***Radiation From Balkan Bombing Alarms Europe***

**By**[**MARLISE SIMONS**](https://www.nytimes.com/by/marlise-simons)JAN. 7, 2001

Pekka Haavisto made some startling discoveries on a recent mission in Kosovo to assess the impact of uranium-tipped weapons hurtled on the province during NATO's 78-day bombing war against Yugoslavia in 1999.

''We found some radiation in the middle of villages where children were playing,'' said Mr. Haavisto, a former environment minister of Finland who headed the United Nations inquiry in Kosovo. ''We were surprised to find this a year and a half later. People had collected ammunition shards as souvenirs and there were cows grazing in contaminated areas, which means the contaminated dust can get into the milk.''

The discovery by Mr. Haavisto and his team of low-level beta radiation at 8 of the 11 sites they sampled seems certain to fan a rapidly spreading sense of fury and panic across Europe about the well-being of soldiers sent to serve in the Balkans, more than a dozen of whom have since died of leukemia.

Residents of Bosnia, Kosovo, Serbia and Montenegro may also increasingly resent that they were unaware until now of the need to clean up the low-level uranium dispersed by American weapons dropped over Bosnia in 1995, and over Yugoslavia during the 1999 Kosovo war.

Mr. Haavisto said that even though the radiation was low level, the debris should be removed. ''We are recommending that until the cleanup starts, contaminated areas should be clearly marked and fenced off,'' he said. ''The local people do not understand the material.''

Even in Western Europe, it is only in recent days that full alarm has been sounded about what the European newspapers have dubbed Balkan syndrome. Besides the leukemia deaths and cases being treated, uncounted numbers of soldiers who served as peacekeepers in the Balkans have complained about an array of symptoms, like chronic fatigue, hair loss and various types of cancer -- complaints similar to gulf war syndrome, registered after the Persian Gulf war in 1991.

The 15-country European Union has ordered its own inquiry into the possible noxious effects of the uranium-tipped ammunition and any potential link to the recent cancer deaths among Balkan veterans.

Tens of thousands of European soldiers who served in the Balkans have already undergone quietly conducted medical tests in countries like Belgium, France and Canada. This week, Italy, the Netherlands, Portugal, Spain, Finland, Norway, Greece and Bulgaria have announced that they will screen all Balkan veterans. Britain, which also owns uranium-tipped ammunition, has resisted.

Alarm bells rang first in Belgium, where nine Balkan veterans have fallen ill with cancer, five having since died. Two veterans have died of leukemia in the Netherlands, and one in Spain. France said it was treating four veterans for leukemia. In Italy, 30 veterans contracted serious illnesses, 12 of whom developed cancer. Six of the cancer patients have already died of leukemia.

Italy said it had also asked NATO for more information about areas where the weapons were used, fearing that its troops served in an area of southern Kosovo that was heavily shelled by NATO's uranium-tipped antitank weapons.

The Italian defense minister paid what was billed as a morale-boosting visit to the Italian troops in the former Yugoslavia on Thursday and Prime Minister Giuliano Amato himself has now become involved in the discussion about depleted uranium.

''We've always known that it was a danger only in absolutely exceptional circumstances like, for example, picking up a fragment with a hand on which there was an open wound,'' Mr. Amato said. ''But now we are starting to have a justified fear that things are not that simple.''

Spokesmen at the Pentagon and at NATO headquarters in Brussels have insisted that many studies have shown that the uranium-tipped antitank shells harm only specific targets, and not people or the environment in general.

''The medical consensus is that the hazard is minimal, that there is no linkage between depleted uranium and cancer because the level of radiation is very low,'' said Mark Laity, a spokesman at NATO headquarters in Brussels.

He said the military makes use of the depleted uranium in antitank rounds because uranium is extremely hard and therefore more effective in penetrating tanks or concrete. In Kosovo, many of the attacks made on what appeared to be Serb tanks in fact were aimed at dummies.Top of Form

Depleted uranium is left over after the most radioactive isotopes have been removed from uranium ore for use in nuclear fuel or nuclear weapons. The depleted portion is still radioactive and will remain so for an immeasurably long time.

Depleted uranium has also been used to balance airplanes, and the United States Department of Transportation has warned personnel to handle it with caution. The main hazard ''is the harmful effect the material could have if it enters the body,'' the warning said. ''If particles are inhaled or ingested, they can be chemically toxic and cause a significant and long-lasting irradiation of internal tissue.'' Any articles used in the handling of depleted uranium ''should be labeled as radioactive waste and disposed of accordingly,'' it said.

Experts differ widely on the scale of the threat to human health. What is at issue is not the radiation level of the ammunition, which is weak and can barely be detected even a short distance from the source.

The chief question is how much of the uranium becomes harmful when it turns into dust and is inhaled. Some experts say it would have to be inhaled in enormous quantities and is most detrimental to the liver or kidneys because it is a heavy metal.

But others disagree. A British biologist, Dr. Roger Coghill, said at a London conference that ''one single particle of depleted uranium lodged in a lymph node can devastate the entire immune system.''

In Spain, a spokesman for the Defense Ministry said that Spain has had 32,000 people stationed in the Balkans since 1992 and that the two confirmed cases of leukemia -- one patient now dead, one undergoing treatment -- represented a statistical average for the population.

Neither experts nor spokesmen have been able to calm veterans or their families. In Portugal, Luis Paulino, the father of a veteran, has ordered the body of his son to be exhumed and examined anew. His son Hugo, a corporal, died last year, three weeks after returning from Kosovo.

Kevin Rudland, a British Army engineer who left home as a healthy young man, is now thin, weak and totally bald as well as among those who criticize the British government for not taking their cases seriously. A team of British biologists conducting an inquiry into the long-term effects of depleted uranium weapons has called on the government to test British troops.

Mr. Haavisto is particularly concerned about the residents of the former war zones. ''There remains a risk for the local population,'' he said. ''Much ammunition is deep in the ground and affects the groundwater.''

He is also concerned about the clearing of mines and unexploded ordnance. ''Some of this is cleared with controlled explosions and so the radioactive and toxic material spreads again,'' he said.

During their mission in November, Mr. Haavisto said, his team of 14 scientists, including a United States Army specialist, collected more than 400 samples of soil, water, vegetation and pieces of ordnance from 11 sites. The sites were chosen from 112 areas designated by NATO as places targeted with ordnance containing depleted uranium.

The samples are being analyzed for both radioactivity and toxicity in five European nations. The final report is expected in early March, he said.

Whatever the outcome, he insisted, all the radioactive and toxic materials should be removed. ''Almost a year and a half was wasted,'' he added, noting that his team had waited for NATO geographical data needed to begin work.