

# THE LEGACY OF CHORNOBYL 1986 TO 1996 AND BEYOND

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## HEARING

BEFORE THE

## COMMISSION ON SECURITY AND COOPERATION IN EUROPE

ONE HUNDRED FOURTH CONGRESS

SECOND SESSION

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## THE LEGACY OF CHORNOBYL—1986 TO 1996 AND BEYOND

Tuesday, April 23, 1996

COMMISSION ON SECURITY AND COOPERATION IN EUROPE  
*Washington, DC.*

The Commission convened in room 2154, Rayburn House Office Building, at 10:00 a.m., Chairman Christopher H. Smith, presiding.

Commissioners present: the Honorable Christopher H. Smith and the Honorable Frank R. Wolf.

Witnesses present: His Excellency Serguei N. Martynov, Ambassador of the Republic of Belarus; His Excellency Yuri Shcherbak, Ambassador of Ukraine; Dr. Murray Feshbach, Professor, Georgetown University; and Alexander Kuzma, Director of Development, Children of Chernobyl Relief Fund.

Mr. SMITH. The Commission will come to order. Good morning. Today's hearing focuses on the medical, environmental, social, political, and economic aftermath of the Chernobyl nuclear disaster, the world's worst nuclear accident. This Friday, April 26, marks the tenth anniversary of one of the most bitter legacies of the Soviet system. Chernobyl is a legacy that has had tremendous human costs and will continue to be felt for decades to come, especially in Ukraine and in Belarus, which bore the brunt of Chernobyl's radioactive fallout. The explosion of the reactor at Chernobyl released 200 times more radioactivity than was released by the atomic bombs at Hiroshima and Nagasaki combined. The physical and psychological health and welfare of hundreds of millions of people in the region, in Ukraine, Belarus and Russia, including nuclear clean-up workers, have been harmed by Chernobyl.

To cite just one example, thyroid cancer in children in Belarus is more than 200 times higher than normal. Several hundred thousand still live in the surrounding contaminated areas.

The scope of the destruction, and its long-term effects, cannot be overstated. Chernobyl's deadly fall-out continues. Inadequate decontamination efforts have failed to eliminate the radiation. The hurriedly erected concrete covering, the so-called "sarcophagus," over the obliterated fourth reactor has developed serious cracks. Unless concerted efforts are taken to repair it, experts fear that it will corrode, releasing tons of radioactive dust into the environment. In addition, there are continuing concerns about radio-nuclide pollution in the Dnipro River, Ukraine's main river, and the source of Kyiv's drinking water. Because of the latency period for various radiation-related diseases, the most significant health impact, regrettably, may be yet to come.

Ukraine and Belarus, which are undergoing an extremely difficult period of transition from the devastating effects of 70 years of communism, are simply not in a position to deal, by themselves, with what is, ultimately, an international problem. The international community is beginning to respond, as witnessed by the December 1995 Memorandum of Understanding between Ukraine and the G-7. This international cooperation is vital. Hopefully, such cooperation will help prevent future Chornobyls.

For today's hearing, I am very pleased to have this panel of very distinguished witnesses, including the Ambassadors of the two countries most affected.

Our first witness is Ambassador Serguei Martynov, Ambassador of Belarus to the United States, since 1993. In 1991, Ambassador Martynov served as Deputy Permanent Representative of the Republic of Belarus to the United Nations and subsequently became Belarus' first charge, opening the Belarus Embassy to Washington. A career diplomat with Belarus' Ministry of Foreign Affairs, the Ambassador has 12 years' experience in multilateral disarmament efforts, especially at the United Nations. The Ambassador will discuss the impact of Chornobyl on Belarus, the country that received 70 percent of the radiation fall-out.

Our second witness, Ambassador Yuri Shcherbak, in addition to being Ukraine's Ambassador to the United States since 1994, has a very direct, personal connection to Chornobyl. A physician, epidemiologist, and writer by profession, Dr. Shcherbak was an eyewitness to the Chornobyl disaster and exposed official malfeasance before and after the accident in his documentary novel *Chornobyl*. In 1988 he founded and led the Ukrainian Green movement. He entered politics in 1989 and was elected to the USSR Supreme Soviet. Having never been a member of the Communist Party, he worked closely with Andrei Sakharov. As Chairman of the Supreme Soviet Subcommittee on Energy and Nuclear Safety, he initiated the first parliamentary investigation of Chornobyl. In 1991 and 1992, the Ambassador served as Ukraine's Minister of Environmental Protection and, from 1992 to 1994, as Ukraine's first Ambassador to Israel.

Dr. Murray Feshbach has been a research professor at Georgetown University since 1981. Prior to Georgetown, he served as Chief of the USSR Population Branch of the Foreign Demographic Analysis Division of the U.S. Census Bureau. Dr. Feshbach is the co-author of "Ecocide in the USSR: Health and Nature Under Siege," published in 1992, and has more recently authored a new book, "Ecological Disaster: Cleaning Up the Hidden Legacy of the Soviet Regime," and edited an environmental and health atlas of Russia. Dr. Feshbach will address Chornobyl's public health and environmental legacy.

Finally, Alexander Kuzma is an attorney by training and has been with the New Jersey-based Children of Chornobyl Relief Fund since 1991. He manages the development of new programs, including hospital development in Ukraine, and a women's and children's health care initiative begun in Ukraine recently. Mr. Kuzma served

The Helsinki Commission is very pleased and grateful that all four of you are here to present your testimony, and Ambassador, I would ask you to begin, at this point.

Amb. MARTYNOV. Thank you very much, Mr. Chairman. Honorable Chairman Smith, Honorable Members of the Commission, ladies and gentlemen. I am profoundly grateful to you, Mr. Chairman, for the invitation and for the honor to take the floor before such a distinguished audience, and I am equally indebted to you for the initiative of holding these important hearings.

For almost 10 years since the explosion of the Chornobyl power plant, on April 26, 1986, the Republic of Belarus has been exposed to radioactive contamination. That date split our history, the history of Belarus, into two epochs, before and after Chornobyl. According to its scale, the Chornobyl disaster is the biggest technogenic catastrophe that has ever occurred on this planet. The United Nations General Assembly resolution estimated the Chornobyl tragedy as the global radioeconomic catastrophe—radioecological, sorry, catastrophe.

You have rightly indicated, sir, that the effect of the explosion of Chornobyl is equal to 200 nuclear bombs. The worst results of the catastrophe are, unfortunately, to be found in my country, Belarus, as you said, received 70 percent of the total radioactive fall-out. It is not the first time that great ordeals have fallen on my country. As you may know, we lost every third citizen in the course of the Second World War. Now, 50 years later, Chornobyl has placed my nation, again, on the brink of either extinction or survival. We have to fight again for the health and for the survival of the nation.

Only 1 percent of the territory of Belarus is standard clean. The rest is contaminated, to different degrees, from very contaminated to relatively acceptable, if the word acceptable can be used under the circumstances. Almost overnight, hundreds of thousands of people were forced to say good-bye to their native lands, to leave behind the graves of their ancestors, and to start building their lives in quite new and unfamiliar areas. The government spends a lot of resources and effort to try to remedy the consequences of Chornobyl. In particular, the government has evacuated and resettled 131,000 people from the area worst affected by Chornobyl. We had to build housing, social infrastructure, provide people jobs, often in an open country. That has been created specifically for these people who are, in themselves, a new category of people. They're ecological refugees.

In spite of this effort of the government, almost two million people continue to live in the areas which are contaminated in Belarus. Among these two million people, there are almost 500,000 children under the age of 17, which is most striking and worrisome. Health problems, indeed, are awesome. Above all, as I said, the children are the most heavily affected. You have indicated, sir, that thyroid cancer has risen dramatically. According to different estimates, from 200 times to 300 times over the normal rate in Belarus. Apart from the thyroid cancer problem, there are other health problems with kids. They have a lot of respiratory diseases. They have general immune system deficiencies. They are prone to fall sick much more often than they used to be. About 40 percent

tional breaches of the cardiovascular system. The general morbidity in Belarus is increasing. We estimate that malignant neoplasm rose, on average, by 60 percent in the years after Chernobyl.

One particular grim aspect of the consequences is that the birth rate in Belarus has been dropping very steadily after Chernobyl. Abortions, for fear of bearing a deformed or otherwise handicapped child, are very much on the rise. Coupled with the economic hardships of the transition period, we are facing what experts call now negative growth of the population. But simply put, in plain language, with each passing year, there are less and less Belarusians on the earth, on the face of this earth.

There is no proven scientific knowledge of what is going to happen in the coming years, to masses of people who are subjected to extremely long-term—and I would say life-term—irradiation. The majority of experts expect a further substantial increase of malignant tumors, as well as other diseases.

Another frightening realization and truth for us is that we are going to live with Chernobyl forever. The radioactive situation now is primarily determined by the presence of the following radio-nuclides: cesium-137, with a half-life of 30 years; strontium-90, 29 years; plutonium-239, 25,000 years; plutonium-240, over 6,000 years. To dissipate, an element needs ten half-life periods. So a simple multiplication act gives a creeping feeling of an adverse eternity before you, and before the country.

Health problems, Mr. Chairman, are not long. Economic losses needed for new expenditures and related problems are mind-boggling. Hundreds and hundreds of enterprises, both industrial and agricultural, had to be closed down in the contaminated areas, along with hospitals, schools, infrastructure. Twenty percent of arable land is taken out of economic use in my country, as a consequence of Chernobyl. According to the most modest estimate, the economic damage incurred by Belarus as an immediate result of the Chernobyl accident is equal to 32 annual budgets of my state. That is about US\$235 billion. Now, 10 years later, the government is compelled to spend, year in and year out, up to 25 percent of its annual budget to try to ameliorate the consequences of Chernobyl.

You were right to indicate, sir, that this is an additional and huge burden on reform in my country, and the pace of that reform. I hope members of this Congress would agree that we cannot abandon hundreds of thousands of helpless people out there in the radioactive cold to face the beast of Chernobyl all alone. The government has to help them.

After the disintegration of the Soviet Union, we were left alone with this disaster. The nuclear power plant in Chernobyl was not built by us. It was not serviced by us. We did not have any influence on the processes taking place. The state that did it is gone by now.

The consequences of the catastrophe coincided with economic crisis and with the destruction of the very fabric of former life. This is why, apart from purely health and economic problems, we have to resolve a multitude of social and economic problems. We have to construct a new Belarusian state, while doing everything, at the same time, in order to minimize, to the extent possible, the consequences of Chernobyl. It is extremely difficult for not only

Belarus but any single country to cope with it, taking into account the global character of the disaster.

The grim Chernobyl picture makes us recall the chilling prophecy to be found in the Revelations. I will quote. "And a gray star fell from the sky, on a third of the rivers. The name of the star is Wormwood. A third of the waters turned bitter, and many people died from the waters that had become bitter." Wormwood translates, in Belarusian and in Ukrainian languages, as Chernobyl. A Revelation prophecy come true is now a frightful reality for the peoples of Belarus, Russia, Ukraine, and for people of the whole world.

So this is a tragic lesson, which, as never before, brought us, citizens of our planet, closer to each other, and makes us think over shall we survive another unforeseeable mistake in a nuclear plant design, or an operator's mistake at such a plant? Can we, as a world community, afford ignoring the worst case scenarios? Do we have enough knowledge to prevent future catastrophes? Do we have enough statesmanship to rise above other considerations and face the challenges of the after-Chernobyl epoch?

Belarus, as I indicated, does all it can, and more than that, to mitigate the consequences of Chernobyl. We try also to provide the international community with a sizable scientific contribution for that purpose. But, again, the scale of the catastrophe and the consequences defies capabilities of any single country.

In our view, the 10 years since the explosion at the Chernobyl power station showed that the international community is not quite up to the Chernobyl test. New and vigorous international cooperation is badly needed in the following three areas.

First, we have to recognize that the plight of Chernobyl victims in Belarus, Ukraine, and Russia still demands meaningful assistance to relieve their suffering. What is needed here is humanitarian help, medical help, in terms of high quality equipment, especially in early diagnosis of treatment, and modern and effective medicine.

Second, we need to increase scientific knowledge of the disaster and its consequences. We need to precisely identify scientific guidelines to try to cope with that. The area of scientific cooperation is, in our view, an extremely important area where we should pool together our efforts, including on multilateral and bilateral levels. Belarus here proceeds from the principle of free and guaranteed access to the information on the consequences of the catastrophe. We are investing a very important part of our research potential in studying the effects of Chernobyl. We have a lot to share with the world, and we are ready to do that, but we need help also.

Under the same second heading, so to say, of cooperation, we need also cooperation to create technologies for rehabilitation of contaminated lands, as well as technologies allowing for producing safe foods in a contaminated environment. This is especially important for us, because that would allow us to gradually return the affected territories, which are large, to full and viable life. If we let the time pass, if we fail to create acceptable conditions for life in these areas, then a whole zone in the geographic center of Europe, the size of several small European countries put together, will be doomed to social, demographic, and economic degradation.

Third, we need to identify the most rational applications of international intellectual efforts and material means. For that purpose, Belarus has recently submitted to an international conference in Vienna several proposals. I will just briefly enumerate them:

To set up a joint scientific, interstate center, to coordinate efforts of the scientists, to make them more efficient.

To arrange finances for Chernobyl projects on some basis, and to study for that purpose a proposal to set up a fund of the planet protection, which could accumulate part of the profits of nuclear machine-building, and power engineering industries.

Third, we need to create a viable and enforceable international legal framework of the responsibility of states for causing nuclear damage to other countries, which would specify proper guarantees and compensations.

Belarus also considers that the disproportionate share of Chernobyl's sacrifice and damage which we had to sustain, warrants international contribution to sustainable social, economic and environmental, and development of the Republic of Belarus and reform in Belarus.

In conclusion, Mr. Chairman, I will say that, for us, this tragedy 10 years ago has a clear beginning. But, unfortunately, we don't see any foreseeable end. Thank you.

Mr. SMITH. Thank you very much, Mr. Ambassador, and I appreciate your very sobering and wise counsel to the Commission. Considering the fact that you have attempted to take these efforts to every responsible body, including our friends in Europe, your recommendations will not fall on deaf ears.

Mr. Wolf, a commissioner who's a member of the Appropriations Committee and very active on human rights and child humanitarian causes, myself, and others will do what we can to take your recommendations and give them additional push and boost from the Congress.

I do thank you for that very fine statement. Let me also point out that, when you quote Scripture and the Book of Revelation, it reminds me of something that Joseph Terelia has said. I've read his book, and I've met him in the past. As a matter of fact, Terelia appeared before this Commission, back in the 1980s, and talked about Chernobyl and, quoting from the Book of Revelation, used the Wormwood explanation just as you did. Yours is a very sobering assessment.

Mr. Wolf, Commissioner Wolf, do you have any opening statement?

(No audible response.)

OK Mr. Ambassador?

Amb. SHCHERBAK. Thank you very much, Mr. Chairman. Distinguished Chairman, Congressman Smith, ladies and gentlemen. First of all, let me thank you for the great honor to be here this morning at a congressional hearing on the Chernobyl disaster.

In the first days of 1986, I voluntarily went to the Chernobyl area as a doctor of medicine and writer, and began to collect testimonies of people involved in the Chernobyl case. Thus, I am testifying before you today not only as an official representative of the Ukrainian Government, but also as an eyewitness who realized

Over 10 years after the events, I continued to study the Chernobyl catastrophe, its causes, and effects. By the totality of its consequences, the accident at the Chernobyl nuclear power plant in 1986 is the largest modern disaster, a national calamity which radically changed the destinies of millions of people living on vast territories. This catastrophe has brought the former Soviet Union and the world community at large to recognize the necessity of solving new and extremely complex, comprehensive, and unprecedented problems, dealing practically with all spheres of life—political and social systems, economy, industrial development, and the state of science and technology, legal norms and laws, culture, and morals.

Chernobyl was not simply another disaster of the sort mankind has experienced throughout history, like fire or an earthquake or a flood. It is a global environmental event of a new kind which is characterized by the presence of dozens of thousands of environmental refugees, long-term contamination of land, water and air, and possibly irreparable damage to ecosystems. The regions affected include not only Ukraine itself, but also Belarus, Russia, Georgia, Poland, Sweden, Latvia, Lithuania, Germany, Great Britain, France, Switzerland, and others. By mid-August of 1996 in Ukraine, there were over 90,000 people from 81 settlements evacuated. From 1990 to 1995, due to the dangerous radiation conditions, 52,000 citizens of Ukraine were resettled. According to the latest data, as a result of the accident, there were contaminated 50.5 thousand square kilometers of the territory of Ukraine, with the population of 2.6 million in 2,218 settlements.

Needless to say, Chernobyl also brought considerable social, economic, psychological, medical, and other consequences. The long-term consequences are grave and cause great tension in the work of state agencies and medical services of Ukraine. For example, 5,000 people have lost the ability to work. The sickness of 30,000 liquidators is officially attributed to the aftermath of the catastrophe. According to different sources, including the Ministry of Health and NGOs, 20,000 to 30,000 people died as a result of the accident. The population mortality in the most affected region increased by 15.7 percent, compared to the pre-accident period.

The unprecedented measures taken in 1986–1987 for overcoming Chernobyl's effects required, even according to very unreliable, low figures, the sum of over \$10 billion, and indirect costs were \$25 billion. Over recent years, the new, independent Ukrainian state had to spend over three billion more to solve post-Chernobyl problems. This sum considerably, by five times, exceeds the budget expenses for health care, culture, and public education. Every year, Ukraine spends 12 percent of its state budget on Chernobyl problems. More detailed statistical data on Chernobyl's effects can be found in my written testimony.

Mr. Chairman, as you know, on Saturday, April 20, 1996, the G-7 Summit took place in Moscow, with the participation of Russian President Boris Yeltsin and Ukrainian President Leonid Kuchma. Here, I would like to express my gratitude for the U.S. support of the idea to invite the President of Ukraine to participate in this meeting.

