THE ROAD TO MANDALAY — MY TRAVELS IN MYANMAR

For the Unlucky Few Who Haven't Heard About it in Person!

REFLECTIONS

by Dr Omar Rahman

SALEEM dropped by a few days ago just after we got back from our vacation in Myanmar. "So the intrepid explorers have returned from 'the heart of darkness', the exotic land of 'ex-Burma'. How was it?"

"Don't mix your literary metaphors Saleem. The 'heart of darkness' was Conrad in Africa. 'Ex-Burma' as you so elegantly put it is more Orwell and Kipling. We had a great time."

"Don't be so terse O R Give me details. Was Big Brother watching you? Did you get a glimpse of Aung Sang Suu Kyi — our Burmese Joan of Arc? Did you get to go to Mandalay?"

"Saleem, we went on holiday. No, Big Brother was not watching us, atleast we didn't catch on, and no, we didn't get a glimpse of Suu Kyi, but did go past her house, and yes we did get to go to Mandalay."

I should explain that Myanmar (formerly known as Burma) has always had a certain fascination for me. When I was growing up, my father used to tell us stories about Burma. Apparently it was quite common for people in Bangladesh (particularly Noakhali and Chittagong) before the Second World War to own agricultural land in Burma, and there used to be a regular seasonal migration of agricultural labour from southern Bangladesh to Burma. While there have been long historical ties between Bangladesh and Burma, these ties however, have not always been looked upon favourably by the Burmese. The British colonialists in their usual strategy of divide and conquer used 'Indians' as middle men between the British administration and the Burmese people. Thus, Indians owned a significant amount of agricultural land used for rice cultivation in lower Burma and controlled small businesses and shops in the major cities. Indeed Rangoon (the Anglicized version of the, current Yangon) was in many respects a thoroughly Indian city, one of the great cities of the Raj on par with Calcutta, Delhi and Bombay.

Once Burma became independent in 1948, all the property owned by non-Burmese was confiscated in waves of nationalistic zeal culminating in 1962 when most non-ethnic Burmese were expelled. From about that time, and until recently, Burma was in a long period of isolationist, authoritarian, socialist hibernation, cut off from its neighbours and the rest of the world (except for China). Since 1988 however, Burma (now Myanmar) has cautiously opened up to the outside world. Despite overtures towards economic liberalisation, political liberalisation is still a contentious issue. The trials and tribulations of Aung Sang Suu Kyi are of course familiar to all of us.

I was eager to travel to Myanmar, as it was supposed to be one of the few places in South East Asia which had been spared the onslaught of reckless modernization. Within Myanmar, the city of Mandalay had a special attraction — Mandalay being a magical name associated with a number of famous authors: Kipling, John Masters and Daphne Du Maurier. Thus my wife and I had set out with a lot of excitement and some trepidation on our one week holiday to Myanmar with stops in Yangon, Mandalay and Began.

"Saleem you would have loved Yangon. It reminded me of Dhaka in the mid sixties. It's very picturesque, wide streets, beautiful trees — (its a shame how many of these similar trees we have cut down in Dhaka to make way for ugly concrete edifices), very few people or cars (compared to the Dhaka of today) and beautiful remnants of British Colonial architecture. It seems like a city slowly emerging from a long sleep. The pace is very laid back, the people friendly and courteous. But even in sleepy Yangon, the wheels of International Trade appear to be spinning. Five star hotels are coming up in every other corner as Myanmar prepares for Visit Myanmar year in 1996, and traffic jams, unheard of even to years ago, have been rearing their occasional ugly head. Trade is picking up, although international investors are understandably cautious with the political process in limbo. The big growth industry is tourism, with everyone scrambling to learn English. Apparently tourist guides earn three times as much as Yangon University lecturers, with the tips in hard currency. This is a big perk given that the Kyat (pronounced 'Chat") trades at 120 to the US dollar unofficially while the official exchange rate is 6 Kyat to the Dollar."

"O R, enough about Yangon, tell me about Mandalay — I have this romantic notion about it, the very name has a certain ring of exotic-ness about it. How does one get there?"

"Saleem, we cut our way through dense jungle, fighting the odd tigers, white elephants, snow white leopards — just kidding. It is like this only! Actually, we flew to Mandalay on a private carrier, Air Mandalay, which was expensive (Tourist tickets are all in hard currency and cost 10 times as much as what it costs Locals) but was surprisingly a pleasant experience. The flight left on time, the seats were comfortable and the service excellent. Quite a contrast to Bangladesh Biman on our return home, where the flight was late, the seats refused to go back, and the overhead luggage bins kept opening up in mid flight. There is a lot to be said for private enterprise. On the other hand, if your want a touch of home! — (Bangladesh Biman), fly the government owned Myanmar Airways, where flying is always an adventure!"

'Mandalay, the Chittagong of Myanmar (sorry, Rafay!) is not quite as exotic as its name. There are, however, a few things to see there, such as the royal palace, and Mandalay hill with its huge pagoda. But I must confess to a vague sense of disappointment, I am not sure what I expected, but this provincial capital did not capture my imagination. Sometimes it's best not to have reality intrude on one's romanticized visions."

"What made up for the disappointment of Mandalay was the fifteen-hour trip down the Ayerawaddy river from Mandalay to Bagan on a slow steamer. The Ayerawaddy was as calm as a lake. We drifted along, the villages on either bank with the Shan hills in the background, werefrozen in time, seemingly untouched by modernity. It was almost unreal, like a water colour landscape."

"The high point of our trip to Myanmar was visiting Bagan, an architectural wonder. In a land of pagodas, this was the apogee — a 30-square-mile area with over two thousand pagodas mostly built between the tenth and twelfth century, a testament to the very high level of sophistication of ancient Myanmarese civilization. There is so much to see there that our one day there hardly did it justice."

"So to sum it all up, Myanmar was everything a holiday spot should be, wondrous, exotic, unspoiled (atleast so far), a society in transition. So take my advice Saleem, go before the onslaught of international investment makes it into a second class Thailand."

Maize to Combat Food Crisis

by Jerome Sarkar

THE Population boom in the third world countries poses a global concern. There are very few options left to improve the present situation, particularly for a country like Bangladesh with alarming over-population and diminishing arable land. An enormous amount of money is being channelled to control the ever increasing population through different methods of family planning. But the result is of a little significance so far.

On the other hand, the land is depleting due to erosions of river banks and the arable land is being gradually transformed into shelters, office buildings, factories, highways, railway tracks etc. This has substantially caused a fall in agricultural output. These are some of the major factors which are responsible for the shortage of food in the country beside natural calamities like drought, cyclone and flood.

Under the circumstances hungry mouths are perpetually multiplying. The poor are groaning under the pangs of food-shortage and consequent ever-escalating prices of food grains. The views of the executive class, the decision-makers from the windows of the air-conditioned rooms almost never see through the hardships of the rural poor, the majority of the population.

Seeking an Alternative

In the backdrop of this, to a few thoughtful, an alternative source to combat shortfall of grain appears imperative. Since there is no opportunity to bring more land under agriculture sector, improved methods, high yielding varieties for greater output in the agriculture sector may be earmarked as alternatives. This may be implemented by providing improved seeds, extending irrigation facilities, ensuring easy access to fertilizers at a fair price etc.

The experts opine that the constant application of chemical fertilizers erodes the natural fertility of the soil thus gradually diminishing soil's ability to produce. Hence additional input to revitalize the soil by replacing partly the chemical fertilizer as far as practicable with indigenous and locally procured fertilizer ingredients like green manure, decomposed organic manure, cowdung etc. would help retain and raise the reproduction capacity of soil. On the other hand, introducing improved irrigation facilities, mechanized ploughing, off-season production etc. will help enhance crop production.

A Hope

As stated above, one of the alternatives of choice is to introduce new crops of improved varieties to raise the supply of food grains. The choice of Maize is thought a breakthrough towards this end. Maize is considered an alternative with bright prospect. It is being introduced in the country. In a few countries including our neighbouring country India, maize is considered an important cash crop.

Maize is not a foreign crop to the farmers in Bangladesh. But unfortunately it is neglected. They are not aware that our soil and climate is favourable for maize cultivation. Maize can be grown both in Kharif and Rabi seasons. Too much rainfall or too much cold hampers the seed from germinating and sprouting. Otherwise there remains practicably no risk. A little caution in this respect will mitigate the risk.

As Inter-crop/Co-crop

The experiments and experiences of other countries suggest that maize is a high yielding variety. It canbe grown in the interval between the main cropping seasons without hindering the major crops. Experts further opine that its production per hectare is more than any other cash crop. It needs less irrigation compared to rice or wheat. Yield of Maize is almost double of that of paddy and wheat. It grows 8 to 10 tons per hectare. It can be grown as inter-crop/co-crop too. It can be grown with crops like choola (gram), mugh pulses, groundnuts, peas, chilly etc. as co-produces.

Diversified Uses

Maize is a staple food in a few countries. Main advantage of maize is its diversified uses. Maize can be used as popcorn, flour and grills in food, pudding and, with the maize cereal different delicacies can be prepared.

It has food value for animals too. As found out, Maize has carotin and thiamine which is suitable for chickens and cattles. Hence it can be a very good source of fodder for livestock and feed for poultry birds.

Maize is used in the food industry to produce bakery products like bread/biscuits etc. as supplementary ingredient. It contains high quality of starch and has multiple uses in other countries.

According to experts, Maize grains contain more than six hundred units of Vitamin 'A'. Maize grains contain oil which is edible, colourless and odour free and, often used to enrich other food. Maize oil has poly-unsaturated fatty acid which helps children to develop their body and the oil help reduce cholesterol.

Last but not the least, dry trunks of the maize plant, leaves, cover-cells and corncobs can be used as fuel and thus can meet the demand of fuel in the villages.

RDRS Initiative

In the light of the above, RDRS took initiative to introduce maize and motivate the poor farmers in the field level within its working areas (Rangpur Dinajpur Regions) in 1994. Crop Diversification Programme (CDP) took a drive to introduce several crops including Maize. In the process some NGOs including RDRS signed agreement with "Integrated Maize Promotion Project" of the Ministry of Agriculture to promote maize in its working area.

RDRS selected the poor farmers, organized trainings and set up demonstration plots. RDRS field staff underwent "Training of Trainers" (TOT) on maize at the cost of CFP and they in turn imparted trainings to the prospective growers. Under the supervision of RDRS trained personnel, the small farmers cultivated in their own land the Hybrid Maize in 23 acres of land in Kharif I and 20 acres in Kharif II and 150 acres in Rabi season. Farmers bore 50% cost of the seed. Other production expenses were supported by CDP. RDRS motivated the farmers and extended all technical assistance. Hybrid seed called "Pacific-II" was imported from Thailand. Yield was amazingly high and it attracted the attention of the farmers widely.

The harvest has generated a sense of confidence among the farmers about Maize production. They intend to cultivate more this year provided the seeds are available. Once farmers assimilate the knowledge of its food value and other benefits, and integrate it into the family consumption, Maize is likely to turn out as leading cash crop in the passage of time.

However, according to agriculture experts, the facility for the preservation of seeds of Hybrid Maize is not existent in the country. Hence the seeds are to be imported from abroad. Preservation facilities however would save both time and money and boost up incentives for production.

In conclusion, taken stock of all factors, the "Crop Diversification Programme" launched by the government is a step towards right direction and sure to serve the purpose best in the present context. The supplementary measures by the NGOs to the Government programme has also borne fruitful results. Maize is obviously an additional crop. Once accepted by the farmers, it will contribute greatly to minimise the dependency on imported food grains. Bold initiatives, active cooperation and meaningful assistance from the concerned authorities for the promotion of Maize will open a new horizon in the field of agriculture production and alleviate the sufferings of the poor farmers, resulting in an answer to the food crisis.

Fighting Greenhouse Effect and Ozone Depletion

by Md Asadullah Khan

THE disastrous climate change and droughts in some parts of the world have raised fears that the dreaded "greenhouse effect" resulting in global warming due to build-up of carbondioxide and other gases in the atmosphere might already be there. Environmental scientists now increasingly believe that the carbondioxide gas released when coal, gas or oil burns is now responsible for more than half of the impending global warming. Data and findings revealed by the World Resources Institute (WRI) suggest that greenhouse threat is more serious than had been realised. About 40 to 50 million acres of tropical forest are disappearing every year. Deforestation is second only to the burning of fossil fuels as a source of carbondioxide (CO_2) concentration. The disastrous "green house effect" causing global warming as predicted by the scientists will raise sea levels enough to inundate the plain of Holland and Bangladesh, and obliterate the Maldives, among other consequences.

The danger of ozone depletion is only part of the problem. This threat to ozone was first detected in 1983, when scientists of a British Antarctic Survey Team made the startling observation that concentrations of ozone in the stratosphere about 10 to 30 miles above troposphere were dropping at a dramatic rate over Antarctica. Other than various factors responsible for this drop, scientists are now convinced that there are some more disturbing factors at work. The cause is a group of man-made chemicals called chloroflourocarbons (CFCs) which are used, among other things, as coolants in refrigerators and air conditioners, for making plastic foams and as cleaning solvents for micro-electronic circuitry. Mounting evidences are available that under certain conditions these compounds, rising from earth plane into the stratosphere, set off chemical reactions that rapidly destroy ozone.

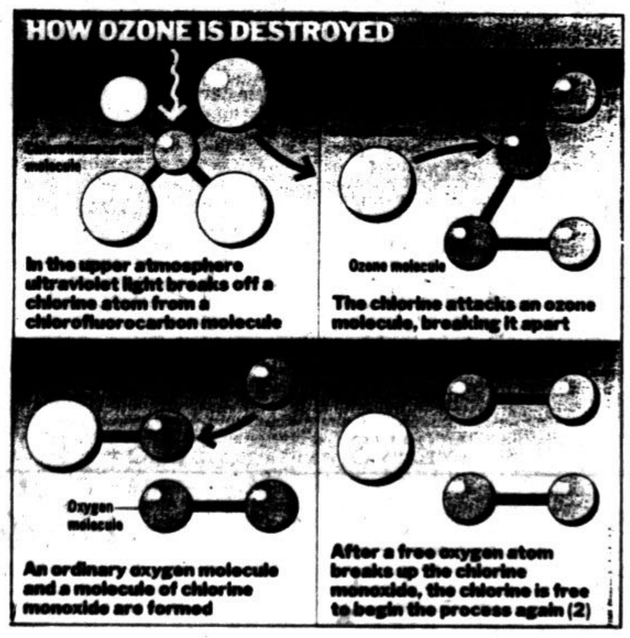
The precise chemical process is yet to be established, but the central role played by CFCs is undeniable. Scientists of the 1986 Antarctic National Ozone Expedition Team pointed directly to a CFC-ozone link. Scientists at the NASA in Boulder, USA further stressed : "humans are altering the earth's surface and changing the atmosphere at such a rate that we have become a competitor with natural forces that maintain our climate."

Impressive evidences point to the fact that the ozone layer diminishes over populated areas and indications are there that the process has begun, although nowhere as dramatically as in Antarctic and the consequences could be dire. Ultraviolet radiation, a form of light invisible to the human eye, causes sunburn and skin cancer. In addition, it has been linked to cataracts and weakening of the immune system. "A layer of ozone in the stratosphere protects the earth by blocking the sun's ultraviolet radiation and the future danger is presented in the form that when man-made CFCs reach the upper atmosphere, some of the ozone is destroyed allowing more harmful ultraviolet light to strike the earth."

Without ozone to screen out the ultraviolet rays all these ills will multiply enormously. The National Academy of Sciences estimates that even an one per cent drop in ozone levels could cause 10,000 more cases of skin cancer a year in the US alone. The UN-sponsored Conference held in Montreal, Canada in 1987 urged all the developed countries to reach an agreement for limiting the production of CFCs and similar compounds that wreak havoc on the ozone.

Potentially more damaging than ozone depletion and much harder to control is the greenhouse effect, caused in large part by carbondioxide (CO_2). The effect of CO_2 in the atmosphere is comparable to the glass of a greenhouse : it lets the warm rays of the sun in but keeps the heat from radiating back into space. Findings based on continuous research and data monitoring suggest that human contributions to the greenhouse effect, mainly CO_2 that is generated by the burning of fossil, may be hastening the global warming trend that could shoot up average temperatures between 2 F and 8 F by the year 2050. Other than this, the smoke and fumes and exhaust that humans generate because of the increased use of fossil fuels in automobiles and factories will eventually alter the earth's climate. On a global basis, every year we are adding a net 3 billion tons of carbon to the atmosphere in the form of CO_2 plus methane, CFCs and other harmful trace gases. The consequences may be most disastrous. They could trigger coastal flooding, droughts and all these alarming signals are already there. The country experienced severe drought last year followed by four successive floods. The prescribed cure that environmental scientists suggest is to reduce fossil-fuel emissions, stop producing CFCs, stop deforestation and start replanting. Shockingly true, reports available from Sylhet, Chittagong, Mirzapur, Sundarban forest zone, and all over the northern zone indicate that felling of trees for fuel wood and timber extraction has gone up on a massive scale without any effort to replenish them.

We must try to realise that the country needs trees and unquestionably lots of them to store the carbon produced by the growing population. More than ever we have to realise now that forests are giant utilities providing an indispensable service to the stability of the planet. Forests are carbon dumps; trees extract CO_2 from the atmosphere, emit oxygen and store the carbon in the wood, leaves, roots and surrounding soil. So the need is for preserving the forests that are still there and replenishing those that have been destroyed.



Without any contradiction it has now been established that the relationship between CO_2 emissions and global warming is no longer debatable. Findings of a Soviet-French Joint Research Team have revealed impressive evidence that CO_2 levels and worldwide temperatures are intimately related. The consequences, they fear, are that in the next half-century, dramatic change in weather patterns, major shifts of desert and fertile regions, intensification of tropical storms and a rise in sea level, caused mainly by the expansion of sea water as it warms up, would come about.

The area is which such climatic warming will first occur is the atmosphere, the ocean of gases that blankets the earth. The bottom layer of the atmosphere, the troposphere is the place where all global weather takes effect. It extends from the earth's surface to a height of 10 miles. Because the air warmed by the earth's surface rises and colder air rushes down to replace it, the troposhere is constantly churning.

Ozone (O_3) is a form of oxygen that rarely occurs naturally in the cool reaches of the troposphere. It is created when ordinary oxygen molecules (O_2) are bombarded with solar ultraviolet rays, usually in the stratosphere. This radiation shatters the oxygen molecules, and some of the free oxygen atoms recombine with O_2 to form O_3. The configuration gives it a property that two-atom oxygen does not have. The most startling feature of this ozone formed is that it can efficiently absorb ultraviolet light. In doing so, O_3 protects O_2 at lower altitudes from being broken up and keeps most of these harmful rays from penetrating in to the earth's surface. The energy of the absorbed radiation heats up the ozone creating warm layer high in the stratosphere that act as a cap on the turbulent troposhere below.

Ozone molecules are constantly being made. But they can be destroyed by a number of chemical processes, most of them natural. Stated precisely, the stratosphere receives regular injections of nitrogen bearing compounds such as nitrous oxide (N_2O). Produced by microbes and fossil fuel combustion, the gas rides the rising air currents to the top of the troposphere. Like most chemicals, man-made or natural, that reach the stratosphere, N_2O tends to stay there. Reports gleaned from the National Academy of Sciences likened the upper atmosphere "to a city whose garbage is picked up every few years instead of daily". As long as five years after it leaves the ground, N_2O may finally reach altitudes of 15 miles and above, where it is broken apart by some ultraviolet radiation that creates O_3. The resulting fragments called radicals — attack and destroy more ozone molecules. Another ozone-killer is methane (CH_4), a carbon-hydrogen compound produced by microbes in swamps, rise paddies and the intestines of sheep, cattle and termites.

CFC_s used as coolants in refrigerators and as propellants in aerosol sprays had shown growth rates that were fabulous and at the same time pretty useful. They were almost produced at a rate of hundreds of thousands of tons yearly. But they seemed too good to be true. CFC_s in aerosol cans are sprayed directly into the air, they escape from refrigerator coils, and they evaporate quickly from liquid cleaners and slowly from plastic foams.

In the troposhere, CFC_s are immune to destruction. But in the stratosphere they break apart easily under the glare of ultraviolet light. The result : free chlorine (CL) atoms, which attack O_3 to form chlorine monoxide (ClO) and Oxygen (O_2). The ClO then combines with a free oxygen atom to form O_2 and a chlorine atom. The chain then repeats itself. "For every chlorine atom released, 100,000 molecules of O_3 are removed from the atmosphere" — a catastrophic phenomenon as announced by Rowland, a chemist at the University of California at Irvine.

The greenhouse effect is not totally unwelcome. Unlike ozone depletion it is a natural phenomenon with positive consequences. Without it, Rowland Group of scientists points out, "the earth would be uninhabitable. It is what keeps us from being an ice-frozen planet like Mars." Indeed, if gases like CO_2 did not trap the sun's energy, the earth's mean temperature would be 0 F_0 rather than the current. 59 .

However, the dire prediction about the catastrophe that is likely to strike planet Earth because of the guzzling of fossil fuels by automobiles and factories must not come to pass all too sudden. Scientists from 38 countries along with the Bush administration of the US in 1990 called for 60 per cent cut in CO_2 emissions. Conservation is the cheapest and fastest way to do that, at least until solar and wind powers, which emit no CO_2 are widely available. Efficiency alone, suggests Christopher Flavin of Vorld Watch Institute, could cut global CO_2 emissions to 3 billion tons a year by 2010, from today's 5.6 billion.

Environmental scientists have suggested the slowing down of greenhouse effect and ozone depletion. The Montreal Accord reached in 1987 urged the signatory countries to reduce production and consumption of CFCs by 50 per cent by 1999. The accord further allowed the developing nations to an increases use of the chemicals for a decade so that they can catch up in basic technologies like refrigeration. The environmental protection agencies have issued a stern warning on the basis of their calculation that without the accord being materialised, a staggering 131 million cases of skin cancer would occur among people born before 2075. This is an alarming forecast that the developed countries of the world must pay heed to.