

Tobacco-Free Initiative: Bangladesh Perspective

by Dr. Khalilur Rahman

Increasing tax on tobacco may not be effective in reducing tobacco use. It can only help the government in generating some small amount of additional revenue. The habituated smokers will buy cigarettes even with the very negligible amount of money that they are supposed to spend for their minimum food. It will kill them in two ways from undernutrition and from ill effects of tobacco. Motivation is needed to help them give up this killer habit.

THE much talked about Tobacco-Free Initiative (TFI) of WHO came to the fore with the announcement of Dr. Gro Harlem Brundtland at the 51st World Health Assembly after her election as the Director-General of WHO in May 1998. Along with Roll Back Malaria, she announced TFI as her immediate priority programme. Accordingly, in a re-structured WHO set-up TFI was included as a Cabinet Project immediately after her assumption of office on 21 July 1998. In Dr. Brundtland's words, "tobacco would be the single largest killer in the next century". If the current trend of tobacco consumption continues, within next twenty years time, the death toll from tobacco is estimated to rise from 3.5 million to 10 million, seventy per cent of which would be from developing countries and half of these victims would be middle-aged. Dr. Brundtland identified global tobacco control as a key public health issue.

Bangladesh Scenario in Tobacco

Again in Dr. Brundtland's words, "smoking is a communicable disease". The allure of smoking is communicated through advertising and peer pressure". Smoking is one of the major health hazards in our country that lead to many serious conditions affecting health status of individual, families and the community. It is directly related to numerous diseases and is the prime cause of many deaths in our country. Smoking is also linked with other health and social problems like addiction, drug abuse and anti-social activities. The victims of these phenomena are the youths. We need to save our future generations from this invisible "killer". According to available statistics, at present, the incidence of smoking is more in the poorer section of the population in Bangladesh. It is also reported spreading among the youths and women. More than 57 per cent of the smokers in Bangladesh are aged between 21 and 40. With the speculated flourishing of the tobacco industry in the country, the poor, younger generation and women are likely to suffer the most.

At a time, when WHO has launched its massive campaign against tobacco through its TFI and when our political leadership has called for intensified anti-smoking campaign by undertaking some concrete steps like declaring smoke-free zones, imposition of tax on tobacco, inclusion of anti-smoking essays in the text books, insertion of health warnings on cigarette packets and banning advertisement for tobacco and smoking in government mass media including radio and television, reducing tobacco cultivation by crop diversification programmes etc., the October 1998 issue of Tobacco Reporter, an International Journal carried a write-up wherein it is stated that the future of the tobacco industry in Bangladesh looked bright. According to this journal, the smoking population in Bangladesh is around 20 per cent and 22 billion cigarettes are smoked annually in the country. It goes to say that the cigarette market in the country is growing at 6.4 per cent annually. It further informs that some multinational cigarette companies are now negotiating with some local companies to produce their brands in Bangladesh under joint venture programmes. At the end, the journal expressed the hope that new joint ventures in tobacco industry on the way, there would be introduction of new brands of cigarettes in Bangladesh market soon.

For the Government and the Board of Investment any foreign investment in whatsoever form seems to be a good one. But we need to know that multinational tobacco companies are now aiming at markets of developing countries because of the fact that their market in the developed countries is getting shrunked with the increased ban on smoking in those countries. We also need to measure the economic benefit of investment in tobacco industry. According to some presumption, the revenue and employment that can be generated by increased investment in the tobacco industry, is less than the amount Government has to pay for the treatment of the people ailing by tobacco consumption. We need to carefully judge the overall economic and social benefit of any investment.

Measures to be Taken
The basic purpose of our anti-tobacco campaign should be to make a generation of tobacco-free children and adolescents. In order to achieve this goal we need to advance in a systematic and planned way. What we need first is perhaps a National Tobacco Policy. While undertaking the exercise to formulate such a policy, government should consult with media, private sector, tobacco industry, NGOs involved in anti-smoking campaign, civil society and other interested parties. We need to accommodate everybody's legitimate concerns in this policy so that it could be acceptable to all and can be fully implemented with the concerted efforts of all parties involved in it. This policy should take due account of the fact on possible economic loss of thousands of people involved in tobacco cultivation and of concerns of those who are dependent on tobacco industry. Before undertaking necessary exercise for such a policy,

awareness creating tobacco programmes against tobacco should be launched. Government, in collaboration with the WHO Country Office in Dhaka, can organise workshop/seminar on tobacco control. Policy-makers in the Government, parliamentarians, academia, NGOs, experts, private sector, representative of the media and tobacco industry and other interested parties should be invited to this type of workshop/seminar in order for achieving a minimum consensus on this issue. Possibility may also be explored to arrange funds to organise this type of workshop/seminar from the Central TFI Project.

Media, as we all know, can play perhaps the most important role in anti-smoking campaign. There is a need for collaboration between government policy makers, health workers and media representatives in anti-tobacco drive. Wide dissemination of information on ill effects of tobacco through media could be of immense help and useful in creating awareness against tobacco. Media can also play role in developing educational and legislative measures against tobacco.

Like other fields, some NGOs are also playing catalytic and complementary role in anti-smoking campaign in Bangladesh. The anti-tobacco programmes of the NGOs can be effective for the rural illiterate smoker since they can easily reach out this target group. Government needs to encourage and assist these NGOs and closely work with them in its efforts for reduction of tobacco use in the country. NGOs may also explore the possibility of getting financial and technical support from WHO Country Office and Central TFI Project since they have been identified as one of the key partners of TFI. Students, social and welfare organisations can also play important role in anti-tobacco campaign. Government can also use these organisations in its anti-tobacco campaign.

Presently our domestic flights are smoke-free. This also needs to be extended to our international flights. This may be helpful in Biman's ongoing efforts for forging a partnership with other international airlines since most of the international airlines are now smoke free.

Until to-day the religious leaders and Imams of mosques wield considerable influence over our rural illiterate population. As per latest statistics, smoking is now on the rise in rural areas as spreading rapidly among the poor. Perhaps these religious leaders and Imams, as suggested by many NGO leaders in Bangladesh, can be useful in persuading the rural smokers in giving up this dangerous habit. A National Convention of religious leaders and Imams can be convened and they could be briefed about the useful and perhaps the historic role they could play in motivating the smoker rural population to give up the habit of smoking. Financial support for organising this type of convention can also be available from WHO Country Office and Central TFI Project. A legislation can also be enacted fixing minimum age for smoking and prohibiting sale of cigarettes to the persons under that age. Increasing tax on tobacco may not be effective in reducing tobacco

Bangladesh, WHO and TFI

In the January '99 Session of the Executive Board of WHO, Dr. Brundtland is expected to present a report on the progress on TFI and to seek guidance of the Board on the issue of recommendation about the IFC. In the 52nd Session of the World Health Assembly (WHA) to be held in May 1999, debate would be held to take a decision on the IFC process. It may be mentioned that Bangladesh is currently Member of the WHO Executive Board.

Next year's Regional Committee Meeting of WHO South-East Asia countries will be held in Bangladesh in the first half of September 1998. The Director-General of WHO, Dr. Brundtland, may attend that meeting as a special guest. Her visit to Bangladesh could be very useful in getting renewed and increased WHO support to our health sector reforms and for other health projects and programmes. TFI is one of the two immediate priorities of Dr. Brundtland along with the Roll-back Malaria programme. Some concrete programmes should be worked out by the Government in the areas of tobacco control and malaria elimination before her visit. She may pledge WHO's enhanced assistance to these programmes during her visit.

The writer is Counsellor in the Bangladesh Permanent Mission, Geneva.

Biodegradable Polythene (Plastics) from Plants

by Abdul Ahad and S K Zahan

Industrial biotechnology is going to reach beyond novelty products for environmentalists, though, most experts agree that it will have to be part of an interdisciplinary approach. . . its really the integration of the biotechnology and traditional chemical engineering that will make this practical.

WHILE genetically engineered or genetically modified food crops have prompted considerable controversy from environmental activists (i.e. Greenpeace) and consumer groups, new advances in enzyme engineering, along with a trend toward interdisciplinary projects in which molecular biologists team up with synthetic chemists, are trying to move environmental biotechnology for the public interest. Polythene is one of most important and discussible invents in modern science. It's widely used whole over the world due to different positive sides-easy to handle, most cases free of charge and after use one can through it very easy way. But then, why all over the earth people are awareness for environmental pollution, blocks drains and outlets of water and health hazards caused by polythene.

purpose only. In this context I would like propose here one of the few vehicles to overcome this problem as well as to use polythene which is recyclable, environmental friendly and will not be health hazards also. No doubt it will be the contribution of molecular biologists therefore quite expensive to set up in industrial level. But its clear we can't get it free of charge in the beginning, may be in near future it will be quite available. May be, near future our nation can overcome this problem to use modified jute made bags-a good substitute of polythene, which only media could emphasised.

The scientific idea is to use a particular bacteria which is already known to produce polyester called polyhydroxyalkanoate (PHA) easily can be processed into a biodegradable plastic. Unfortunately, the cost of fermenting glucose to produce PHA has restricted its ability to compete with traditional polymers. To get around this problem, researchers (at Monsanto)

are moving the production line back a step by inserting the genes for PHA synthesis into plants. Then plants can easily produce and they have a way to doing things that makes use of some resources that we've not able to exploit, like solar energy and carbon from the atmosphere, rather than fossil fuel. Currently, the scientists from the same company are focusing on producing the polymer in a tissue specific manner in plants, so that corn stalks or sugarcane leaves, which are normally left in the field to rot, could instead become valuable agriculture products.

They also developing a broad range of chemical and biotechnological approaches to use biological raw materials for polymers. If industrial biotechnology is going to reach beyond novelty products for environmentalists, though, most experts agree that it will have to be part of an interdisciplinary approach. We think its really the integration of the biotechnology and traditional chemical engineering that will make this practical. A genetically engineered plant or a fermentation might be used to produce intermediates for traditional polymer synthesis, for example, allowing companies to eliminate costly low-yield steps without retooling an entire manufacturing process. Such considerations are quite crucial in industrial biotechnology, where the ultimate success of an approach is usually determined more in the marketplace than in the laboratory.

While Monsanto is one of the large life science company entering the plastic business, they may find themselves competing with a giant plastics company now entering biotechnology. Also at DuPont company scientists have developed a bacterial fermentation process to produce precursors of a type of polyester from plant carbohydrates. The resulting plastic is completely recyclable and friendly to environment.

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The writers are pursuing higher research at the Freiburg University, Germany.

China Tipped as Chief Culprit for Ozone Erosion

With governments met to discuss progress on the international effort to phase out chemicals that damage the ozone layer, Gemini News Service reports on new information pointing the finger at those who sustain the under-the-counter trade in these dangerous substances.

Neena Bhandari writes from London

HIGH in the stratosphere, between 12km and 27km above ground level, lies the Earth's sunblock: a layer of ozone which prevents ultraviolet radiation from reaching the Earth's surface. That layer has been steadily eroded over the last few decades by chemicals commonly used in a wide range of manufacturing processes and products, putting humans at risk of high incidences of skin cancer, immunodeficiency and eye cataracts. This September, the hole was bigger than it has ever been: a 27 million square kilometre gap, three times the size of Australia, over the southern hemisphere.

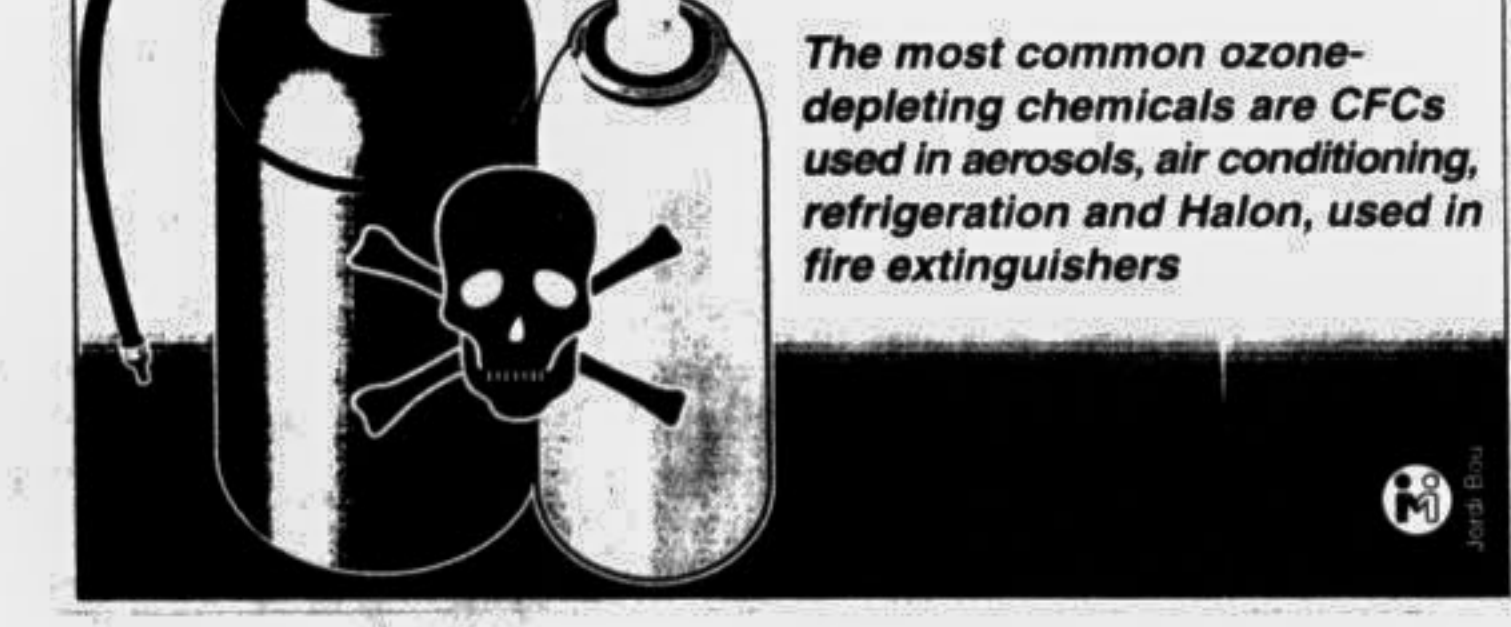
the oil and gas industries — are also responsible for ozone depletion. The damage they do to the ozone layer has been known since 1974, when Sherwood Rowland and Mario Molina, scientists at the University of California at Davis, published findings that CFCs can remain in the atmosphere and release large quantities of chlorine when broken down by the sun. This in turn breaks down a high-level ozone protecting the earth from UV radiation.

Global sunscreen

An immense hole over the South Pole has appeared in the ozone layer, the planet's atmospheric protection against ultraviolet radiation.

In 1989 the Montreal Protocol was established to try to eliminate the chemicals that damage the ozone layer.

- At present, the risk of malignant skin cancer in the US is now 1 in 87 - an 1,800% rise since the 30s
- By 2050 there could be 33,000 new cases a year in the US and 14,000 in NW Europe, even taking into account Montreal.
- But Canada's government estimates that if Montreal works: 19.1 million non melanoma skin cancers, 1.5 million melanoma skin cancers, and 333,500 skin cancer death can be avoided by 2060



The most common ozone-depleting chemicals are CFCs used in aerosols, air conditioning, refrigeration and Halon, used in fire extinguishers

ment across the EU still relies on CFC12. Industry analysts estimate the scale of the illegal trade at between 6,500 and 10,000 tonnes each year. As for the US, during 1997 over 200 tonnes of Chinese CFC12 entered the US market and this amount has been equalled in just the first six months of 1998. And though even the Chinese material is certified, for import licence purposes, as reclaimed or recycled, halon plants in China are shown in the EIA report to be almost exclusively for manufacture. The main customers, it says, are the US Department of defense and British Petroleum. As a result, the atmospheric concentration of halons continues to increase. Used mainly for the fire suppression, they contain bromine, which does 40-60 times more damage to ozone than the chlorine found in CFCs. "China, which can continue to produce halon until 2010, more than doubled its production of halons between 1992-94

and was responsible for 90 per cent of the world's halon output in the latter year," the report explains. It has to be remembered, though, that China is supplying a market in the developed world that, in theory, is no longer interested in ozone depleting substances. Although the EIA's report lays much of the blame for the illegal trade on China, it recognises that the developed world signatories are still the bulk consumers of illicit ozone depleting substances. It is possible that this factor is what stands in the way of effective monitoring and enforcement. In other words, the onus is on the developed world. And as with all things environmental, time is running out. — Gemini News

The writer has worked on several Indian newspapers, including The Times of India, Hindustan Times and The Pioneer.

So-called 'DNA vaccines' are also a possibility. These involve injecting selected HIV genes directly into the body. These enable the individual's own cells to make HIV-based proteins which, in turn, trigger natural immune defences in the human blood stream. Early tests on animals, allowing for the problems of such studies, show promise. They can also be produced relatively cheaply. Companies working on this approach include Merck, PMC, and Chiron, and smaller biotechnology companies such as Apollon and Auragen. Of these, only Apollon has begun human studies.

So-called 'whole-killed' vaccines are another subject of study. These are produced by neutralising the HIV by using chemicals, heat or irradiation, allowing them to be injected into the body without lethal effect — but also allowing the body to develop an immunity. A similar but more controversial technique involves so-called 'live-attenuated' vaccines — using live but weakened viruses — has been considered, but the risk of infecting the uninfected with the vaccine itself is high.

He adds optimistically: "We believe the prospects are good. We are excited to be developing a vaccine that may save millions of people world-wide, who are at risk of becoming HIV-infected."

By Hanna-Barbera