Uncovering Hiroshima in our midst

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Comment

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LAST week was the 65th anniversary of the world's first nuclear bomb attacks on Hiroshima and Nagasaki. After more than six decades, the terrors inflicted on people in the twin city bombings are still felt today.

It is no doubt a barbaric act on humanity, involving the immediate loss of hundreds of thousands of innocent lives, noted the Peace Declaration released on Aug 6.

The proclamation further described the bombing victims as being hurled into a "hell" beyond their most terrifying nightmares, together with the many souls that fell victim to unwarranted death. "No one should ever have to suffer such horror." But until today this is merely wishful thinking as long as there are nuclear weapons in the world!

The cry of conscience and the voice of civil society yearning for a future free from nuclear weapons were reportedly heard at the United Nations recently under the leadership of the Secretary-General Ban Ki-moon,who, for the first time, attended the Peace Memorial Ceremony in Hiroshima this year. Indeed, it is the dreams of the *hibakusha* (surviving victims of the atomic bombings) to see that the world will be "zero nuclear weapons" by 2020, an achievement regarded as significant in human history as the "discovery of zero" itself.

Girls pray after releasing paper lanterns on the Motoyasu river in Kyodo, Japan in memory of atomic bomb victims on the 65th anniversary of the bombings of Hiroshima and Nagasaki

Among others, the Final Document from the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons Review Conference in May "expresses the unanimous intent of the parties to seek the abolition of nuclear weapons; notes the valuable contribution of civil society; notes that a majority favours the establishment of timelines for the nuclear weapons abolition process; and highlights the need for a nuclear weapons convention or new legal framework."

In doing so, leaders of the nuclear weapon states must be confronted with an urgent need for the abolition of the weapons, and to sharply reduce nuclear and other military expenditures, as reiterated in the Peace Declaration. The United States being the most involved and the first to use such a weapon in human history must be held accountable for taking the lead.

While the world is focused on nuclear weapons, let us not be distracted by the nuclear reactors that will make their presence in Malaysia soon, albeit on an "uninhabited island" earmarked as one possible site. Allegedly, this is deemed a better choice! But let us not forget the Three Mile Island incident in 1979 in the US where radioactive gases leaked from the nuclear generating station. The episode is still dubbed the "most significant accident in the history of the American commercial nuclear power generating industry".

Consequently, according to the International Atomic Energy Agency, the Three Mile Island mishap was a vital turning point in the global development of nuclear power where the number of reactors under construction globally increased every year except 1971 and 1978.

However, the number of reactors under construction reportedly declined from 1980 to 1998. Some reactors on

order were cancelled. Until today the reactor at Three Mile Island is said to be "permanently shut down and defuelled, with the reactor coolant system drained, the radioactive water decontaminated and evaporated, radioactive waste shipped offsite to a disposal spot". But as always, memories of such tragedies are short-lived.

Some sources are adamant radioactive leak is a typical phenomenon. Moreover, accurate accounting of all radioactive wastes released to the air, water and soil from a reactor fuel production system is simply not available. The system includes uranium mines and mills, chemical conversion, enrichment and fuel fabrication plants, nuclear power reactors, and radioactive waste storage pools, casks and trenches.

The extent of risk involved can be gauged from a comparison of a medical complex with as many as 1,000 laboratories in which radioactive materials are used to that of a nuclear power reactor. While the former may have a combined inventory of only about two curies (the measure of radioactivity), "an average operating nuclear power reactor will have approximately 16 billion curies in its reactor core" — an equivalent radioactivity of at least 1,000 Hiroshima bombs." This does not include the reactor's radioactive by-products that continue to give off radioactive particles and rays for long periods — described in terms of "half-lives".

One of the radioactive isotopes of iodine (iodine-129) has a half-life of 16 million years; technetium-99 has 211,000 years; and plutonium-239 has 24,000 years. Xenon-135, a noble gas, decays into cesium-135, an isotope with a 2.3 million years half-life. It is scientifically established that even low-level radiation can damage tissues, cells, DNA and other vital molecules causing programmed cell death (apoptosis), genetic mutations, cancers, leukaemia, birth defects as well as reproductive, immune and endocrine system disorders.

It is imperative that the tragedy of Hiroshima and Nagasaki is allowed to first permeate our innermost conscience before the decision to have nuclear reactors in our midst.

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