

Trapped by Bits, Bytes and Formats The Siren Song of Computers

EVERYBODY is using computers or thinking about using it. There is this general perception that computers are some kind of magic wand which will vastly improve productivity and generally make our lives much easier. Pundits are forever droning on about the new information age where those who understand and can use computers will be the haves and the rest the have-nots. Parents are concerned about viewed in creasingly as the key to professional success.

Just last week, my friend Y, an avowed technophobe stopped by my office and confided that he was thinking of acquiring a computer. I nearly fell of my chair for Y is well known among his friends for being a rigid traditionalist. He writes with a fountain pen (he can't find a working quill) and prides himself on doing multiplication in his head.

I said tentatively "Did you say computer, or was I just imaging it? Why this leap into the unknown? I think you should start slow, get used to a ball-point pen, move on to an abacus, then consider a typewriter and maybe a calculator."

Y said, "Don't be silly. I have given it a great deal of

thought and have finally decided that I should explore new technologies."

I was waiting for him to give me some credit for this amazing change of heart, as I had spent many hours arguing with him about the merits of computers. However it was not to be.

"I have decided to let you show me the advantages of a computer", Y said in his usual imperious tone, as if he was doing me a big favour.

Being the computer advocate that I am, I took this on to be a big challenge. If I could convert someone like Y, why the sky would be the limit. I said "You've made the right decision. You won't regret it. It will make your life a lot easier. Once you start using it, you will never look back."

"Stop gushing like an old car salesman," Y said suspiciously. "Show me what the computer can do."

I proudly turned to my computer and said, "Well, lets suppose you want to write a letter. In your old antiquated way, you would have to fill your fountain pen with ink, get some paper and write out a draft. After correcting all the spelling mistakes, and several false starts, you would end up with a final draft. Then some poor typist,

Then some poor typist wouldn't understand what to do and may say, "Why all of this would be trivial. First you would turn on the computer, and the monitor. Then you would access your favourite word processing programme and start writing. Of course you would have to choose your fonts, the pitch, set the margins, the headers etc."

I was starting to really get into the nitty gritty, when Y somewhat callously interrupted and said "Don't babble on, just show me."

I turned on my laptop computer and lo and behold nothing happened. In a somewhat embarrassed voice, I said, "The battery is dead. I just have to attach the

Bangladesh take only round pins. Every country apparently has a different standard with regard to sockets, and someone out there is making millions selling these converters. This time around the computer screen actually came to life. I then effortlessly using my new track-point clicked on to the "word" icon, after only having overshoot it twice. Finally I got a blank screen. Then I decided to set the parameters. First the margins, then the fonts. I love the fonts menu, where else can you spend so much valuable time, trying to decide whether you should use "Century schoolbook 12," or "Times Roman 10," or my favourite font "Avant Garde".

I finally finished the letter and said "Well now we can use the spellchecker to correct all the spellings. With this modern technology, you no longer have to know how to spell, the computer does it for you. I activated the spellchecker and it went through the letter and highlighted the word "Labour" in the sentence "I respectfully desire to labour in your service."

Y looked at me and said "What's wrong with labour, why does it want to highlight and change it?"

I smiled weakly and said "Oh, I forgot to set the option on the spellchecker to accept British spellings. By the American standards, labour should be spelled 'labor'." After instructing the

spellchecker to allow me to use "labour" instead of "labor", I eventually managed to finish the draft with no spelling mistakes.

"Well" I said, "That's all done now. All we have to do is save it and print it". I hit the "save" button with a flourish, named my file a: slavelet and waited for the computer to do... A message came up on the screen and said "Disk error, cannot access file". Then the computer screen went blank and I cried out "Oh!..."

Y screamed "What happened, tell me, tell me."

I said, "It looks like, the file allocation table is probably messed up. I should have set the automatic save option."

Y looked at me blankly and said, "Leaving aside your technospeak, does this mean, we have nothing to show for the past hour. What's so great about computers. I think I will stick to my pen and paper and not have to worry about files, saving, formats, fonts etc."

I rose to defend the honour of computing and said "There's a high learning curve, but once you master it, it's a snap." Y was however already walking out the door.

"Well", I thought to myself, "you can't win them all."

do a short letter. I said to Y with all the pride of a parent showing off the antics of a favorite child, "Now see, you can easily modify this sentence, 'I beg to state, as your obedient servant...' to 'I humbly beg to state, as your obsequious slave...'" by just highlighting the relevant text and deleting it. Just like I am doing OOPS! I seem to have overshoot and easy. Fortunately by using the undo key on my second day did manage to modify the sentence properly.

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The Few Decide What You Eat Today

by Geoff Tansey

SOMEONE else probably decided what you ate today. Yes that's right — when you guzzled a soft drink or opened that tin of beans, or whatever it is that you thought was your choice. Think again.

Giant western food corporations, whose turnovers dwarf the gross national product (GNP) of many countries, control the global food strategy. Consumers are at the bottom of the decision-making process and farmers are not much higher up.

In 1991, for example, according to the World Bank, Unilever's turnover of \$40 billion and Nestle's \$35bn was greater than the GNP of 110 countries.

But the economic activities, policies and bargaining power of these companies cannot just be measured in money. The decisions made in their boardrooms can also affect the way people live and work right across the planet.

These transnational corporations control one-third of world food output, according to the United Nations 1994 World Investment Report. This means, it says, that the world economy is becoming increasingly subject to internationally integrated corporate strategies.

Three directors in Unilever, for example, form a food executive and determine and coordinate the strategic direction of that company's food businesses worldwide.

Product teams implement the global food strategies and supply specialist marketing, research and technological know-how. How else could Unilever's ice creams, for example, be successfully marketed across Europe, Australia, Malaysia, Brazil, the United States and Thailand?

In all this big money is at stake. Producing processed food and beverages is one of the world's largest industries valued at \$1.5 trillion a year. The largest share of production, about \$800 billion, is held by companies from the Organisation for Economic Co-operation and Development (OECD) nations — the rich countries club that includes the United States, European Union countries and Japan.

The 100 largest OECD-based companies are estimated to account for about one-fifth of global production of processed food and drink, according to an OECD study.

In comparison to the big players in the food system, farmers are just small fry. In industrialised countries, they are becoming an endangered species as farming land becomes increasingly concentrated in larger units.

That is reflected in the composition of the OECD labour force — on average just over one person in 20 works in agriculture. In some countries, like Britain — which once had a thriving community of small farmers — that figure is as low as one in 50.

In the developing world about 60 per cent of the population work in agriculture, but this ranges from around 90 per cent in parts of Africa and Asia to 10 to 20 per cent in Latin America.

OECD farmers often find themselves on a production treadmill, slaves to a timetable and a system laid down by their suppliers and buyers. A relatively small number of large multinational companies supply them with machinery, fertilisers, pesticides, fuel and increasingly, seed as well.

Then, price-setting regimes, such as the Common Agricultural Policy in the European Union, decide what the producers should get for the fruits of their labours. In all this decision-making, with its far-reaching consequences, farmers play a relatively minor role.

The crop buyers also tend to be large. Just six compa-



REFLECTIONS by Dr Omar Rahman

adapter". I brought out the adapter and connected it to my computer, and was glad to note that I had remembered to bring the flat pin to round pin converter. All the American sockets are flat pins, while the sockets in

After about ten minutes, Y said rather testily "Get on with it."

I started writing, or more accurately typing, having settled on Palatino 12 as my font of choice. Since it was just a demonstration, I decided to

DEPLETION OF THE OZONE LAYER Causes, Consequences and Commitment towards Control

by Syed A N M Wahed and Ahmed Al Farouq

FOR thousands of years life on earth has been safe guarded because of a life giving layer of ozone, acting as a shield to protect the earth against harmful ultraviolet radiation from the sun. It is unique to our planet. If it were to disappear, the sun's ultraviolet light would sterilize the surface of the globe, annihilating all terrestrial life.

Ozone forms a fragile shield, curiously insubstantial but remarkably effective in efficiently screening out almost all the harmful ultraviolet rays of the sun. The shorter the wavelength of ultraviolet radiation, the greater the harm it can do to life and the better it is absorbed by the ozone layer. Relatively short ultraviolet radiation, known as UV-C, is lethal to living things and is almost totally screened out.

Longer wavelength ultraviolet, UV-A, is relatively harmless, and is almost entirely allowed through. In the middle lies UV-B, less lethal than shorter wave radiation but still dangerous; the ozone

the ozone layer was as severely depleted again. Research also shows that since 1979 total ozone has declined by some 5% over Antarctica throughout the year as a whole.

Causes of depletion

In 1974 Drs Mario Molina and F Sherwood Rowland, working in the United States, first suggested that the growing use of family of compounds called chlorofluorocarbons, CFCs, was likely to cause ozone depletion. Over the following decade, development of their hypothesis was erratic. It was not until the British Antarctic Survey published its findings in 1985 that the world had conclusive proof that ozone depletion was occurring. It was not until two or three years later that we were sure that CFCs were the main culprits. Because of their stability, CFCs do not break down in the lower atmosphere but are transported into the stratosphere where they are eventually broken down by ultraviolet radiation, releasing

free chlorine. The chlorine acts as a catalyst in the destruction of ozone. The net result is that two molecules of ozone are replaced by three of molecular oxygen, leaving the chlorine free to repeat the process. For the stable CFC molecule, this can continue for over a century. Two other man-made chemicals, carbon tetrachloride and 1,1,1 trichloromethane, also contain chlorine and are sufficiently stable to reach the stratosphere in significant quantities where they can destroy ozone.

Halons, which contain bromine, are also significant ozone depleting chemicals. Bromine is a much more powerful ozone depleting substance than chlorine and is thought to account for at least 20 per cent of the ozone depletion observed over the Antarctic. Halon emissions are thought to account for half of this, the remainder comes from natural sources.

Consequences of depletion

Any increased UV-B that reaches the earth's surface has a potential to cause considerable harm to the environment and life on earth. Findings show that non-melanoma skin cancers, the commonest and less dangerous varieties, are caused by both UV-A and UV-B radia-

tion. By the year 2000, ozone layer loss is predicted to be 5-10% for the mid-latitudes in the summer.

Special provisions for developing countries, for countries with low levels of production, for countries with state run economies, and for countries who are members of a regional economic integration organization. There are also provisions governing trade with countries outside the Protocol and for trade with developing countries.

The Montreal Protocol was a landmark in environmental policy making, because it was the first international measure designed to prevent — on the basis of scientific evidence — rather than cure a global environmental problem. Shortly after the Protocol was adopted scientists established beyond reasonable doubt that CFCs and halons, together with the peculiar meteorological conditions that prevail over the Antarctic had led to the 'hole'.

Both the Convention and the Protocol are guided by regular meetings of the Parties, the Parties to the Protocol meet every year and the Parties to the Convention meet once every three years.

The Convention focuses on research on the ozone layer while the Protocol implements control measures on ozone depleting substances.

All governments are invited to participate in these meetings though only the parties can vote. Financial assistance is given to many developing countries so that they can attend. Many non-governmental organizations attend the meetings as observers.

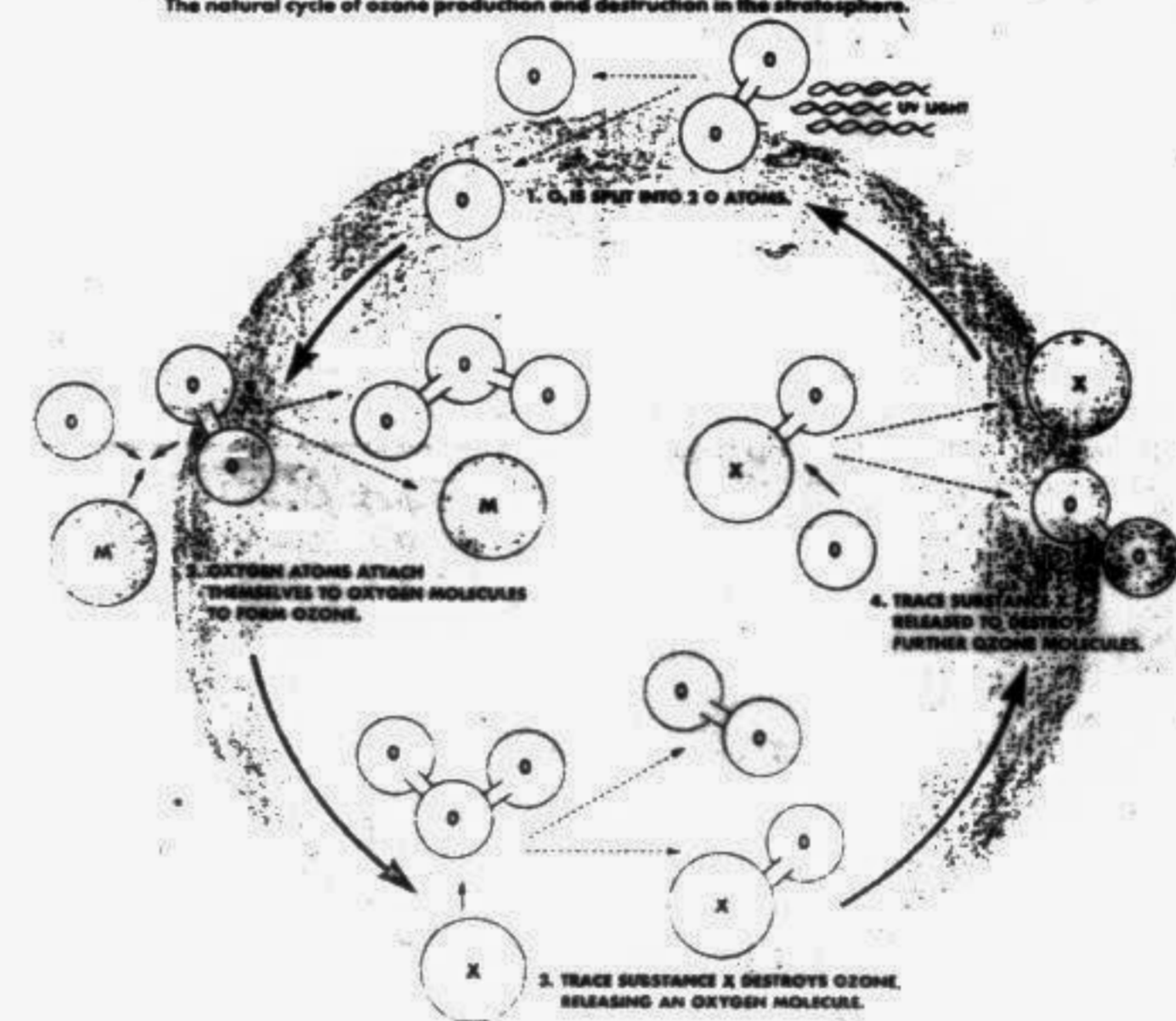
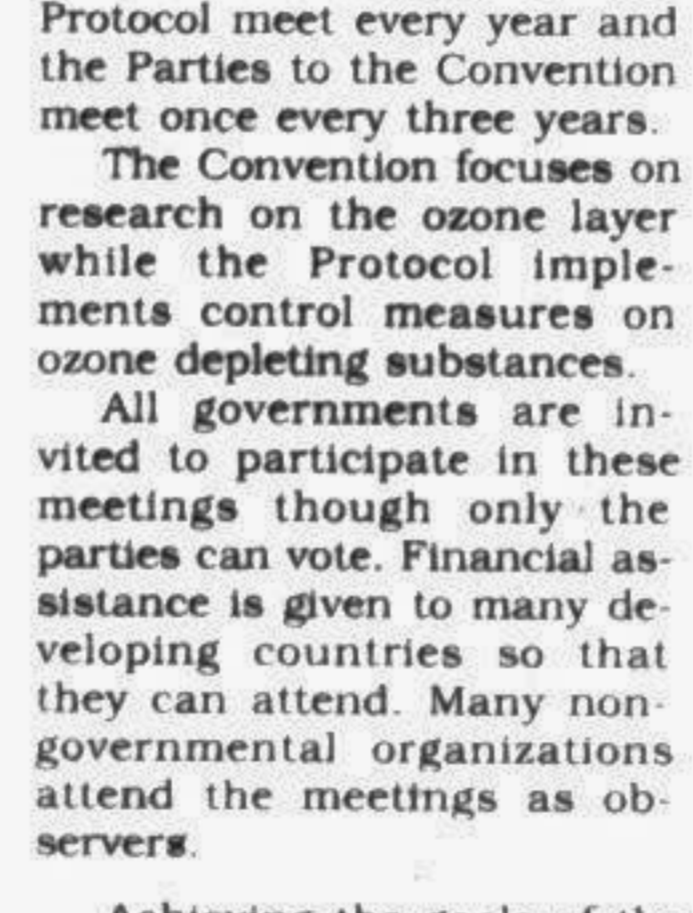
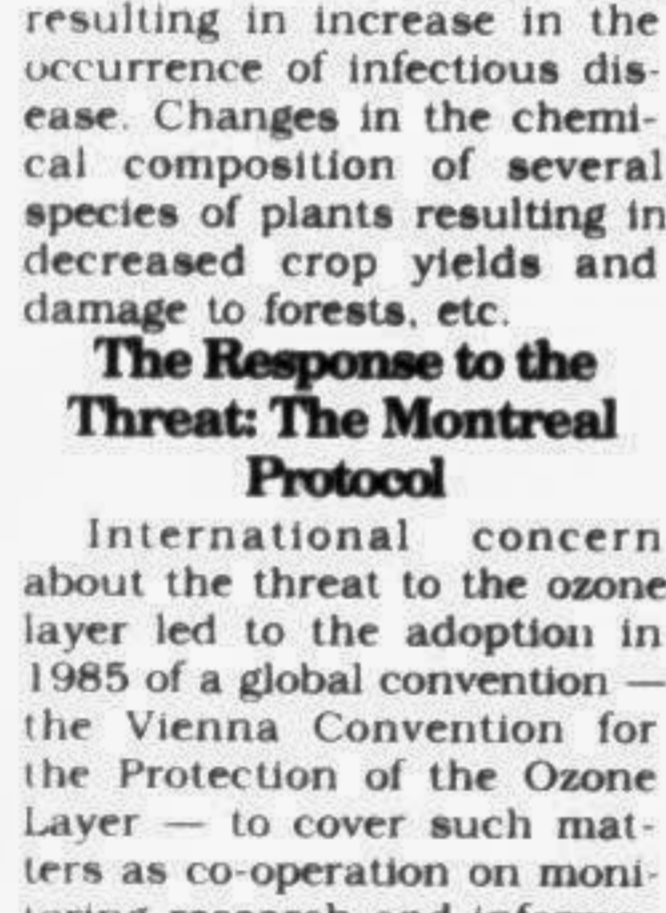
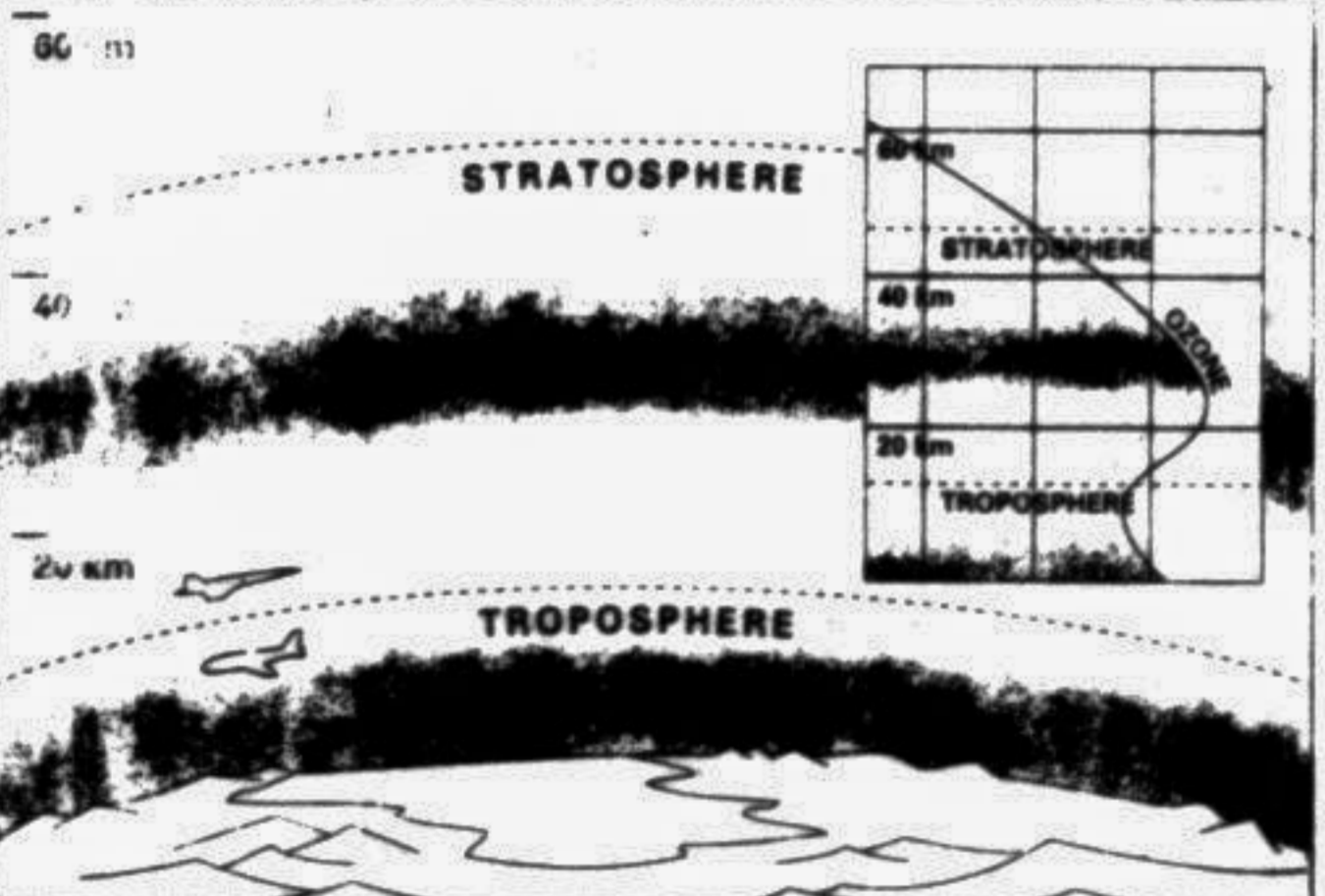
Achieving the goals of the Montreal Protocol depends on widespread co-operation among all the nations of the world. It is not enough that the developed countries which accounted, in 1986, for 85 per cent of the consumption of ozone depleting substances participate in the Protocol. The participation of developing countries, which consumed only 15 per cent, is also equally and vitally important. CFC consumption in developing countries has been growing at a much higher rate than in the developed world and could nullify the effect of the Protocol in two to three decades if they keep out of the Protocol. However, per capita CFC consumption in Bangladesh is very much insignificant compared to developed and most of the developing countries.

Commitment of the Government of Bangladesh

Bangladesh is firmly committed to the initiatives undertaken by the international community in protecting the ozone layer and to, this end, phasing out the use of ODSs. As a developing country, enlisted in Article 5 of the Montreal Protocol, it has been given a grace period of 10 years starting from 1995 for the phase-out process. Under the financial assistance of the Ozone Multilateral Fund, an Ozone

Cell is the process of being set up within the Department of Environment to undertake and monitor the ODS phase

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layer absorbs most of it.

Any damage to the ozone layer will lead to increased UV-B radiation. However, this radiation is also limited by tropospheric ozone. Aerosols and clouds. Increased air pollution in recent decades has masked any increase in radiation, but this safeguard could disappear if efforts to clean up the atmosphere are successful. Clear-cut increase of UV-B radiation have been observed in areas experiencing periods of intense ozone depletion.

Depletion of the Ozone Layer

The first clear sign of damage to the ozone layer was reported in 1985 by the British Antarctic Survey team who had been measuring ozone levels over the Antarctic since 1957. They observed that every southern spring ozone was almost completely destroyed over the Antarctic, covering a region as big as the United States and as deep as Mount Everest. In October 1987, when the so-called 'hole' was very severe, the total amount of ozone measured at the monitoring station at Halley Bay was less than half of its 1970 levels. Between altitudes of 15 and 20 km over the Antarctic, where the depletion was greatest, 95 per cent of the ozone had disappeared. In 1989 and 1990

lean meat and less fat.

Scientific research can give agriculture a boost. With computer technology and detailed information about land conditions, for example, the application of fertiliser can be targeted much more precisely. But who will benefit from these improvements?

This raises a thorny issue: Who takes responsibility for new products and processes, such as those being pioneered by biotechnologists, go wrong?

For example, if pest resistance introduced to a food crop passes into weeds, they could destroy the food crop. That may require a rethink of the legal status of major corporations to ensure their responsibility for the social and environmental consequences of their actions.

The concentration of food power challenges governments and citizens' groups to ensure no one group gets too much power. This, says George, is the major challenge facing this generation — to try to invent some democratic means of controlling the new global actors who shape not just our food production system, but the rest of the economic order as well.

This requires laws, rules, and regulations that operate globally as well as nationally and locally — GEMINI NEWS

le is estimated at about US \$ 8.05 million. The benefit is a reduction of ODS consumption of about 7,500 MT ODS

(low estimation being 5,500 MT) over a period of 1994-2006.

In order to achieve the objective of ODS use phase-out in compliance with the requirements of the Copenhagen Amendment to the Montreal Protocol an Action Plan has been suggested in the Country Programme.

The regulatory measures proposed include a schedule of ban on the use of ODS for different purposes to be imposed at specifically given date; introduction of a special ODS tax on the import of all controlled substances and ODS using equipments. Since such a tax will, hopefully, encourage substitution of ODS in sectors where substitution may be easily accomplished.

Major importers and some of the users of ODS in Bangladesh are well informed about the Montreal Protocol and the efforts to substitute ODSs by new generation refrigerant. The majority of users particularly the technicians in the service sector, owners of fish freezing industries and the general public are unaware of the ozone depletion problem. Information dissemination to professional personnel/technicians as well as to the citizens of Bangladesh about the ODS is, therefore, essential for bringing about ODS use phase-out.

An information campaign should, therefore, be launched for creating general awareness about ODS through television, movie house (cinema) and newspaper.

The ozone cell will undertake distribution of international and national literature, posters etc. on ODS alternatives to the ODS using industries. Industry Associations in the respective sector is also expected to support this activity.

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Feeding the world's growing population is a noble and difficult enterprise. But that challenge is overshadowing another important issue. Who has power and control over food today, and how much power should they have?

