government agencies and ensuring their proper functioning during emergencies. The roles of NGOs and donor community have also increased significantly. However, there are many more to do if we would like to support the people in their miseries. Coordinated initiatives from all segments of population are needed to support marooned people survive floods.

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ENSO and deviations of flood affected areas in Bangladesh

DR. MD. RASHED CHOWDHURY

THE atmospheric component of El Niño-Southern Oscillation (ENSO) climate cycle is the Southern Oscillation Index (SOI). The SOI is calculated from the monthly or seasonal fluctuations in the air pressure difference between Tahiti and Darwin. Sustained negative values of the SOI often indicate El Niño episodes. These negative values are usually accompanied by sustained warming of the central and eastern tropical Pacific Ocean, a decrease in the strength of the Pacific Trade Winds, and a reduction in rainfall over eastern and northern Australia.

The most recent strong El Niño was in 1997-98. On the other hand Sustained positive values of the SOI often indicate La Niña episodes. This

positive value of the SOI is associated with stronger Pacific trade winds and warmer sea temperatures to the north of Australia. Waters in the central and eastern tropical Pacific Ocean become cooler during this time.

From a historical perspective, La Niña provides an increased probability that the greater Ganges-Brahmaputra-Meghna (GBM) basin areas will be wetter than normal. The most recent strong La Niña was in 1988-89 and 1998-99; a moderate La Niña event occurred in 1984-85. This last event finished in 2000-2001.

The SOI and rainfall relation in the greater GBM basin systems shows strong casual connection indicating negative SOI value to dry and positive SOI value to wet. Therefore, when SOI is negative (i.e. strong El Niño years) the whole basin experiences less

rainfall. The deficiency of rainfall causes Bangladesh rivers to be drying because of low-flow and, as a result, the country faces severe drought (see Fig. 1: minus 90% deviation of FAA from the normal).

On the other hand, when SOI is positive (both in strong and moderate La Niña years) there is significant increase of rainfall along the greater GBM basins causing flooding along the whole catchments. This, in turn, severely floods Bangladesh, as it is the lowest riparian country in these basins (Fig. 1: plus 110% deviation of FAA from the normal).

However, in case of moderate El Niño years, the basin-wide rainfall picture in the downstream Bangladesh is relatively different from the upstream India. With marginal deficit of rainfall in Meghna basin, Bangladesh experiences high rainfall along the Ganges and Brahmaputra basins. Although the upstream rainfall is not very dominant, the exceptionally high and prolonged local rainfall contributes to flooding in Bangladesh (Fig. 1: plus 60% deviation of FAA from the normal).

On contrary, the excessive rainfall in the upstream and downstream of greater GBM basins during the moderate La Niña years causes flooding inside Bangladesh (Fig. 1: plus 24% deviation from the normal).

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WORLD BREASTFEEDING WEEK

Breastmilk can save millions of lives

PARVEZ BABUL

BREAST milk is a unique, God-given food for infants and young children. Every year August 1-8 is observed as World Breastfeeding Week worldwide. The slogan for this year is "Breastfeeding: Initiation in the first hour can save more than one million newborn babies."

The World Breastfeeding Alliance sets aside this week to raise awareness that breastfeeding is the optimal nutrient for the health of growing infants. It is natural, safe, and life-saving. Everyone who is committed to child health and wellbeing should encourage mothers to initiate breastfeeding in the first hour of the infant's life, and to give their infants breastmilk during the first six months, known as exclusive breastfeeding. They should continue to breastfeed until the child is two years old.

The theme of World Health Day (April 07) this year was: "Invest in breastfeeding: build a safer future." It addressed the need for increasing global security by strengthening global health.

The theme also highlighted that a healthy, strong, child was one of the most important building blocks of a secure future in all communities throughout the world. About 29,000 children below five years of age die worldwide everyday, which means

The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) and the Convention on the Rights of the Child (CRC) have asked Bangladesh to ensure that women have the right to breastfeed their children. Men's involvement and cooperation are needed to raise awareness, and to support and encourage women to breastfeed their children.

one child dies every three seconds.

Most of these deaths could have been prevented. Mother's milk can prevent these deaths, and build a strong base so that diseases can be prevented. Breast milk contains all the necessary nutrients for disease prevention and is life saving, unlike formula milk and food.

According to the Annual Report (2005) of the Nutrition Surveillance Project (NSP) of Helen Keller International (HKI), Bangladesh, and Institute of Public Health Nutrition (IPHN), the three measures of malnutrition are very high in Bangladesh. They are wasting (too thin) at 11.4 percent, stunting (low height for age) at 39.3 percent and underweight (low weight for age) at 46 percent.

Poor breastfeeding practices and insufficient and inappropriate feeding of infants and young children cause these high rates of malnutrition.

One of the Millennium Development Goals (MDG-4) is to reduce child death rates. The infant and child mortality rate is still alarmingly high in Bangladesh. The infant

mortality rate in Bangladesh is 41/1000 births, and under-five mortality rate is 77/1000 births.

In Bangladesh, one hundred thousands children die due to diarrhoea every year. Children under two years of age are most vulnerable to diarrhoea and malnutrition. Currently, in Bangladesh only 36 percent of mothers are practicing exclusive breastfeeding and only 23 percent initiated breastfeeding within the first year.

Helen Keller International (HKI), Bangladesh has called on all health and nutrition practitioners to encourage mothers to breastfeed their infants. And, through the Essential Nutrition Actions (ENA) training, HKI teaches technical skills to health and nutrition practitioners to share this information and practice these skills correctly.

Breastfeeding and gender

Breastfeeding is a biological function, and the issue of gender is at the heart of mothers' ability to practice breastfeeding. It offers biological and social benefits to women and their infants.

The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) and the Convention on the Rights of the Child (CRC) have asked Bangladesh to ensure that women have the right to breastfeed their children. Men's involvement and cooperation are needed to raise awareness, and to support and encourage women to breastfeed their



children.

Men can promote breastfeeding by helping women with chores so as to allow them time to breastfeed their children. Men may also be in a position to challenge misconceptions and poor advice from family members.

Every parent wants the best for his beloved child. So, let us start saving the lives of our children within the first hour of birth with the God-given, healthy, and life-saving breast milk, and tell mothers to continue breastfeeding for up to two years.

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