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Experts Find Reduced Effects of Chernobyl

By [ELISABETH ROSENTHAL](#)

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ROME, Sept. 5 - Nearly 20 years after the huge accident at the Chernobyl nuclear power plant in [Ukraine](#), a new scientific report has found that its aftereffects on health and the environment have not proved as dire as scientists had predicted.

The report was prepared by a panel of more than 100 experts convened by United Nations agencies.

It says huge compensation programs for people in the Chernobyl region have become "a major barrier to the region's recovery," both by creating a culture of dependency and by soaking up a high percentage of the region's resources. It recommends that the compensation programs be cut back.

The report, "Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts," says 4,000 deaths will probably be attributable to the accident ultimately - compared with the tens of thousands predicted at the time of the accident.

Only 50 deaths - all among the reactor staff and emergency workers - can be directly attributed to acute radiation exposure after Chernobyl's Reactor No. 4 exploded in April 1986, the panel found. The rest will be from cancer at a higher rate than would otherwise be expected in people exposed to radiation near Chernobyl in the wake of the accident.

But for millions of people who were subjected to low levels of radioactive particles spread by the wind, health effects have proved generally minimal, the report found.

The powerful explosion that rocked Chernobyl sent chunks of the reactor core into the surrounding fields and clouds of radioactive particles into the air. The fire burned for 10 days and released radioactive particles that were carried by the wind to large rural swaths of what was then the Soviet Union. The particles settled in human bodies and homes and contaminated fields, forests and livestock.

The report acknowledged that there was a core of people, probably 100,000 to 200,000, who continued to be severely affected by the disaster.

But seven million people in what are now [Russia](#), Ukraine and [Belarus](#) still receive some kind of Chernobyl benefits, from monthly stipends to university entrance preference to therapeutic annual vacations. In Ukraine, the number of people designated as permanently disabled by the Chernobyl

accident (and their children) increased from 200 in 1991 to 64,500 in 1997 and 91,219 in 2001 - even though the effects of radiation decline over time, the report noted. Both Ukraine and Belarus still spend about 5 percent of their annual budgets on Chernobyl victims.

The panel found that contrary to previous forecasts, there had been no observed rise in the incidence of leukemia, a blood cancer widely associated with radiation exposure - except for a small increase among workers who were in the contaminated plant. Nor has there been the expected detectable decrease in fertility or increase in birth defects.

Indeed, the report concludes that "the largest public health problem unleashed by the accident" is "the mental health impact." Residents of the region, who view themselves as victims of a tragedy they poorly understand, are still haunted by anxiety that has prevented many from restarting their lives.

In the immediate aftermath of the disaster, the Soviet Union declared an 18-mile "exclusion zone" around the reactor, which still exists, and resettled hundreds of thousands of people. Agriculture was forbidden in contaminated areas, as was the collection of forest products like berries and mushrooms. A host of compensation schemes were established.

"People have developed a paralyzing fatalism because they think they are at much higher risk than they are, so that leads to things like drug and alcohol use, and unprotected sex and unemployment," said Dr. Fred A. Mettler, leader of the team analyzing health effects for the Chernobyl Forum, a research group comprising United Nations agencies and representatives of affected countries.

The only concrete health impact in the region has been thyroid cancer in people who were young at the time of the accident and drank contaminated milk from cows that ate grass contaminated with radioactive iodine dispersed during by the accident. Radioactive iodine, which is short-lived, concentrates in the thyroid gland. Because the disease is generally treatable, only 9 of the 2,000 who have come down with the disease have died.

Other than the thyroid cancer cases, other cancers and adverse health effects, when they occur, may be particularly difficult to link to the Chernobyl accident, because life expectancy dropped dramatically in the region after the fall of the Soviet Union. "The effect may be difficult to detect against the background noise," Dr. Mettler said.

"Early on, there were all sorts of claims being made because people didn't have much accurate information," said Dr. Mettler, a University of New Mexico expert on the effects of radiation exposure. "Now, at last, we have the eight U.N. agencies and the three governments involved coming to a consensus about the effects and what needs to be done."

Although five million people live in areas still classified as contaminated by Chernobyl, a vast majority are exposed to very low doses of radiation, the study found, with levels no higher than in large areas of [China](#), [Brazil](#) or [Britain](#), where naturally occurring background radiation in soil is relatively high.

"People were evacuated from areas that now have dose levels lower than where I live in [New Mexico](#)," Dr. Mettler said.

Although there is still a strong stigma against growing or eating agricultural products from anywhere in the area, concentrations of radioactivity "in agricultural food products produced in areas affected by the Chernobyl fallout are generally below national and international action levels," the report found.

Those who continue to be affected by the accident include poor rural dwellers who live in the few severely contaminated areas, those with thyroid cancer and those who were resettled after the disaster but who had never found a new life or employment in their new communities.

"A small but important minority, those caught in the downward spiral, need substantial material assistance to rebuild their lives," the report said. But for the millions of others designated as victims, it said, the priority should be to encourage self-reliance, providing them with realistic information about the minimal risks they face.

Noting that the collapse of the Soviet Union - and the end of Soviet-era benefit programs - worsened the poverty of the region, the researchers said its people should now be provided with incentives to develop small businesses, for example.

"The extensive system of Chernobyl-related benefits has created expectations of long-term direct financial support and entitlement to privileges, and has undermined the capacity of the individuals and communities concerned to tackle their own economic and social problems," the report concluded.

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