

Bio-diversity in peril: We're paying the price



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PRIME Minister Khaleda Zia while speaking at the inauguration of a Tree Fair at the National Parade Square on June 1 called for invigorating the afforestation programme and preventing the enemies of trees from carrying on their onslaughts on forests. While making no secret of the fact that some of these enemies are also present in the forest department, the Prime minister called upon the authorities concerned to identify and take proper action against them. Because of human greed and insensible activities, the world is losing a marvellous diversity of genetic material that has enabled the plant kingdom

to overcome pests, blights and droughts throughout the ages.

Moreover, the explosive growth of human population causes more forest land to be cleared forcing wild species of plants and life-forms into extinction. Consequently, many potentially valuable food and medicinal sources are being lost forever before they are even discovered. The situation as it exists today calls for an objective analysis of the state of forests throughout the world. The emerald rain forests either in Madagascar or in the Amazonian belt or the Sunderbars in Bangladesh that seem to be a showcase for the diversity of life are apparently on the wane. In all these lush green territories there was hardly a break in the cacophony of all kinds of insects, birds, monkeys and other wildlife including tigers and deer. The plight of these deer and tigers symbolise the tragic fate of Bangladesh wildlife today.

Just about 50 years ago, forests draped almost one-fourth of the country's land nourishing and protecting wildlife and other species. Today that is in tatters, slashed by human interests, covering only 6 percent of the country. Human beings are the only ones who possess the power to snuff life out of all other species. It's a formidable power that can

so easily turn malevolent. Unfortunately for us Bangladeshis, it has already twice more than malevolence. We have been born killers. We've failed to understand that the earth is one intricate ecosystem of links by which all life is shaped. Lose one species and a thousand others will be on the brink, eventually threatening our survival.

In the late '70s to meet the needs of a population boom that bedeviled almost all parts of the world, there came the swarms of settlers slashing and burning huge swaths through the forests to create roads, towns and fields. They came to enjoy a promised land, but they produced a network of devastation. Nature's handiwork is so exquisite, so skillfully arranged that humans have no control there. The soil that supported a rich rainforest did not prove to be well suited for corns and other crops and most of the settlers can't eke out only an impoverished and miserable existence. But in the process of grabbing lands from forest, humans around the world are destroying entire ecosystems and millions of species of plants and animals that live in it. Reports have it that an estimated 20 per cent of Brazil's forest is gone. So is the case with Indonesia, Malaysia, India and Bangladesh.

Forests, and rivers and such other water bodies big and small are interdependent. When such water bodies are drying up or under threat somewhere, forest resources in that region go extinct. In the south western part of Bangladesh rivers were dammed by building polders known as coastal embankment to pave the way for easy farming through control of salinity intrusion in the farmland. These polders, some most unscientifically constructed, have resulted in huge deposition of silt in the Sunderbars, the only mangrove forest in Bangladesh spread over 2200 sq. miles of coastal area. Consequently the natural ecosystems of the Sunderbars have been greatly destroyed causing in its wake extinction of 64 species of vertebrate animals, 40 species of mammals, 38 species of birds, 21 species of reptiles and 23 species of fish. But the loss of biodiversity of fisheries has serious implications on human health and survival. Because fish resources have always provided crucial sources of protein, fats and vitamins to poor folks in Bangladesh.

Shockingly, scarcity of fresh water, the most critical of all ecosystems, has brought suffering on a wider scale. Fish resources are under threat from over-fishing and pollution of water bodies. Other than the loss of food chain from fish sources because of the pollution of water bodies, there are threats from other directions too. Studies suggest that human water consumption rose six-fold in the last two decades, double the rate of population growth. Experts fear that water scarcity may soon limit the economic development in countries like China, India, Pakistan and Bangladesh. Because of water scarcity, pollution load has increased and now fertilizers, silts, sewage and other effluents have killed rivers, lakes, haors and baors. Consequently, agricultural lands have been degraded vastly around the world by the build-up of salts and loss of nutrients. Most worrisome, the prodigious loss of forest resources has put human beings around the world in a perilous situation. Home to two thirds of all species, forests temper climate and capture and store water. Forests store 40 per cent of terrestrial carbon and can slow the build-up of carbon dioxide in the atmosphere.

Reports have it that except for Russia and Canada, industrial nations have almost cleared all their original forests. The most damaging report comes from Brazil which has ripped almost 20 percent of its tropical rain forest. Tropical rain forests are the site of the most known damage. Although they cover only six per cent of the land surface, they contain more than half the species of plants and animals of the entire world. The alarming loss of the habitat spells trouble for the planet's reservoir of bio-diversity. Experts estimate that each year about 0.25 per cent or more of the forest species is being doomed to immediate or early extinction taking the annual loss in the tens of thousands. Speaking about the

most delicate situation in our country, the Sunderbars, the largest mangrove ecosystem in the world has now been reduced to half of what it used to be 150 years ago, simply because of over-fishing, rampant logging and over exploitation of plant and wildlife species.

Country leaders and policy makers must try to understand how various ecosystems interact. Deforestation in mountains can worsen floods in grasslands or agricultural land below as was the case with China, India and Bangladesh in 1998 and 2004. Humans have hurt coastal/marine ecosystems directly by draining wetlands, trawling oceans for fish and destroying reefs and lagoons. Nevertheless, we also damage these ecosystems indirectly as rivers transport to the coast effluents and by-products of agriculture, industry, urban areas, logging and dams. Now all these activities mostly done in an insensible manner resulting in man-made climate change threaten all coastal areas as melting glaciers send more water seaward. Consequently, the warming and expanding of the ocean cause sea levels to rise. Coastal cities now face the risk of being inundated and islands may be swept under waves of water ripped off by cyclones and hurricanes.

The Earth's most important elements move in cycles, circulating from sky to land and sea and back again. Human presence has disrupted the most basic mechanisms of the planet. And the biggest assault has come on the carbon cycle. We are pumping carbon dioxide into the atmosphere much faster than land and sea can absorb it. In consequence, the incoming gas is trapping heat and upsetting the climate. The result: apart from rising seas and fiercer storms, droughts and floods in cyclic ways, there's change in world's ecosystems as the boundaries of forests and grasslands shift. Unfortunately, many animals and plant species may not be able to adjust to sudden changes in their habitats.

On the other hand the havoc caused by nitrogen cycles is also taking its toll on humans. Indiscriminate use of fertilisers, burning of fossil fuels and elimination of forest zones has doubled the levels of nitrogen that can be used by living things. As our experiences now suggest, these levels are more than can be efficiently absorbed by plants and animals and recycled into the atmosphere. These excess nitrogen compounds wash into fresh water as well as salt-water systems where they produce dead zones by stimulating suffocating growths of algae. Paradoxically, since meeting the global food gap is invariably linked with the aggressive use of fertilizer, restoring the balance of nitrogen cycle poses a daunting challenge.

In recent times around the globe water cycle poses a more threatening prospect with increasing demand for fresh water for humans. Even the large rivers like the Yellow river in China, the Nile in Egypt and more so the Ganges,

Brahmaputra etc. in India and Bangladesh continue to dry up before getting to the sea. On the other hand waterways that still remain are laden with noxious chemicals and sewage. Because of the construction of 40,000-plus large dams and many other smaller obstructions, the world's rivers have now become a series of interconnected lakes making life harder and spawning disastrous situation. Bangladesh is now faced with a critical situation of water-logging and salinity intrusion over vast areas of south-west part of the country because of the unplanned construction of polders, bridges and culverts here and there without taking the ecological factors into consideration. Shrimp cultivation in the south western part of Bangladesh that in consequence has spread salinity over vast areas of the country has destroyed farmland.

We are destroying part of the creation, thereby depriving all future generations of what we ourselves were

bequeathed. The most unsettling prospect is that even the world's richest nations may not have the wherewithal to restore a vital balance in our ecosystems. That only underscores the fact that it is far less expensive to halt destructive practices before an ecosystem collapses than it is to try to put things back together later. Evidently, the new kind of environmentalism values the world's flora and fauna not just aesthetically as the natural heritage of humanity but also a source of wealth and economic well-being. With the world population at almost six billion now and sure to keep on growing with every passing year, humanity may have entered a dangerous bottleneck. But there perhaps is seen a silver lining behind an enveloping dark cloud. An infant bio-diversity industry is now taking shape along several fronts. More than 20 pharmaceutical companies have forged contract with private and national organisations to push chemi-

cal prospecting for new medicines in rainforests and other habitats. Such collaborative actions are now most urgent and crucial. For example, in Africa the desperate shortages of human and financial capital impoverish both their people and land. The resulting loss of bio-diversity carries a price for us all. For instance, the rosy periwinkle, a plant native to Madagascar, has proved potent against childhood leukemia. Shockingly, because of lack research in forest wealth mainly due to scarcity of fund, many other species either in this small island country or in the forest wealth of the Sunderbars or Chittagong hill tracts are disappearing faster than scientists can catalogue.

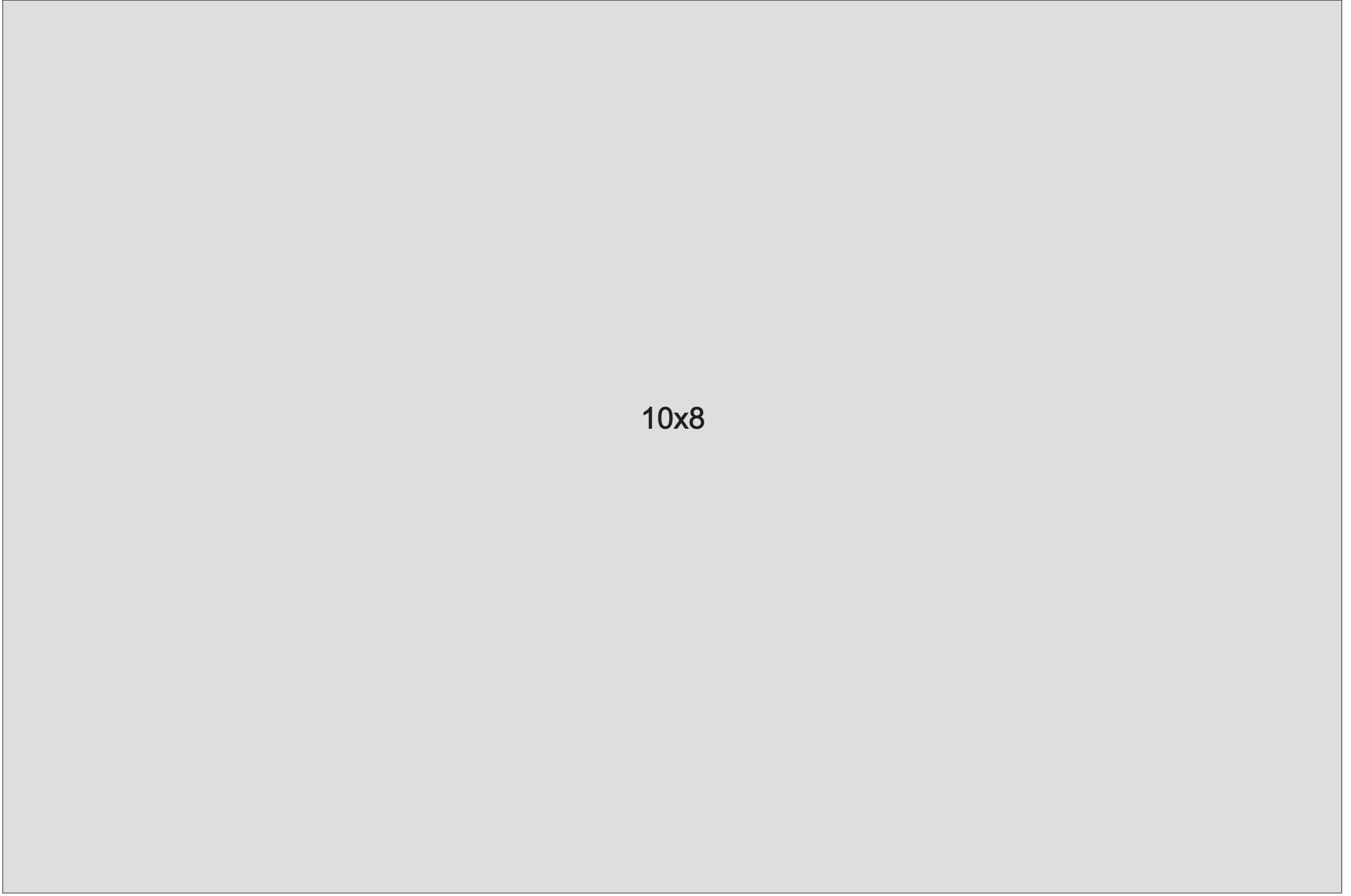
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