

Air Pollution and its Control in

Dhaka City

by Dr Jasim Uddin Ahmed



The worst polluters are the two stroke engines used in the three-wheel autorickshaws and the similar contraption popularly called, tempos.

AIR pollution is now a common complaint in Dhaka city. Whoever I talk to says it is unbearable to breathe in the busy traffic zones, more so in areas of heavy traffic jams. The common complaints are burning of eyes and throat. Another usual complaint is coughing, which, if superimposed with cold, persists for weeks in spite of medication.

The major source of air pollution is the vehicle exhaust, which contains partially burned gasoline that is recognizable by the heavy smoke from many vehicles, carbon oxides, sulphur oxides, nitrogen oxides and toxic metals, mainly lead. It has been claimed by some studies that lead content in the air of Dhaka city during the winter months is the highest in the world and several times higher than internationally accepted limits. The worst polluters are the two stroke engines used in the three-wheel autorickshaws and the similar contraption popularly called, tempos. In the evening, in particular, some of the busy streets covered with exhausts from vehicles assume the look of a long smoke tube. It is impossible to have free breathing in this condition, whether by pedestrians or by the riders of vehicles. Many people are seen to cover their nose with handkerchiefs or by some other means, including practically useless nose masks now in the market.

Besides vehicle exhausts, Dhaka city air is also polluted by a number of other sources. The ones that deserve mention are: — Resuspended dust and smoke-laden vehicle exhaust which has settled on the ground by gravitational settling or precipitation. — Industrial atmospheric effluents, carrying various chemicals as well as toxic metals. Industrial liquid effluents released into drains, when clogged or blocked, can overflow and become a source of air pollution when dried. — Smoke from burning coal released into the air through the chimneys of brick fields that is carried by wind to Dhaka city from immediate vicinity. Burning coal causes emission of sulphur oxides, carbon oxides, and many metals including uranium. Couple of months ago, while I was coming from Savar, I counted nearly two hundred brickfield chimneys, each one profusely releasing heavy dark smoke. At that very moment, I noticed all the smokes were being blown by wind towards Dhaka city. Similar scene one would encounter along the Narayanganj-Pabna route. There are brickfields all around the Dhaka city, therefore, wind from any direction will carry such smoke towards the city.

Similar to the smoke from coal-burning brickfields, smoke from rice mills not far from Dhaka city gets access to the city air through wind or dispersion. Last year, as I was coming from Barisal, I counted chimneys of rice mills from Munshiganj to Dhaka. The number was alarmingly high, and each chimney was pouring its column of air into the air.

Dried human saliva and coughs, which people spit on the roads and footpaths right and left, after being dried by sun get airborne as pollutants.

Dried, resuspended urine, fresh or rotten, from roadsides where men openly relieve themselves without reservation or shame, is another source of air pollution. Roadside in general are men's urinals; there are many spots (for example, Gulistan, Kaoran Bazar, Farm Gate, Mahakhali rail gate etc) which are notoriously offensive to the naso-pharyngeal chamber.

Open drains, loaded and blocked with accumulated rotten refuse, emit offensive odour and often overflow on to the roads and streets. As the overflow dries in the sun, it becomes airborne by resuspension. Similarly, clogged underground drains ooze rotten slush on to streets and are, therefore, another kind of air pollution source. One classic area where sources of both kinds exist is Hazaribag, the site of tannery industries.

Litters of all kinds in

market places, where vegetable and other leftovers and blood and other refuse from slaughtered animals get rotten, emit intolerable smell, are smashed by vehicles or human feet, and, after being dried in the sun, get airborne by resuspension. Majority of the floating population in the city cluster around market places day and night and generate all kinds of litters from food bags to excreta.

Domestic garbage, recklessly thrown away have countless fates, including being added to the sources of airborne pollution of the city. Roads in many areas are strewn with plastic bags and all kinds of rubbish.

City garbage collection spots, where symbolic containers are located, are the scenes of garbage rummagers and crows. I have keenly observed that people carrying the garbage from their homes take trouble to come to the spot, and dump it on to the street, little away from the containers. Piled up garbage has a large spectrum of rubbish. The collective juice oozing out of the rotting garbage pile acts as a primordial kind of soup for all germs to breed. This mixes with dust and, after being dried



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by sun, becomes airborne as another germ-laden air pollutant. — Cooking hearths in the slum areas, the so called bastis, generate smokes from burning any possible fuel, from rubber tyres to paper cartons or other combustible or partially combustible solid wastes from many sources, including industries. The chemical pollutants in such smokes can be any body's guess.

Tall buildings in semi-slum areas, I call them modern slums, where no one is prepared to sacrifice an inch of land for road but raise multistorey structures to house more than capacity inhabitants, are the indirect sources of air pollution through various routes — traffic jams in narrow roads causing vehicles to idle, piling up of garbage and litters, etc.

The city has few main roads running south to north, while there is practically no long east-west roads crossing the city; this resists easy flow of traffic. And most of the roads — east-west or north-south — are often partially blocked by buildings belonging to influential people. Such congestion and or sudden blockade of main flow traffic causes traffic jams

at the turns and thus concentration of exhausts. And there is daily new input of vehicles on the roads, whereas new roads are not added, as such the traffic is beyond the capacity of the present roads.

Possible Solutions

The following suggestions are my own; the authorities concerned may find some worth in them. I would like to stress that sincere public co-operation and public participation are essential for the success of any corrective measure that is planned to be implemented. Motivating those who are at the top of the pollution pyramid, instilling in them self realization and moral obligation, and raising civic sense among them should be the primary effort. Means should be devised for public education on how to protect their own environment. Such means may be found through television, schools, public meetings, pamphlets, meetings with owners of industries, factories, workshops, etc. Human being is a part of the environment, and, therefore, should be a friendly participant in it. Misuse or abuse of our own environment will bounce back, hence, with time the environ-

ment will close in on us. The Government may promulgate rules on papers, but unless the people to whom such rules are addressed to are educated in their heart to respect those rules, these papers will appear to them as another bunch of litters.

Reducing pollution from vehicle exhaust: The first step should be to phase out autorickshaws and tempos which are the sources of offensive exhaust and intolerable noise. The newly introduced Maxi seems to be a practical alternative to the vehicles with two stroke engine. It would be necessary for the Government to work out mechanism how to enhance Maxi or similar service with fare within reach of average people and absorb autorickshaw and tempo owners or drivers in to Maxi or similar service. As the Maxi has a higher fare than that for tempo, people may react to such a proposition. But it should be kept in view that people using tempo save money in one pocket, but lose from another pocket in terms of medical costs for illnesses resulting from pollution. Autorickshaws, when used by three persons, seem to be more expensive per person than Maxi. (I would like to

make a note here that I am not deriding an owner of Maxi, nor do I know any body who introduced Maxi in Dhaka. I congratulate those who thought of this concept). In my opinion, Maxi or Maxi type smaller vehicle can play even on narrow streets, thus serving most corners of the city.

Reducing air pollution from other sources:

The Government should take measures to tighten, as well as strictly implement, emission controls for all vehicles and urge vehicle owners to sincerely co-operate.

The industries, including brickfields and rice mills, should be obliged to use filters in chimneys to contain as much pollutants as required by emission rules.

The city garbage collection system should be modernized and enough collection containers should be provided at increased number of spots, so that people are morally obliged not to throw litter right and left. Market places generating large volumes of waste should be provided with adequate number of containers and periodic review of the need should be ensured. Proper motivation to use containers for dumping wastes will prevent littering.

Trash cans should be provided on all streets at short distance intervals so that people are prompted or motivated to use them for dumping litters, either from domestic or other origins.

Roadside urination and fouling by men, beggars, basti people, etc. should be eliminated by providing public toilets at various places, more particularly in busy areas, including shopping and market places. After adequate facilities are provided, penalty for urinating or fouling on roadsides must be instituted.

Drains should be kept under routine surveillance to ensure easy flow; prompt attention should be given to remove blockage or clogging. Stopping spilling on roads has to be approached through enhancing public awareness about personal hygiene and consciousness about public health. Education through television and other means about the detriments of spitting on roads and public places should be provided on a routine basis.

Reducing traffic jams in the city would need opening new roads, and crack blockades caused on main roads by buildings of influential people or other undesirable structures. These are expensive propositions but sooner or later something will need to be done about these. The other important measures would be to remove (in my opinion) the traffic circles and allow straight flow of traffic by proper traffic light control. Turns at such important points may be simplified by proper road engineering skills.

To handle the problem with tall buildings in semi-slum areas is a joint responsibility of Rajuk (Dhaka Improvement Trust) and City Corporation. To start with, both organizations earlier made mistake once by approving building plans without having a city master plan. Both Rajuk and City Corporation could have ensured at least a reasonable road width in every area. While Rajuk attended to areas like Gulshan, Banani, Uttara, Baridhara, etc., it was not meticulous about enforcing rules in other areas. Currently, a trend is growing to demolish old buildings and build multi-storey buildings on the same plots. Here is a chance both Rajuk and City Corporation is losing. Before approving a new multi-storey building to replace an old building both the organizations can require the builder to release 4 to 6 feet of land for the road. In this way and over time, roads in such areas will grow to be wider on both sides, without having these two organizations been responsible for any compensation, which they would have had to pay, if the initiative to widen the roads would have come from them.

The author is retired Head of Radiation Safety (Director), International Atomic Energy Agency, Vienna.

Economics and Professor Yunus

by Nazrul Islam

The purpose of this write-up is not to criticise Professor Yunus but to engage him and others, who are interested, into a discussion. Such a discussion may help clear up many issues and determine the agenda.

I read with great interest Prof. Yunus's article, 'Towards a Poverty-free World', that appeared in The Daily Star on March 31, 1998. Like many other Bangladeshis, I am also a great admirer of Prof. Yunus. His innovative approach to microcredit has helped Bangladesh acquire a new positive image in the international arena, and for this we may all be thankful to him.

I also share many of Prof. Yunus's criticisms against "economics" and am therefore curious about his ideas regarding what he calls, "new economics" or "new economics text-book". The purpose of this write-up is not to criticise him but to engage him and others, who are interested in this issue, into a discussion. Such a discussion may help clear up many issues and determine the agenda.

First of all, we need to recognise that economics is not a monolithic discipline. There are many different schools of economics. For example, one could speak of neo-classical economics, institutional economics, radical economics, Marxian economics, etc., to mention a few. Obviously, they are not of equal status. Neo-classical economics has had the status of being the mainstream economics, and with the recent demise of the "socialist" world, this pre-eminent status of neo-classical economics has become further fortified.

It is obvious that Prof. Yunus's criticisms are mainly directed towards neo-classical economics. Nevertheless, it is useful to be clear on this because it then requires us to check whether some of Prof. Yunus's criticisms of neo-classical economics have already been voiced in other schools of economics. This may also help in seeing where some of the ingredients of Prof. Yunus's proposed new economics text-book may potentially come from.

Many of Prof. Yunus's criticisms of neo-classical economics are quite on the mark. However, one needs to be cautious not to over do it, because criticisms may then become misplaced and counterproductive. For example, Prof. Yunus is right that neo-classical economics has a very reductive approach. It tends to reduce in its analysis only those things (variables) that are observable and measurable. Thus, it wants to stay away from a direct analysis of human emotions, sentiments, etc.

However, that does not imply that 'labour' in neo-classical production function is supposed to mean 'draught animal'. It is quite possible to distinguish different types of labour, including the types that arise on account of differences in gender and creativity. Ironically, contrary to Prof. Yunus's view, in neo-classical economics, entrepreneurship is just another kind of labour!

Similarly, a neo-classicist may argue that she is not lacking 'ambition', 'sense of sacrifice', 'sense of pride or accomplishment' etc., out from her analysis either. These all may be present in an individual's utility function, which determines her or his labour supply function. On a second point, it may not be quite correct to say that neo-classical economics considers wage-employment as the only form of employment and rules out self-employment.

In fact, discussion of labour-leisure choice in neo-classical economics is often initiated in the context of Robinson Crusoe, the quintessential self-employed (until he meets Friday). The neoclassical abstractions of utility function, supply and demand functions, revealed preference, etc. may be used to analyse self-employment just as well as to analyse wage-employment. Finally, it may also not be quite true that neoclassical economics negates the existence of social consciousness-driven entrepreneurs.

In the scheme of neo-classical economics, social consciousness is again part of the utility function that determines preferences of an individual. Nor is it the case that social consciousness-driven entrepreneurs are absent in the developed capitalist economies, which neo-classical economics wants to describe. In the US, for example, non-profit enterprises or institutions comprise a large part of the economy.

All in all, therefore, it may not be quite accurate to lay all the blame for poverty in Bangladesh and other Third World countries on neo-classical economics. After all, the countries that gave birth to neo-classical economics and are sustaining it are not poor! There must be other reasons why we are poorer than the home countries of neo-classical economics. The task is to find out these reasons and to devise such economics curriculum for our universities as would be best suited to deal with them.

That may be a more fruitful direction for Prof. Yunus's quest for a 'new economics text-book'.

Prof. Yunus is quite correct in saying that poverty is created not by the poor. It is rather created by 'the theoretical framework that we work with, the institutions that we built, policies that we pursued, and the norms that we created.' One of the major limitations of neo-classical economics is that it takes the institutions as given and does not try to analyse them. This is less of a problem in the developed countries where the institutions necessary for efficient functioning of a market economy are already more or less in place. But, this becomes a serious problem when a market economy is fostered in a developing country where the necessary institutions are either absent or inadequate.

It is this absence of institutional analysis that led to the failure of the neo-classical economics to see that there may be other (institutional) mechanisms for enforcing loan repayments than just through the use of collateral. It is a great merit of Prof. Yunus that he could identify this institutional possibility and make very successful use of it. Another important limitation of neo-classical economics is its reluctance to discuss distribution issues. It tends to leave distribution to the market mechanism of equality of marginal productivity and remuneration of factors of production.

Again, this is predicated on certain assumed institutional arrangements regarding bargaining processes among representative of different factors of production. Such institutional arrangements may not be present in a developing country, thus creating a mismatch between theory and the real context.

This suggests that the "new economics text-book" or "new economics curriculum" for a country like Bangladesh should consist of a balanced combination of neo-classical analysis of market functioning on the one hand and institutional analysis of social arrangements required for functioning of various kinds of economies, on the other. From this viewpoint, the institutional school of economics may have something useful to offer. Institutional analysis also requires understanding of political economy.

Hence, classical political

economy, and its later day developments should also be very relevant. Understanding of institutions also requires adequate knowledge of history. Thus, economic history should be an important component of the new economics curriculum. Bulk of Bangladesh's economy still is comprised of self-employed, peasant households. (Note that, contrary to Prof. Yunus's preference for self-employment to wage-employment, preponderance of self-employed, peasant households has not prevented Bangladesh from being poor.) Peasants are not irrational, as we had to learn, unfortunately, from Theodore Schultz.

However, in large parts of Bangladesh's economy, production relations are still very much enmeshed with personal, kinship, and other non-market relationships. Economics curriculum in Bangladesh needs to include analysis of this complex web of market and non-market production relationships. Recent advances in game-theoretic analysis have opened up new possibilities of rigorous analysis of these kinds of situations. It is simply not right to pretend that impersonal market relationships are universal in Bangladesh, and thereby focus almost exclusively on the analysis of transactions in such markets only.

Economic analysis of non-market and pre-market-type transactions can provide also the link between economics and analysis of institutions. Ultimately, this will help in transformation and creation of institutions that are so necessary for successful economic and social development.

To conclude, therefore, what we need in economics education is a balanced combination of neo-classical analysis of market economy, analysis of non-market economic transactions, and institutional analysis. Plain broadsides against neo-classical economics are not necessary for achieving this objective.

In fact, what I am afraid of is that such broadsides may end up being an undue distraction from pursuing the right objective. That will be an unfortunate outcome and perhaps not the best use of Prof. Yunus's potential in advancing the above objective.

The author is a Professor of Economics at Emory University, Atlanta, Georgia, USA.

Twenty-five Years of UCEP

A Success Story: What Next?

by Aziz-ul-Haq

UCEP has to graduate from a Programme to an Underprivileged Children's Education Foundation (UCEF) which should draft a policy on education of underprivileged children for government's consideration.

IN twenty-five years of its existence the Underprivileged Children's Education Programme has gained considerable experience and commendable success. It has also raised high hopes for the future. Facilities for Research, Seminar, Symposium should be created to draw peoples' attention. It has to be reckoned that after UCEP's phase of trials and errors, it has reached a stage when people must be informed of what was achieved in the past and should happen in future. The days of publicity-shyness are over. UCEP should, in future, publish periodical information bulletins for public attention.

UCEP should make full use of its own existing resources such as land, buildings, water-bodies etc so as to make those visible to people. It should adopt or host economic activities such as printing and publishing of books, supply of stationery items, school uniform, school furniture, school meals and so on.

The beneficiaries of UCEP's education programmes are deprived children of underprivileged urban families who cannot or did not take advantage of the country's general education facilities. UCEP aims at im-

parting a modest level of basic skills in literacy and numeracy and then expects its pupils to take courses of practical training in such vocations as promise employment for them.

UCEP selects students from among underprivileged urban families with great care. In most cases, a growing child in such a family is of some practical help to the family or is employed by some other. UCEP has to assess a potential student's aptitude, discuss pros and cons with his or her parents/guardians, with the current employer, if any. UCEP has to fix its teaching hours to suit its students' convenience and has to be watchful about absence from attending classes.

UCEP's vocational courses include practical training in workshops, factories and business establishments. UCEP maintains liaison with potential employers of its graduates. Such graduates enjoy preference in respect of recruitment and emoluments in some industries, such as garments, electronics, metal works.

UCEP's activities has provided some relief to our overburdened primary education system and has helped supply of trained workers to a growing

number of economic enterprises. UCEP has to build bridges of understanding with its graduates, their employers, patrons, planners, policy makers, the government and create favourable climates for expansion of its activities. UCEP should benefit by collaborative programmes with other like-minded institutions at home and abroad.

UCEP now has general education and vocational education schools in Dhaka, Chittagong, Khulna and Rajshahi. It should expand its activities to the two new divisions namely Barisal and Sylhet by the end of this century; and then serve all the district towns of Bangladesh. In future it should aim at deploying not less than two-thirds of its resources to promote technical vocational education which will be the order of the day in the competitive world of the coming century.

Presently UCEP Association has only 30 members, each of whom contributes a sum of Tk. 500 annually to the Association. This membership base should be impressively broadened. Each such member should contribute a sum of Tk. 1,200 annually. UCEP should enroll Life Members on payment of

Tk. 1,00,000 each at a time. Membership and Life Membership fees should initially be invested for three years, after which the interest should be used for offering micro-credit facilities to such enterprising graduates as show promise in self-employment.

UCEP should attract patrons on payment of Tk 10 lac which should be used for promotion of research, publications and exhibitions. The government should exempt such donations from payment of income tax. UCEP should secure state support through projects for creation of new facilities and services throughout the country.

UCEP's measure of success, in future, will be conditioned by the variety, quality and quantity of its programmes. The country will be happy to see signs of such progress. The state will have to respond generously to such a plan of action. Friendly donors, it is hoped, will respond more generously in favour of such planned development.

UCEP has to graduate from a Programme to an Underprivileged Children's Education Foundation (UCEF) which should draft a policy on education of underprivileged children for government's consideration. Graduation to UCEF will be an uphill task. We must act right now and launch an expedition to implement "an idea whose time has come".

The writer is former director of BARD/CIRDA.

Sammilita Nari Samaj condoles Shazneen's death

By Staff Correspondent

The Sannilita Nari Samaj (SNS) in a press release yesterday expressed deep concern over the murder of the schoolgirl Shazneen Tasnim Rahman, youngest daughter of Transcom Ltd Chairman and Managing Director Latifur Rahman in Gulshan Thursday.

"Shazneen's planned murder amply proves there has been tremendous deterioration in law and order. The government is to be blamed for such deterioration in law and order.

SNS also observed that the role of police was very mysterious.

The SNS noted with grave concern that some of the state run TV drama serials were portraying violence, repression on women which provoke mostly youngsters to resort to violence in the society.

JS told 724 cases filed against owners of brickfield

Forest and Environment Minister Syeda Sajeda Chowdhury told the Jatiya Sangsad yesterday that the number of cases against brickfield owners during 1996-97 was 724 for burning wood violating the existing laws, reports BSS.

Replying to a question from Awami League member Shahjahan Khan (Madaripur) she said of the total cases 511 have been resolved while 213 remain pending.

She said the government has promulgated Brick Burning (Control) Ordinance on May 13, 1992 to stop burning wood in the country's brickfields.

She further said the government has undertaken Dhaka Urban Transport Project with World Bank assistance.

JS body appraises 4 ADB aid packages

The Parliamentary Standing Committee on the Ministry of Health and Family Welfare yesterday appraise four aid packages of the Asian Development Bank (ADB), reports BSS.

Chairman of the Standing Committee Dr Kazi Abu Yusuf chaired the meeting at Jatiya Sangsad.

The committee decided that tender notice will be served for the first and second package to ensure transparency and accountability of the government as sub-committee report observed different anomalies following their probe into the medical equipment procurement tenders.

It was also decided that the lowest bidder will get the third package while the ministry will give work orders for the fourth package to the selected bidder.

Members of the committee, state minister for Health and Family Welfare Dr M Amanullah, Dr H B M Iqbal and Begum Aleya Ferdousy participated in the meet.

Biman to resume Barisal flights from May 3

Biman Bangladesh Airlines will resume its twice-a-week (Sunday and Thursday) flights to Barisal from May 3, a Biman press release said in the city yesterday, reports BSS.

The revised fare on this route has been fixed at Tk 950.00 for one-way journey.

On every Sunday and Thursday BG 471 will depart Dhaka at 1700 hours and reach Barisal at 1730 hours and DG 472 will depart Barisal at 1800 hours and reach Dhaka at 1980 hours as per the revised schedule.

Biman had to cease its operation on Dhaka-Barisal route earlier due to severe constraint of aircraft. With the return of Biman's second ATP into service, Biman is resuming its operation to Barisal, the press release added.

Police round up 151 in city

Police rounded up 151 people from different parts of the city on various charges during the last 24 hours till 6 am yesterday, reports UNB.

People frustrated by AL rule, alleges Jamaat

Amir of Jamaat-e-Islami Prof Gorn Azam yesterday alleged that the present government has failed to accomplish a single sublime work during its last two years rule, reports UNB.

"People of the country are getting frustrated and looking for an alternative due to misrule of this government," Golam Azam said addressing a public meeting at Paltan Maidan in the afternoon.

Training course on feature writing begins

A four-day advanced training course on feature writing began at the conference room of News Network in the city yesterday, reports UNB.

Correspondent of Associated Press Farid Hoquein and Editor of News Network Shahiduzzaman are conducting the course, organised by News Network, a feature news agency.

