

ing words from a large number of other languages. This fact was more appalling to observe when, last year, a TV channel televised a live question-answer interview programme with topper from the Indian Civil Service Examination announced by the UPSC. The candidate was not consistently fluent in either English or Hindi. It is high time that the UPSC maintains strict criteria for linguistic fluency before making a final selection for the top civil services of the country. When in school, fifty years ago, I remember our teacher of the English language, while giving regular daily assignments on essay, précis and paragraph writing, often used a quotation – 'Reading maketh a full man, conference a ready man and writing an exact man'. The more we read, we equip ourselves with information and knowledge, the more we discuss, we equip ourselves for healthy conversations and the more we write, we evolve ourselves into perfectionists. The ability to write good text in any language is not acquired merely by reading books on the subject, but only

through self-efforts and intensive practice since childhood. Unfortunately, education being a state subject in our country, syllabi for school education are more open to political interference and accommodation rather than in turning out students with good command over languages and a perpetual urge to excel towards perfection.

In the early nineties, when I arrived in the University of Ghent, Belgium on a fellowship from the Commission of the European Communities, the young and dynamic Director of the department, introduced me to three secretaries in the office of the department. The three of them were also the language specialists in Flemish, English and German besides looking after the routine secretarial work. The Director told me in no uncertain words and I quote him in direct speech for our authorities in positions to ponder – 'Moharir, you are free to send any communication for publication from here, but whatever you write, you show that to the Secretary. She will sit with you, go through your

manuscript, edit it and suggest changes for crisp and effective communication. Please also remember, whatever communication you send for publication that carries the name and address of my Department, it should be scientifically correct, technically sound and must not contain even one grammatical or spelling mistake in the manuscript'. The message was loud and clear. No wonder, all the seven papers I communicated from the department were accepted for publication without any revision or corrections being suggested by the reviewers.

1. Venkateswara Sarma, V., *Curr. Sci.*, 2007, **92**, 1029.

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Modernization and global warming

Of late global warming has become a big issue, which rightly needs immediate attention. It requires a review of the progress of man for the last couple of centuries, such as industrialization during the nineteenth century, large-scale urbanization in the West during the earlier half and subsequently in the developing nations in the later part of the twentieth century, and lack of consideration for the ways of living adopted by man for several millennia in the past that lead to global warming.

With developments in medical field there is a phenomenal control over epidemics and diseases, decrease in infant mortality rate, and increase in life expectancy. Similarly, there is progress in fields such as education, food, nutrition and clothing. At the same time there is tremendous growth in population which is disproportionate to the progress. Education, however, is yet to penetrate several sections, particularly women in developing countries, who could play an important role shaping the minds of the young.

Forested area was converted to agricultural land and given to the landless.

Damming of rivers and siphoning of groundwater brought incredible progress in the agricultural field. Fossil fuel and electricity were used copiously to draw out water for tilling. To produce electricity, more fossil fuel was burnt. High-breed varieties were discovered and there was a 'green revolution'. Food was grown in such large proportions that there were no adequate granaries to store the grains, which decayed in several instances. Similarly, there was great 'white revolution'; increase in poultry and other products. Population grew further enormously; people migrated to cities in search of jobs. Quality of education improved. Business in cities spread globally leading to progress. Numerous chemical and other polluting factories were installed. Sky-scrapers were built in large numbers and at the same time slums multiplied. City-lights, air conditioners/heaters and transportation increased enormously. Dangerous weapons of war were invented, such as explosives from day-to-day products (which were handy for terrorists), chemical and biological warfare and nuclear warheads. Tension was created

among developing countries so that weapons could be sold. These form only a fraction of the list of our progress and modernization.

The result of this is pollution, warming of climate, diminution in ozone layer, erratic rainfall, land erosion; depletion in groundwater, fight between the states over river waters and drying up of land due to lack of water; in some cases waterlogging and salt-water incursions have rendered the land unusable for agriculture. The developing countries failed to adopt systematic harvesting of forest and to afforest the wasteland. Mangroves began to deplete rapidly. Forests once cut were never grown again; green patches disappeared forever. Imbalance of nature had set in; wildlife began to disappear due to deforestation and unscrupulous hunting. Soon some animals were considered as 'endangered species'. Disparity in ratio between the predators and the prey persuaded either the predators to enter townships or the prey to frequent agricultural lands. In recent years, apathy towards vultures that are efficient scavengers, has exposed carcass of cattle

in the outskirts of towns. Street dogs eating raw meat have taken the place of vultures. Now street dogs have transformed into a ferocious breed, attacking human beings. Large-scale industrialization polluted ponds, lakes, rivers, seas and air. Several 'Minamata disasters' and other industrial disasters such as the Bhopal Gas tragedy came into light.

Was there a necessity of pushing states into war, such as the Vietnam War in the 1960s and the recent Gulf/Iraq wars? Oil wells and tankers were set ablaze that polluted the atmosphere, generating large amount of heat. Treacherous weapons that were hazardous to the environment were tested in the name of wars.

No doubt, a huge volcanic eruption like that of Krakatoa in 1883 is capable of contaminating the environment, which can be equivalent to pollution created by man for decades. Nonetheless, nature repairs the damage within a few years, making the environment fresh and healthy. Damage to the environment by man, however, never ceases or depletes, it only adds up. It does not give opportunity to nature to 'repair' the damage. Are we digging our own grave?

Developing countries are proud of their progress and their cities are bubbling with activities with 'Las Vegas-type' lighting lasting throughout the night. Roads are choked with vehicles and it takes several hours to reach one place to another a few kilometres apart. The developed nations showed sympathy to developing

countries. They generously donated to fight hunger and to save children. There is competition among celebrities to adopt poor children. As the aid poured in, the population of the down-trodden multiplied enormously. The charity of the affluent nations has turned the developing nations into 'confirmed beggars', expecting more and more aid. As the population exploded, their need for food increased enormously; there is greater utilization of natural resources and further damage to environment increasing global warming. Instead, the aid should be diverted to educate people regarding perils of population explosion. When the aid for wheat from the PL480 scheme was given to India in 1960s and 1970s, the donating country should have insisted on checking the population growth. Since then, our population has more than doubled and proportionately our needs. We are not able to reap the benefits of our progress over the last 5–6 decades.

Scientists and environmentalists are aware of the above facts. Several conferences/seminars/workshops have been conducted and papers have discussed the cause of global warming. Scientists and policy makers are aware that air conditioners release green-house gases. Yet they move in air-conditioned cars and seminars are conducted in air-conditioned halls. A large number of heat-generating bright lights decorate the venues. They want to ban plastic, but food and water is served in plastic containers. Carelessly thrown plastic bags choke the drainage resulting

in flooding. Yet we dispose plastic bags haphazardly.

We are aware of the facts as well as the remedy. Who would 'bell the cat'? Probably the German (and also Dutch) way of dealing facts could provide some clues. They are conscious of pollution caused by motor vehicles and to go on bicycles. There are separate tracks for bicycles, whereas in developing countries it is now considered far below one's dignity to ride a bicycle. In China and India, bicycles are slowly disappearing from the roads. Although highly affluent with a huge amount of per-capita income, the Germans shun away from wasteful expenditure. Air conditioners and heaters are used sparingly. The Germans avoid moving in individual cars as they have managed an efficient network of public transport. How many of us in the developing countries adopt such measures? It is said that the Western world is responsible for global warming and it is expected that the same affluent society would find a solution. Are we ready to sacrifice the luxuries that the modern world has offered? Is it possible to avoid using fossil fuels that took millions of years to form? Is it not possible for us to bring an end to ice-sheets and glaciers from melting? Are there any other remedies?

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Imperatives for tsunami education

The memories of the tsunami of 26 December 2004 that killed lakhs of people in several countries around the Indian Ocean are slowly fading. While it is true that the sorrows and miseries of the past should be left behind, the coastal communities cannot afford to forget the incident, as it is by no means an odd one. Tsunamis are a recurring phenomenon. The nation should initiate efforts towards tsunami preparedness. Educating the coastal communities that are at risk should form an essential component of tsunami preparedness.

An earthquake followed by an unusually receding sea is a sure sign that a tsunami is on its way. In case of a tele-tsunami (far-

field tsunami), the earthquake may not be felt, but the unusually receding sea is a tell-tale sign of the approaching tsunami. This simple knowledge could have saved thousands of lives on 26 December 2004. It is by now a well-known story, how a 10-year old British girl, Tilly Smith with her presence of mind and quick thinking, saved about 100 lives on that day at one of the beach resorts in Phuket, Thailand. All she did was to alert the people on the beach about the possible tsunami, when she saw 'bubbling on the water, right on the edge, and foam sizzling just like in a frying pan'¹. When everyone on the beach like everywhere else in many

countries around the Indian Ocean followed seaward (unfortunately to a point of no return), curiously watching the unusually receding tide, in a false-ebb (which normally precedes a tsunami), the girl warned people around her that it is a sign of an approaching tsunami, about which she had learnt in her geography class a few days ago. Later, the girl became the United Nations brand ambassador in its campaign to highlight the importance of tsunami education¹.

Not only did the common man on the beach on that fateful day fail to realize the impending tsunami, but what happened in the scientific communities in