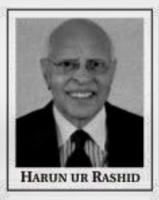
BOTTOM LINE

How safe are nuclear energy plants?



HARUN UR RASHID

ON February 24, Bangladesh's secretary of the ministry of science and deputy director-general of the Russian Atomic Energy Corporation signed a primary deal with Russia for installing a 2,000 MW third-generation nuclear power plant (reactor) at Rooppur (Pabna).

By signing the deal the Bangladesh government launched the country's first nuclear plant power project, which will be completed in 2017-18 at the cost of $1.5 billion to $2 billion.

It is noted that France uses nuclear power to generate 77% of its electricity, and Russia gets 20% of its total energy requirements. More than 35 nuclear power plants are currently under construction around the world, 24 of them in Asia including in China.

However, the explosion at the Japanese nuclear reactor, triggered by the devastating earthquake on March 11 has raised serious health concerns for people in the vicinity as well as questions about the viability of nuclear energy.

In recent years, experts have maintained that nuclear energy is safe, that it will help the world overcome its dependence on oil, and that it prevents hothouse gas emissions. Events in Japan are being closely monitored by nuclear experts.

Until a few days ago, the future of nuclear energy appeared to be bright. Not because of any great love of nuclear reactors but because of their advantages, like the fact that they don't emit greenhouse gases and air pollutants, among them nitric and sulfuric acids, and also because it can't possibly supply all our needs through renewable energies.

Today, there are 442 active nuclear reactors in the world, and it was believed that by 2035, another 180 facilities would be set up and that they would supply a little more than the portion of total global electricity consumption they supply today -- about 16%.

The explosion of the Japanese reactor has sparked a renewed discussion about the amount of atomic energy that should be developed. There will be those whose opposition to nuclear energy will be strengthened by these events, but there will also be others who will say that, in the final analysis, the safety systems did prevent a terrible disaster like the one in Chernobyl in 1986.

What we witnessed in Japan was an earthquake of tremendous magnitude (Richter scale 9 magnitude) and a tsunami wave that hit the generators that were the back-up to the emergency system. Despite that, experts maintain that the worst case scenario has not been realised. If there is no worsening of the situation, they argue that this event will not have significant health repercussions. It's true that small quantities of radioactive materials were released, but these are not expected to cause serious health-related problems (about 60 people in Japan are being examined for radioactive contamination).

If the worst-case scenario happens and there's a total meltdown of the reactor, it is likely that large areas will be polluted by radioactive material, similar to what happened in Chernobyl. It's also possible that there will be a greater risk of developing malignant tumours, leukemia and cancer of the thyroid. Nobody expects huge numbers of people to face immediate death. It is noted that in Chernobyl, which was a dreadful and terrible incident, 41 people died, and they were directly exposed to the radiation.

STEVE ALLEN

The reactors planned for the future -- called third- or fourth-generation reactors -- will use much more advanced technology. They will be built in such a way that they can withstand disasters even more serious than what happened in Japan.

There's no doubt that one of the key messages that has to be conveyed is that a problem occurred in an existing reactor. The reactors planned for the future -- called third- or fourth-generation reactors -- will use much more advanced technology. They will be built in such a way to withstand even disasters more serious than what happened in Japan. They will not reach a state of meltdown, and even if that does happen, it will be for very short periods and only extremely small quantities of radioactive materials will be emitted into the air. In my opinion, that is an extremely important message.

"The safety features of Indian nuclear plants have to be rechecked to assess whether they can tackle inoperable situations," says former Atomic Energy Commission chairman and its current member, M.R. Srinivasan, who has visited the Fukushima plant.

"It was constructed to withstand natural calamities. But what happened on March 11 was something unusual: It was a deadly combination of a strong earthquake and a tsunami which struck the nuclear plant and damaged it."

Nuclear reactors are designed to withstand earthquakes specific to the seismic zones they are located in. In the case of Fukushima, it is clear the intensity of the earthquake was more than what the plant was designed to withstand.

The design of a nuclear reactor is location specific. "The thickness and the height of their walls are planned considering the area where the plant is set up," says chief spokesperson, department of atomic energy, S.K. Malhotra.

Now, given the intensity of the earthquake and tsunami in Japan, nuclear scientists will have to be prepared for extreme, or inoperable, situations.

What has happened in Japan may discourage many countries to go for nuclear reactors, and they will intensify efforts to make use of renewable energies that don't rely on nuclear power.

There are nuclear experts who have complained during the present crisis that one of the problems is that the public doesn't understand how a nuclear reactor works and what this activity means. That is indeed a problem because it is a complex subject.

Experts say that we have to wait and look at things in proportion. It could still turn out that after this is over, we'll be able to say that the safety measures proved themselves despite the terrible risks to the facility.

The write is a former Bangladesh Ambassador to the UN, Geneva.

Dr. Yunus and the current debate: Perspective of an academic bystander

ABDUL HANNAN CHOWDHURY

IN 1974, the then US Secretary of State, Dr. Henry Kissinger, labeled Bangladesh as a "basket case." However, a country in a phase of transition is expected to be inflicted with myriad problems. Professor Muhammad Yunus, by establishing Grameen Bank, pulled the country out of such international labeling in the 1980s. After thirty years of planting the seeds, the Grameen Bank is now emulated all over the world, changing the courses of many lives around the globe.

In 2006, Prof. Yunus was awarded the Nobel Peace Prize, the ultimate award the world bestows on its great human beings, and because of that the honour the country earned was immeasurable. We proved that we were no more a "basket case."

Dr. Yunus earned the award for his vision and actions to eliminate poverty from the world. He is a man of great dignity, and former US President Clinton described him as "a man who long ago should have won the Nobel Prize." In his honour, January 14 has been celebrated as "Yunus Day" in Houston, Texas, since 2008. This is in addition to the many awards and honour Dr. Yunus earned around the globe.

Why is so much admiration shown to one person? It is because there are so few people who are actually working towards the goal of a world free from poverty. He made so honest a vision, so difficult a task, so easy by simply unifying the poor and destitute.

Have we rewarded him for any of his endeavours? Thirty years after the seed of Grameen Bank was sown, Dr. Yunus was charged with defamation, and had to appear before court so many times in so many places. A man of great stature was blamed of corruption and laundering of funds, following the allegations made by a Norwegian documentary.

The allegations did not stand after a full-fledged investigation. Why? The Norwegian government admitted that there was no trace of corruption in the movement of funds. Erik Solheim, Norwegian Finance Minister stated: "There is no indication that Norwegian funds have been used for unintended purposes, or that Grameen Bank has engaged in corrupt practices or embezzled funds."

Dr. Yunus is blamed for sucking the blood of the poor. First of all, the motivation behind a theory is more important than the application of the theory. Capitalism and communism have been applied wrongly many times in history. But one cannot blame the beauty of such theories. If microcredit is simply sucking the blood out of people, than where were all the depository institutions, credit unions, financial institutions of all shapes and size, when the poor needed loans?

The banks were issued commercial papers, or provided unsecured loans to large institutions in need of liquidity to meet short-term debt obligations! Never did such institutions, some owned and operated by prominent politicians, provide unsecured loans to poor villagers.

Why is so much admiration shown to one person? It is because there are so few people who are actually working towards the goal of a world free from poverty. He made so honest a vision, so difficult a task, so easy by simply unifying the poor and destitute.

Until the inception of Grameen Bank, only loan sharks used to lend to the poor. If microfinance is simply sucking the blood out of people, what was microfinance regulatory authority doing? How could women be empowered by privileging them with credit, and default rate being lower than for commercial banks?

In the last thirty years, microloans reached 13 crore families worldwide, and microcredit grew 16-fold and changed the fate of 64 crore people worldwide. On the 100th anniversary of International Women's Day, the US ambassador for global women's issues, Melanne Varveer, affirmed: "It is gratifying to see that, 81% of microlenders were women, which is more than 100 million women."

The default rate for unsecured microloans is only 10% compared to conventional 30%, due to social and cognitive reasons. Simply put, a female finds it demeaning if she fails to pay off a loan, while another female across the street successfully pays off a loan. What can be more inspiring, compared to the shameful motivation of industrialists to deliberately default on large loans.

Critics publicly accused Dr. Yunus of buying the Nobel Peace Prize, or influencing the Nobel Committee in some manner. What was the rationale for all this? Still, to be clear of all accusations, the Nobel Committee thoroughly investigated Dr. Yunus's background. In spite of this, some people say that he is a politically motivated and profit seeking person. What can be more embarrassing than this?

Muhammad Yunus stopped at nothing in tackling the unchallenged causes of poverty. The notion of social business was pioneered by Dr. Yunus. This revolutionary concept was labeled by detractors as another "fashionable" way to snatch money from the poor. Dr. Yunus said: "I am proposing to create another kind of business, based on selflessness that is in all of us. I call it Social Business."

There are many writings that define, how Type I and Type II social businesses are different from foundations, NGOs, CSR, cooperatives and social marketing. Just to put some light on the social business movement that is currently going on in the world, BASF has joined hands with Grameen to improve health in the country, but will not take the profit from their operations. A Scottish university is combining with Grameen to create Glasgow Caledonian College of Nursing to educate the daughters of poor farmers on nursing, and ensure employment in many sectors.

Violia has joined with Grameen to ensure pure drinking water to the poor only. Among others, GE Healthcare, Intel, Reebok, Adidas etc. are investing in social business. Besides setting up of Yunus Research Centres or Grameen Creative Labs located in major universities around the globe, cities in Germany are being termed as social business cities.

Dr. Yunus is 70 years old, so he has to be relieved from his position in Grameen Bank. The hearing of writ petition of Dr. Yunus at the High Court has been dismissed. Dr. Yunus is asking for a congenial transition.

In a press conference our foreign minister said that Yunus had "friends" around the world, so there could be retaliation. If nothing is politically motivated, then why would anyone challenge Dr. Yunus? Many of the CEOs of giant corporations of the world are over the age of retirement. Can there be a replacement for Bloomberg? Can there be a replacement for Warren Buffet? Then why should we be so prompt and motivated to replace our national icon? Was it because Dr. Yunus wanted to form a political party, the fundamental right of any Bangladeshi national? So, it is evident that a person such as a Nobel Laureate does not have freedom of speech.

Dr. Yunus is a vision. He is more than just a person of great ingenuity. He is not just one person, he is not 1 crore or 16 crore people, Dr. Yunus is 62 crore people of the world. Is there is an alternative to Dr. Yunus?

"If we can change our imagination, we can create another world": Professor Muhammad Yunus, Nobel Peace Prize Laureate.

The writer is Professor, School of Business, Director, BBA Program and Director, Career and Professional Development Studies, North South University.
E-mail: hannan@northsouth.edu