

WORLD ENVIRONMENT DAY

Man, technology and the environment



QUAMRUL HAIDER

THE Homo sapiens, in their current evolved form, have been around on Earth for about 200,000 years. Many advances have taken place since then, with each advance seeming to have had a greater impact on our environment than the previous one. More recently, the use of technology that brought human society an unprecedented level of comfort and material well-being is threatening to destroy our planet, the only one that is in the Goldilocks zone of the solar system.

The negative impacts on the environment caused by our unbridled use of technologies are numerous. It is beyond the scope of this article to discuss in detail all the adverse side-effects. Instead, I will focus on perhaps the most significant one—climate change, followed closely by air pollution, water pollution and resource depletion, albeit not necessarily in the same order.

Our laptop or smart phone or iPad may not release any climate-altering greenhouse gases, but their production and subsequent use involves energy generated by fossil fuels that are responsible for global warming. The same is true for other high-tech devices and electronic implements that have become an integral part of our daily life. For example, using a cell phone for just an hour a day via massive server networks, which consume a huge amount of electricity, translates into more than a ton of carbon dioxide a year.

In the latest report of the World Meteorological Organization, projections of rising global temperatures due to unrestrained emissions of greenhouse gases, aided and abetted by technology, underscore that Earth's climate is moving to greater and greater extremes at an accelerated pace. Indeed, the fury unleashed by climate change is not just making us live in a radically transformed world, but also negatively impacting our health, economic infrastructure, supply chains, and will eventually induce widespread famine and mass migration. Anticipating a grim future for Earth, we are now exploring the possibility of colonising Mars by terraforming it into a habitable planet.

Is it possible to go far back in time to a period when the air was pure? If we think of pure air as we think of pure water, probably not. Long before man, dust storms, fires and volcanoes polluted the air with vast quantities of particles and impurities of various sorts. They threw very fine dust into the atmosphere that finally dispersed and settled on the ground. Our appearance, of course, compounded the picture. When we discovered that fossil fuels could generate more heat than wood, we said goodbye to a halcyon period when the air was relatively pure.

Today, some of the major pollutants in the atmosphere are by-products of technology, such as emissions from vehicles, industries and power plants using fossil fuels, brick fields, foundries, refineries and waste incineration facilities. The pollutants from these sources not only add significantly to local air pollution levels, they also interact with environmental components to form secondary pollutants, thereby making a bad situation worse. The primary pollutants together with the secondary ones are



Locals harvest their potatoes as Mount Sinabung spews volcanic ash in Karo, North Sumatra province, Indonesia, on August 10, 2020.

PHOTO: REUTERS

precursors to the formation of smog, the worst form of air pollution against which our body has very little defence.

There is no other environmental issue more important than safe and clean drinking water. A continuous supply of clean water is our inalienable right. As noted by the Anglo-American poet W. H. Auden, "Thousands have lived without love, not one without water."

How does technology contribute to groundwater pollution? The lifetime of new technologies is very short. They become obsolete after only a few years of use, which leads consumers to dispose of their old ones to buy the newest versions. It is estimated

that globally, we throw away roughly 50 million tonnes of electronic waste every year. More often than not, we throw them away as household trash that ends up in landfills. The toxic material they contain or are made of may eventually leach into the ground and make their way to the water table which is a major source of our drinking water.

Being a mineral intensive industry, technology contributes towards depletion of resources. Increased industrial activity to meet the demands of a digital society requires raw material, some toxic and carcinogenic, whose reserves are finite and are on the decline. Lest we forget, it takes minerals

and fossil fuels hundreds of millions of years to form, but only a few hundred years to use up all the reserves.

Mining itself comes with a high carbon cost. Even if factories reuse or recycle material, they still need space because high-tech industries are growing at a rapid rate. Making space for new facilities often involves deforestation, which in turn results in loss of habitat for the animals. Besides, in the long run, over-exploitation of resources ceases to be beneficial and becomes an environmental threat.

All told, at the end of a typical day, in view of our over-dependence on technology, the Earth's atmosphere becomes a little warmer, the water a

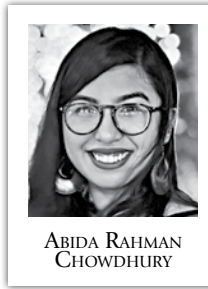
little more polluted, the soil a little more chemically altered, and natural resources a little more depleted. Crime-ridden and overcrowded cities become even more crowded, while the air in and around them, already choked with pollution, becomes a little more toxic. In sum, the web of life becomes a bit more torn. And tomorrow, it will start all over again.

Although these statistics are extremely depressing, my intention is not to discourage the readers but rather to make the point that we are on an unsustainable course. This is not to say that we and the rich biological world we live in are doomed. True, we cannot turn the clock back, but we still have a chance. We need to get our heads out of the sand, we have to get active, we have to be bold, we have to make profound changes to reverse the environmental mess of our own making, and soon.

A final thought on the World Environment Day 2021. It is possible to coexist with nature regardless of all the technological advances by finding sustainable solutions that meet the needs of the present without compromising the future. But they have to be affordable and equitable for all people and all nations. However, if we continue to ignore the modest demands that the environment makes upon our use of it, then all the technology we can devise will not suffice to put right the endless environmental traumas that we have created. On the contrary, it will only impoverish our future generations, who will have enough dilemmas to deal with. Let us give them at least a glimpse of how our planet once looked like.

Quamrul Haider is a Professor of Physics at Fordham University, New York.

Shrinking wild spaces and the growing conflict between humans and animals



ABIDA RAHMAN CHOWDHURY

LIKE writer-journalist Jon Mooallem wrote in "Wild Ones", I too have been finding nature in the oddest of places. This, especially so

during this long-drawn-out pandemic, while I remained mostly holed up in one of the most nature-unfriendly cities in the world (if I may say so). Bears have appeared on my pyjamas, which I have refused to get out of as the pandemic stretched on and on. Tigers are seen on the tip of my toothbrush. Elephants and sloths roam the wild in the animated movie I keep playing in a loop because it's comforting. In terms of actual wildlife, though, I have seen the occasional Lesser Golden-backed Woodpecker.

In the meantime, work has continued—mostly from home—and as a copy editor with a background in environmental science who receives stories from around the country, I could not help but note the sheer volume of human-animal conflict stories. I am beating myself up for not keeping an exact count, but a quick search on *The Daily Star's* website reveals that there are way too many stories of humans being trampled to death by elephants. Now, elephants in general are not human predators. They do not eat us for food and are considered gentle. But they can kill, when provoked, when we come in their way, when they are stressed, harassed or are looking for food and you happen to be in the way. In the hill districts, this seems to be happening way too often to be ignored. Which

brings me to the issue of growing human-wildlife conflict.

This is not a case that involves just elephants. In the hill districts of Bangladesh, namely Bandarban, Rangamati and Khagrachhari and parts of Chattogram and Cox's Bazar, the cases of conflict happen to be more with elephants. This is because these areas are considered to be among the last habitats of the Asian elephant, a species that has been driven to near extinction thanks



Two wild elephants spotted in the south forest division of Cox's Bazar during an elephant census in May 2018.

PHOTO COURTESY: MA AZIZ/JU

to habitat destruction, degradation and indiscriminate hunting, among many of the myriad reasons. Most recently, the corridor used by Asian elephants for migration—something that is entrenched in their memory and cannot be just changed overnight—was slowly closed up by the Rohingya refugee camps. This meant that a part of the elephant population got stuck on the Bangladesh side of the forests

and the rest remained in the forests on the other side of the border, likely in India and Myanmar. For a species with a declining population, this meant further isolation, further restriction of genetic diversity and an overall immense distress to these gentle giants, who need a vast area for foraging, roaming, finding food, and mating.

While stories of conflict between elephants and humans kept coming from the south-eastern region of the country, other places in Bangladesh

immediately beat up the poor reptile. Maybe compassion is still alive. He cut up the nets, rescued the animal which he believed had slithered in from bordering India in search of food, and handed the nearly six-foot-long python to members of the forest department, who then released the animal into the wild.

The point here is, a python does not need rescuing. They are supposed to move long distances. Animals do that. Migration and movement, even in humans, was a common practice before we had somehow managed to climb up the food web very quickly and very decisively to change the course of nature entirely.

This can be explained by the alarming decline in forest cover. According to Global Forest Watch, from 2002 to 2020, Bangladesh lost 7.03 Kha (kilo hectare) of humid primary forest, making up 3.7 percent of its total tree cover loss in the same time period. The total area of humid primary forest in Bangladesh decreased by 7.3 percent in this time period. In 2010, Bangladesh had 2.22 Mha (mega hectare) of tree cover, extending over 16 percent of its land area, and by 2020, it lost 21.5 Kha of tree cover, equivalent to 11.6 metric tonnes of CO₂e (Carbon dioxide equivalent) of emissions.

Meanwhile, according to older reports, the per capita forest area in Bangladesh is less than 0.015 hectare (Islam 2013) against the world average of 0.6 hectare (FAO, 2010). And according to a recent TIB statement quoting the United Nations Food and Agriculture Organization, the annual deforestation rate in Bangladesh is almost double the global average—2.6 percent.

Our monumental rise to the top has

removed nature's regular checks and balances. And that has spelled disaster for the order of the natural world. Never before have we faced extinction of so many species at so quick a rate.

Bangladesh, while being a tropical country, should be extremely rich in biodiversity, and on paper it is, but with shrinking natural habitats and a growing population constantly vying for resources, biodiversity has taken a hit. Bangladesh's most extensive database on biodiversity was conducted by the International Union for Conservation of Nature's last animal Red List of Bangladesh (2015), which was funded by the World Bank. In that exercise, 160 biologists rigorously assessed 1,619 species of mammal, bird, reptile, amphibian, freshwater fish, crustacea and butterflies. Alarming, about 24 percent of these species were found to be threatened.

Even the pandemic could not stop the rate of our destruction of the planet. According to the National Space Research Institute of Brazil, more than 1,200 square kilometres of the Amazon rainforest—an area that is ten times larger than Dhaka city—were destroyed from January to April in 2020 during the ongoing pandemic. This deforestation is 55 percent more than that during the same period of 2019. A recent Greenpeace report has already warned that the Amazon may become the source of the next zoonotic pandemic.

To explain the extent of the damage and the surreal picture of wildlife, I will have to go back to the wise words of Jon Mooallem in his seminal piece of work: "We are living in the eye of a great storm of extinction, on a planet haemorrhaging living things so fast that

half of its nine million species could be gone by the end of the century... As our own species has taken over, we've tried to retain space for at least some of the others being pushed aside, shoring up their chances of survival."

The only chance for the wild to survive and revert back from extinction happens to be with our intervention. In fact, J Michael Scott, an American government biologist, was quoted as saying in "Wild Ones": "Right now, nature is unable to stand on its own."

Unfortunately, the very species—aka us—responsible for driving so many animals towards extinction, plundering through vital ecosystems and continuously destroying and degrading habitats, also happen to be the ones that possibly can change the course of this tide and be responsible for conservation of nature.

Being cooped up in our homes and watching nature simply in fantastically shot documentaries or reading about it fails to drive home the point that our planet could very well go on without us. It is us who need biodiversity and wild spaces to continue to exist and flourish—for the mind and for the body.

Historian Joanna Bourke wrote it best in her reflections in the book "What It Means to Be Human": "Erasing the awe-inspiring variety of sentient life impoverishes all our lives."

We have brought the world to a stage where the plunderers, who need and rely so much on the natural world for food, shelter, sustenance and medication, will have to sow the seeds of rejuvenation. And it is not a choice anymore, because humans cannot afford to count yet another loss.

Abida R Chowdhury is a journalist at The Daily Star.

QUOTABLE Quote

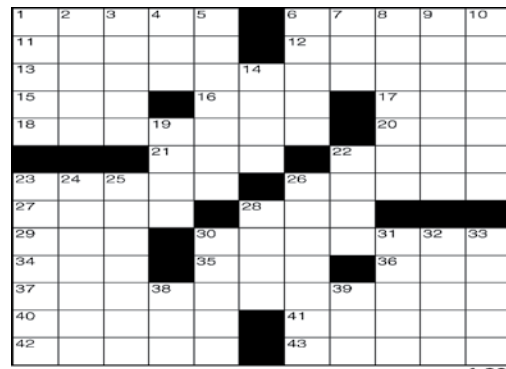


CICERO (106 BC-43 BC) Former Roman consul

In times of war, the law falls silent.

CROSSWORD BY THOMAS JOSEPH

- ACROSS**
- 1 In the middle of
 - 6 Strong winds
 - 11 Toil away
 - 12 Without others
 - 13 Decent
 - 15 "You there!"
 - 16 Wide shoe
 - 17 Saloon
 - 18 Gives approval
 - 20 Rage
 - 21 "You betcha!"
 - 22 Tripod trio
 - 23 "Great!"
 - 26 Carnival attractions
 - 27 Bills in tills
 - 28 Took the title
 - 29 Commercials
- DOWN**
- 1 Dominant
 - 2 Foals' mothers
 - 3 Follows orders
 - 4 Simple denials
 - 5 Less experienced
 - 6 Airport areas
 - 7 Copying
 - 8 Pushed (for)
 - 9 Blow up
 - 10 Prephetic figure
 - 14 Brooklyn team
 - 22 Pocket fuzz
 - 23 Scouring aid
 - 24 Experience
 - 25 Bothers
 - 26 Setting for an urban garden
 - 28 Small songbird
 - 30 Forest makeover
 - 31 Put aside
 - 32 TV's DeGeneres
 - 33 Actions
 - 38 Peace sign
 - 39 Period



YESTERDAY'S ANSWERS



BETLE BAILEY



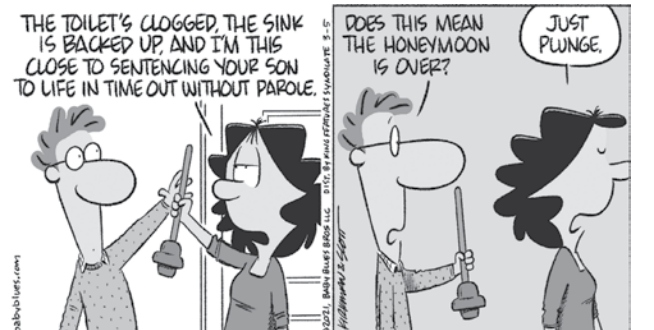
BY MORT WALKER



BABY BLUES



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