

Global resources needed to combat radiation levels

This month marked the half-year anniversary of the Fukushima earthquake and tsunami, and TEPCO and the Japanese government remain unable to control the nuclear emergency that continues to unfold.

Radiation levels exceed the Chernobyl disaster and now reach a level that is unknown to humans or machines. Radiation leakage from the Fukushima Daiichi Nuclear Power Plant was so high in August it exceeded the monitoring equipment's maximum measuring capacity.

Radiation experts estimate that more than 1 million people will die from Fukushima's radiation. According to Dr. Tatsuhiko Kodama, the director of Radioisotope Center at the University of Tokyo, the amount of radiation released thus far is equivalent to more than 29 "Hiroshima-type atomic bombs."

Despite these life-threatening levels of radiation contamination, the majority of pregnant women and children in Fukushima have not been evacuated and they occupy facilities that are unsafe. Their exposure to unhealthy levels of radiation places them at higher risks of cancer and other medical conditions, including death. It is time for the international community to become more involved.

Last month, half a dozen Japanese non-governmental organizations petitioned the United Nations Office of the Commissioner for Human Rights to investigate the widespread violation of children's rights in the Fukushima region. Fukushima prefecture is approximately the size of Connecticut with a population similar to Houston (just over 2 million residents).

Prior to the earthquake and



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Commentary

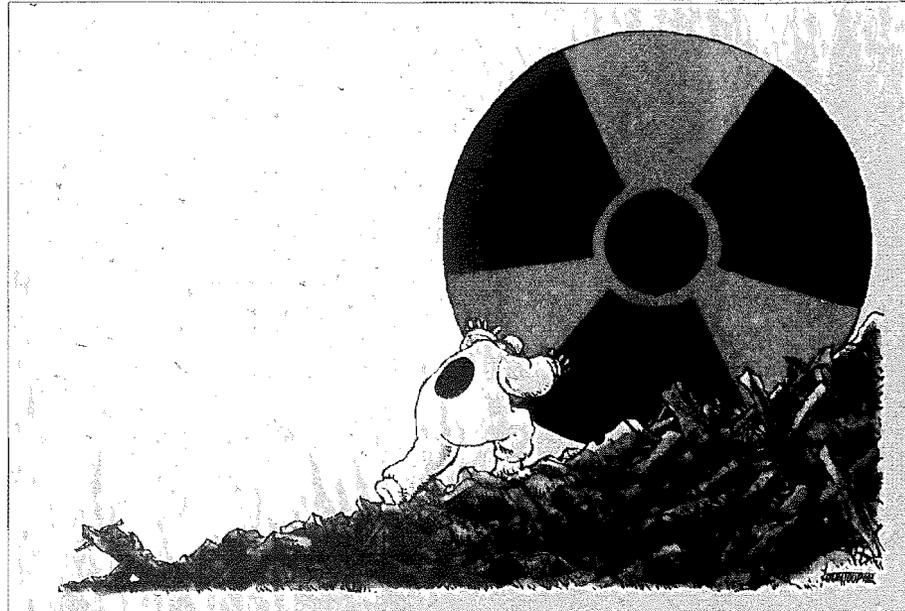
tsunami in March, 385,940 Fukushima residents were children and teenagers. Today, these children are facing widespread discrimination that risks their lives and health.

Children are much more vulnerable to radiation exposure than adults and fetuses have the greatest vulnerability of all. Radiation is a process by which energy travels. High-energy radiation can ionize atoms. Essentially, an electron is knocked out of its electron shell and the atom is left with a net positive charge. This can damage cells. Damage to the DNA in cells is especially harmful and can lead to an increased risk of cancer.

Both because of their size and because their cells are rapidly changing, children are more likely to be harmed when exposed to radiation than adults.

Radiation exposure occurs throughout our lives all around the world. We are exposed to radiation when we sleep next to another human being, when we fly on airplanes, when we stand on the ground, when we are next to granite, and, of course, when we have x-rays, mammograms or CT scans. That is why the International Atomic Energy Agency has developed nuclear safety standards that set individual radiation exposure at one millisievert per year.

Japan adopted that standard and applies it to all regions in the country except Fukushima. Following the Fukushima nuclear accident, the radiation exposure standard for the residents of the



Fukushima prefecture was raised to 20 times the standard set for the rest of Japan, from one millisievert per year to 20 millisieverts per year. This standard applies to adults and children alike.

What is a millisievert? Millisieverts are one of the units used to measure a dose of radiation. To provide comparison, 20 millisieverts is the current maximum permissible dosage for radiation workers in most countries. It is 10 times the level of radiation exposure from a mammogram, 250 times the average dose to people living within 10 miles of the Three Mile accident, and 4,000 times the exposure from dental x-rays.

What does this mean for the children of Fukushima? It means that if they are exposed to 20 millisieverts of radiation within a year, they will have a 1 in 200 risk of getting cancer. If the exposure lasts for two years, the risk is increased to one in 100.

Despite these risks, insufficient efforts have been made to thoroughly decontaminate children's schools, homes and playgrounds. In fact, measurements of radiation in the Fukushima schools are so high

that if the schools were governed by Japan's workplace laws, children would not even be permitted to enter the facilities, let alone occupy them day after day. Despite these high levels of radiation on school grounds, Fukushima schools opened on April 5 without proper decontamination.

Japan should be praised for trying to normalize children's lives as much as possible. It also is admirable that the government is working to respect children's right to education. However, this right must be balanced with children's other rights — including the right to survive, the right to achieve the highest attainable standard of health and the right to non-discrimination. These rights are recognized in the United Nations Convention on the Rights of the Child, to which Japan is a party. Japan's domestic laws also reinforce these rights.

Japan has been a vocal and active leader on children's rights on the international stage, providing humanitarian assistance to the children of numerous countries during times of crisis as well as stability. It is time for the international community to return Japan's

generosity and provide greater support to end the nuclear crisis, decontaminate the affected regions and ensure that the rights of Japan's children are respected in the process.

The United Nations Office of the Commissioner for Human Rights should accept the invitation to investigate the violation of children's rights in Fukushima, but that investigation alone will not solve the problem. The international community must assist Japan in widening the evacuation zone, giving priority to families with children and increasing support for all evacuees.

We also must provide financial and technical support to decontaminate the region effectively, beginning with those places most frequently occupied by children and pregnant women. Finally, and most important, we must pool our global expertise and resources to contain the radiation emanating from the nuclear plant once and for all.

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