

## Profile

### Mikhail Balonov: understanding the legacy of Chernobyl

It was a few months after the Chernobyl disaster, in 1986, when Mikhail Balonov found himself addressing a large crowd of Russians. The crowd, understandably, was agitated and distrustful of Balonov, a Russian radiobiologist. It had fallen to Balonov to try to convince the inhabitants living in the area, which had been exposed to radiation from the nuclear power-plant explosion, that the situation was not hopeless and that they could take countermeasures to protect themselves from environmental radiation. "When people are so excited they only respond when you are emotional also", Balonov told *The Lancet*. His strategy was to present the crowd with a government scientist, who, along with his pregnant wife, would be living and working in the contaminated area. "That was probably the best argument you could make to these people. Then they start to listen to you", says Balonov, who is a consultant for the International Atomic Energy Agency (IAEA).

Finding the shared ground between hard science and popular perception has been one of the most difficult issues Balonov has had to face during a career of more than 30 years in radiation protection. Born during World War II in what was then Leningrad, Balonov has degrees in radiobiology, radiation hygiene, nuclear physics, and biophysics. Last month, he finished one of his most challenging assignments yet, as scientific secretary of the environmental group of the Chernobyl Forum, a consortium that brought together more than 100 scientists from eight international organisations, including WHO, and stakeholders from Russia, Ukraine, and Belarus. The Forum was set up by the IAEA in 2003 to try to establish a scientific consensus about the effects of Chernobyl. The final report, *Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts*, was released in autumn, 2005. As the 20th anniversary of the disaster approaches, on April 26, 2006, the controversy over its legacy continues.

The Chernobyl Forum report estimates that 4000 people may die from the long-term effects of the radiation released during the accident, but that so far only 50 deaths can actually be attributed to leaked radiation. In particular, the report notes a link between the effects of radiation and thyroid cancer among children. The report found no evidence of any increase in malformations among animals or people. But public behaviour was affected by the explosion, and in the year after the accident, rates of abortion in the region increased significantly, said Louisa Vinton, who coordinates the United Nations' Chernobyl policy. The public was, and in some cases still is, "consumed by anxiety", says Vinton.

Balonov's experience as an expert who was on the scene from the beginning helped to give credibility to the international experts' arguments that the impact of the

disaster was much less than was first thought. "He has the steady calm of having lived through hundreds of these debates", says Vinton. "He can at least present a fair picture if not win the whole argument." It also made an important difference that Balonov is Russian, said Burton Bennett, who chaired the Chernobyl Forum. An important aspect of the Forum was incorporating the views of politicians and other stakeholders from Russia, Ukraine, and Belarus. "He could understand their point of view", said Bennett.

The Chernobyl Forum's work continues to be questioned by both victims' groups and other scientists. A recent report in *The Guardian* cited claims that 500 000 people died from the catastrophe, and that another 30 000 people are expected to develop cancers caused by exposure to radiation. In another article, Linda Walker, the national coordinator of the Chernobyl Children's Project in the UK, argued that the IAEA-led Forum ignored many health effects because of its bias in favour of nuclear power.

Balonov counters such criticisms by saying that the Forum's report incorporated the work of the world's best epidemiologists, who would gain nothing from ignoring important findings. "They are hunters for hot facts. They would have been happy to find something", he says. Blaming the region's increased mortality on radioactivity is difficult in a country that has as many public-health problems as contemporary Russia, says Balonov. The Forum's report attributed many of the region's current health problems to high rates of smoking and drinking and to poor diet.

Since the publication of their final report, Balonov has stepped down from his post on the Chernobyl Forum, but he will continue to work as a consultant for the IAEA, before returning to St Petersburg to work at the government's Institute of Radiation Hygiene. With the forthcoming 20th anniversary this month, Balonov is fully aware that the battle over the legacy of environmental and health effects remains a contested issue. "During the past 20 years it was extremely difficult to influence the public's thinking, to give them scientific information. They didn't want to listen to it", he says. "We professionals actually lost the battle for the public's trust. They didn't trust us; they wanted to listen to amateurs and the politicians, who have their own games. That is one of the most difficult lessons from Chernobyl, that it is very difficult to gain the public's trust. Probably we did not do enough", he told *The Lancet*, adding that "It's a complicated case, it's a subject for a good psychologist".



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