Yes we can

Let us not, therefore, question our ability to operate nuclear power stations. Certainly this is a challenge, but at least we have a base (the Savar research reactor) to train our staff in. Yes we can.

A.B.M. NURUL ISLAM

THERE is widespread scepticism among the intelligentsia of Bangladesh when it comes to employing nuclear technology for power generation. They say it is too sophisticated, too dangerous and is for the developed countries.

But are these fears based on facts?

When Dr. I.H. Usmani, chairman of the then Pakistan AEC, recruited manpower in the early 1960s to develop the base for nuclear applications, he was more or less even-handed in employing scientists and engineers from both the wings of the country.

As a result of the tumultuous events of 1971, when the two wings parted company, our respective nuclear manpower bases were more or less equal. This fact was recognised in a survey by TIME magazine in the mid-seventies as to which countries were capable of developing nuclear weapons. Both Bangladesh and Pakistan, amongst others, were mentioned.

While Zulfiqar Ali Bhutto decided to build the nuclear bomb even if they had to eat grass, our political leadership had to deal with the aftermath of the utter destruction resulting from the War of Liberation.

Lacking satisfactory jobs in the nuclear field at home, the two senior-most nuclear engineers of that generation one went on to build and manage the Ashuganj Fertilizer Factory and the other joined the Atomic Energy of Canada Ltd (AECL). He was entrusted to head the operations of the Embalse Nuclear Power Station in Argentina and later on to be the Commissioning Manager of the Cernavoda Reactor in Rumania.

The next-level professionals of that era went on to teach nuclear engineering courses in the Middle East, do research in far away places like Brazil, test and certify nuclear reactor operators in Canada, etc.

In spite of our limited resources, we are fortunate that the country had at least invested in a research reactor at Savar, which we have been operating successfully since 1986. The technical problems that arose were all been solved using local expertise.

As regards nuclear technology being the prerogative of the developed world, look no further than across our border. India has currently 19 reactors in operation (the first one operating since 1969) and 4 reactors under construction, while for Pakistan the figures are 2 (first one operating since 1971) and 1 respectively.

UAE ordered four 1400 MW power reactors (to come on stream between 2017 and 2020) from South Korea last December. Is our manpower in any way inferior to any of these developing countries?

As for the capability of the developing countries to operate these sophisticated facilities safely, the record is mixed. Of the two most serious accidents in power reactors that have taken place so far, one was in the "developed" US (Three Mile Island {TM}in 1979) and the other in the "developing" former USSR (Chernobyl in 1986). Note also that both accidents happened in the lands of the nuclear superpowers.

Safe operation of a nuclear power station requires three basic features:
- An inherently safe reactor design,
- Rigorous operator training, and
- A safety culture.

An inherently safe design in case of TMI prevented the release of radioactivity to the outside environment even though half the core melted. No deaths occurred.

Chernobyl was lacking in all the three areas. It was compounded by the culture of secrecy of the Soviet era. Even the occurrence of the

Are they safe enough?

DAVID HENDERSON

accident was denied by Moscow for a number of days. Chernobyl was a disaster waiting to happen. No wonder that there were no takers this type of reactors outside of the former USSR. However, lessons have been learnt and improvements have been made even in this type of reactor.

The man-machine interface has undergone radical change as a result of these two accidents. Previously, the attempt was to determine the root cause of an emergency and take remedial action. However, with hundreds of alarm signals flashing in the control panel, it was found well nigh impossible to determine on the spot what the root cause was.

Now, the requirement for the operator has been made much simpler: to just ensure that the reactor core fuel is covered with coolant under sufficient pressure, i.e. to make sure that

the reactor proper is safe -- other things can be taken care of later.

I believe that operating a well-designed nuclear power station with a properly qualified and trained crew is no more difficult than flying jumbo jets -- which our pilots are doing regularly.

The 438 nuclear pow?er reactors currently operating in the world are run by people who eat, drink and dream like us. No special genes are involved.

Why then should we suffer from any inferiority complex?

Let us not, therefore, question our ability to operate nuclear power stations. Certainly this is a challenge, but at least we have a base (the Savar research reactor) to train our staff in.

Yes we can.

Engr. ABM Nurul Islam is a former BAEC and IAEA official.

Health matters

STAR

Since about 50 percent of the population will be living in urban localities and big cities in the near future, there should be an urban health strategy to address the health services of the urban population. The national health policy should reflect this issue with due importance.

DHIRAJ KUMAR NATH

PROVIDING services as well as protecting individual health in the city is a critical issue. Not to speak of trauma caused by reckless driving, air pollution, emission of carbon and black smoke, and sound pollution, which are the reasons for severe sufferings of many aged people, infants, and mentally and physically weak city dwellers.

Besides, unplanned solid waste dumping and disposal of highly poisonous materials from clinics and hospitals are posing a serious threat of contamination with communicable diseases to local inhabitants and even the passers-by.

Food safety situation is alarming, with no

systematic supervision except some magisterial interventions that take place occasionally. Water-borne diseases like diarrhea and dysentery are regular phenomena in cities in spite of general consciousness about safe drinking water and alertness about decomposed and unhygienic food that have increased manifold in recent past.

This situation is prevailing in all the big cities -- Dhaka, Chittagong, Rajshahi, Khulna, Sylhet, Barisal -- and 309 municipalities of the country. The city health situation is in a more deplorable condition due to the absence of pragmatic policy or strategic guidelines to address the urban health care delivery system.

Urbanisation is inescapable in modernisation and should, therefore, be taken as inevi-

table. Former secretary general of the United Nations, Kofi Annan, said in 2000: "We have entered the urban millennium. At their best, cities are engines of growth and incubators of civilisation. They are crossroads of ideas, places of great intellectual ferment and innovations -- cities can also be places of exploitation, disease, violence, crime, unemployment, and extreme poverty. We must do more to make our cities safe and livable places for all."

Global population growth in the next three decades will occur in urban areas in a massive way with the huge migration of rural middle and lower-income societies to nearby cities. Most of these migrants, generally of low human and financial capital, will settle in slums and in areas of concentrated poverty and environmental vulnerability.

Bangladesh is no exception to this trend of urban population growth. At present, around 30 percent of the population (about 45 million) are living in urban cities. The national population growth rate is 1.40 percent whereas city population growth is more than 6 percent. With this trend of urban growth, the country will be half urban within the next 20 years.

Among the 19 mega-cities of the world, Dhaka stands in the 9th position with about 13 million inhabitants, of which 36 percent live in slums. According to UN Department of Economics and Social Affairs/Population Division, Dhaka's position in terms of population shall be 4th in 2025, with 22 million people -- ranking after Tokyo, Mumbai and Delhi, and followed by Sao Paolo, Mexico city, New York etc.

The present population of 27,700 per square kilometre in Dhaka city might be doubled, and less than 20 percent might have access to safe drinking water. Besides, about 7.80 lakh people are entering the city every year, which may increase due to climate changes. In addition, 60 private universities and 32 private medical colleges are located in Dhaka city. About 10, 54,000 vehicles are plying every day, and there are about 5 lakh rickshaw pullers.

Thus, health and health-related behaviour in urban areas, with vulnerabilities and environmental risks, have emerged as prime reasons for adoption of a national strategy. The national health policy is going to be finalised soon, as assured by the health minister in a press conference on January 16. Since then, no substantial progress has been observed, including the holding of regional workshops and interactions with the civil society organisations and health service providing private agencies.

The public, by and large, are expecting a commendable and implementable health policy in view of the fact that vision 2021

pledges to do so and the government is committed to achieve the targets of millennium development goals by 2015. The urban health strategy should contain key strategic actions, of which stewardship role of the government should be prime one.

The primary health care centres and comprehensive health care centres to address maternal mortality and morbidity, child care and nutrition education should be major components with in- built referral systems to tertiary level hospitals.

In the city, the influence of community and peer group is less in comparison to rural places, thus service providers and non-government organisations with messages of behaviour change might influence the urban population intensively. Slum dwellers are mobile, and providing health service to them with 30 percent red cards free of cost, as practiced by the second urban primary heath care projects, is sometimes difficult.

In fact, the challenges of urban health care services are many and diversified. They relate to strategic options to identify the target group of people -- rich and poor -- free medication or charging of user's fees, areas of operation of slums, institutional arrangements, private-public partnership, supply of drugs and medicine, etc.

The critical issue is the implementation strategy to address the city health service delivery system. The Local Government Ordinance-2009, as in the past, allocated the responsibilities of primary health care, water supply, sanitation, conservancy, etc. to the ministry of local government, rural development and cooperatives.

Thus, city corporations and municipalities can implement a plan designed and directed by the local government division where the ministry of health and family planning can play a facilitating role. On the other hand, the local government division has no separate unit of its own.

It is, therefore, strongly felt that there should be a separate ministry or division to look into urban issues like health, solid waste management, water supply, municipal financing, sewerage and sanitation, housing and settlements etc. Agencies related to these activities should also be brought under this urban development division. There should be a strong national coordination committee to provide guidelines and monitor the service delivery system from time to time.

Since about 50 percent of the population will be living in urban localities and big cities in the near future, there should be an urban health strategy to address the health services of the urban population. The national health policy should reflect this issue with due importance.

Dhiraj Kumar Nath is a former Adviser to the Caretaker Government.

ICT: Myriad prospects

The prime minister and cabinet ministers have shown their interest in using the benefits of ICTs for digitising the country and making the administration pro-people even before their targeted timeframe. The task is not at all difficult if the bureaucracy plays ball.

KAZI S.M. KHASRUL ALAM QUDDUSI

THE prime minister says that her government wants to ensure transparency and accountability in the administration to establish good governance and end corruption with a greater use of information and communication technologies (ICTs). It is reassuring when she adds that her government wants the public servants and service providers to take services directly to the people instead of people approaching the administration for the same.

In fact, ICTs have opened up a myriad of avenues in administration. ICT features provide the administration with the logistics to make them increasingly accessible, communicable and, of course, useable. In addition to political will in all contexts, bureaucracy is crucial in executing the government's wishes. ICTs used in policy-making and policy execution can be categorised as follows:

Database technologies

They are applied in three basic forms of information systems: Firstly, object registration systems are a general-purpose registration of population and legal entities such as institutions, immoveables, enterprises, etc. Authorised officials, such as public notaries, can maintain the systems. The citizen's administrative identity is certified by these authentic registration systems.

Secondly, sectoral systems assist in basic transactions within a specific sector of public administration, such as social security, health care, police, traffic and transport etc. In healthcare, electronic patient dossiers are becoming the knowledge base for transactions linking different care providers: hospitals, pharmacies, general physicians, homes for the elderly, nursing homes, medical insurance companies etc. In the judicial and social security sectors, sectoral systems are linked to each other.

Thirdly, controls systems perform and monitor the expenditure of financial, human and physical (building and equipment) recourses within ministries, other government bodies and subsidised organisations. Control systems are playing an increasing role in the transparency and accountability of governmental institutions and private bodies, such as schools, hospitals, social security organisations, and as partners in civic society (non-governmental organisations [NGOs]) through performance indicators and benchmarking.

Decision support technologies

These serve as an aid to decision-making processes, according to specific rules, to individually, or collectively, entered data. Decision support systems can range from fairly simple processing (case-handling) systems, based on a few production rules, to complex advisory systems and expert systems like knowledge-based systems.

As a result, time and place are losing their significance. All kinds of virtuality are thereby introduced

Networking technologies

Examples of these are file-sharing, email, websites, navigating, chatting, targeting messages, video-conferencing, and the like. Networking started with local and wide area networks. More recently intranet and extranet -- using internet technology -- have been widely introduced into government procedures.

Personal identification and tracking technologies

General personal identification numbers, or more specifically, fiscal, social security, health care or educational numbers, can create virtual general databases. Smart cards, incorporating identification numbers and other tracing or tracking devices, can be also used by public services for identification or for monitoring of people and vehicular mobility.

Global Positioning Systems (GPS) and Closed Circuit Television (CCTV) nets are good examples of this technology. Mobile phone systems like GSM provide a comparable tracing and tracking facility. Point of Sales (POS) systems are the private enterprise counterparts of "profiling" applications in parts of public administration, such as inland revenue. The performance of schools (quality cards), hospitals (waiting times), municipalities (cost of service), fire brigades (reaction time) and other public services are becoming increasingly transparent thorough the use of these technologies.

Office automation and multimedia technologies

Office automation serves the purpose of information retrievability through the use of text-processing systems and other entry devices (for text, voice and pictures); storage media such as magnetic tapes, CDs, CD-ROMs or photographic films; electronic mail, electronic data interchange; and document and text retrieval systems.

Recent activism clearly indicates that the government's well-professed Digital Bangladesh is very much on course. It bears repeating that political will is the number one prerequisite to reform of any sort. The prime minister and her concerned cabinet ministers have shown their interest in using the benefits of ICTs for digitising the country and making the administration pro-people even before their targeted timeframe. The task is not at all difficult if the bureaucracy plays ball.

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