From: chuck boardman
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See examples below.

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Belarus to Repopulate Chernobyl Exclusion Zone

by Dr. Zbigniew Jaworowski*

On July 23, Novosti, Interfax, Interia, other Belarusian, Russian, and Polish news agencies announced that the government of Belarus decided to resettle hundreds of thousands of people back into the 2,000 ghost-villages in the Chernobyl exclusion zone from which they had been hastily removed 24 years ago.

That panic-stricken reaction to the 1986 Chernobyl nuclear reactor mishap was a fatal error on the part of Soviet authorities, influenced in part by exaggerated recommendations coming from international radiation protection bodies, such as the International Commission on Radiological Protection and the International Atomic Energy Agency.
A short-term evacuation of people from an area near the Chernobyl power station, for example from a town of Prypyat, situated 3 km from the burning reactor, was a reasonable precautionary measure in the developing crisis. But, as radiation dose rates decreased rapidly by orders of magnitude, there was no sense in keeping the inhabitants of Prypyat away from their homes, where now the radiation level is similar to that in the streets of Warsaw (Jaworowski 2010).

Even more senseless was relocation of people from localities in Belarus, Ukraine, and Russia, far distant from the only really dangerous area comprising only 0.5 square kilometers, and reaching out to a maximum distance of 1.8 km southwestward from the Chernobyl reactor. But relocation was carried on even after 1986, resulting in the uprooting of 336,000 persons from their homesteads. Now they can come back again.

Already 10 years ago, the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) made clear that these measures were exaggerated (UNSCEAR 2000). Relocations gained nothing in respect to health, as there was no real detectable health hazard. On the other hand, they led to enormous societal losses (ostracism and pauperization of evacuees, exclusion from use of vast "contaminated areas," losses of property and infrastructure), and an epidemic of psychosomatic afflictions among the evacuees (diseases of digestive and circulatory system, headache, depression, anxiety, escapism, learned helplessness, unwillingness to cooperate, overdependence, alcohol and drug abuse, and suicides).

The "contaminated areas" were defined as those where fallout of radioactive cesium-137 was above 37 kilobecquerels (kBq) per square meter. In the Soviet Union, this covered more than 140 000 square kilometers of land. But the Chernobyl fallout also reached many other countries. Cesium-137 fallout of more that 185 kBq/m^2 was found in Austria. Bulgaria, Finland, Norway, Sweden, Great Britain, Greece, Romania, Switzerland, and Turkey. People in those countries were not relocated. A cesium-137 level higher than 37 kBq/m^2 corresponds to an annual dose of 1.6 milisieverts (mSv), or about a half of the average *natural* radiation dose in these so-called "contaminated areas."

Normal soil contains about 50 natural radioisotopes biologically much more dangerous than cesium-137. Their total activity in the top 10 cm layer of soil is 400 kBq/m^2 (Jaworowski 2002), which is more than 10 times higher than the Soviet "relocation limit." The promoters

of the 37 kBq/m^2 limit probably did not consider this fact. They also did not take into account that in many countries, where the natural radiation dose rate reaches to as much as 100 times greater than the average annual radiation dose received by inhabitants of the so-called "contaminated areas" in the Soviet Union, no increased incidence of neoplastic diseases and genetic disorders was ever registered. Just the opposite: The health of these populations is better than in countries with low natural radiation background. Compared with other noxious agents, ionizing radiation is rather feeble. Nature seems to have provided living organisms with an enormous safety margin for natural levels of ionizing radiation—and also, adventitiously, for man-made radiation from controlled, peacetime sources (Jaworowski 1999).

The current decision of the government of Belarus is an important political event which may bring a positive change in acceptance of nuclear power by the public. It probably results from years of studies reviewed by UNSCEAR which show that the Chernobyl catastrophe caused a minuscule risk for the general population. The only fatal victims were among the employees of the power station and rescue workers. There is no increase of neoplastic mortality among these workers, nor of cancer incidence and hereditary diseases among the inhabitants of "contaminated areas"(UNSCEAR 2008).

Ultrasound monitoring of the thyroid gland is carried out each year for almost all inhabitants in the so-called "contaminated areas." As a result of such enormous mass screening, up to now a total of about 5,000 thyroid cancers have been detected in children and adults from the "contaminated areas." This corresponds to 0.1% of the population living there. Most of these cancers are "occult thyroid cancers" which do not cause clinical symptoms, and have nothing to do with the radioactive iodine-131 dispersed from the Chernobyl reactor. The normal incidence of occult thyroid cancers in the population of Belarus is 9%; in the United States 13%; and in Finland 35%. About 90% of thyroid cancers are curable. In many thousands of Swedish and British patients who have received doses of radioactive iodine-131 much higher than the doses absorbed by people in the "contaminated areas," no increase in thyroid cancers was detected, but rather the opposite: a 38% deficit of cancers among the Swedish patients, and 17% deficit among the British ones.

Calculating by unit of energy produced, the Chernobyl catastrophe caused 0.86 deaths per gigawatt of electricity produced per year, which is 47 times less than for hydroelectric power stations (40 deaths per GWe-year), including the 230,000 fatalities caused by the 1975 collapse of the dam on the Banqiao river in China.

The government of Belarus took into account the recommendations of a report jointly published in 2002 by four UN organizations: the United Nations Development Programme (UNDP), United Nations International Children's Emergency Fund (UNICEF). World Health Organization (WHO), and United Nations Office for Coordination of Human Affairs (UNOCHA). In strong words, the report stated that the enormous effort and billions of dollars spent on mitigation of the effects of Chernobyl accident, did not produce a positive result, but rather aggravated the situation of 7 million people defined as "victims of Chernobyl," and petrified psychological effects of the catastrophe and of the wrong Soviet decisions. The report recommended that the three post-Soviet countries and the international organizations abandon the current policy, based on the misguided expectation of mass radiation health effects, which led to the useless expenditure of giant resources. The report presented 35 practical recommendations needed to stop the vicious cycle of Chernobyl frustrations, social degradation, pauperization and the epidemic of psychosomatic disorders. In practice, the

recommendations suggested removal of all the restrictions that had been imposed. Most important among them was that the relocated individuals should be allowed to return to their old settlements.

This last recommendation was fulfilled by the government of Belarus, which should be commended for its courage in standing up to the Chernobyl hysteria, for years cultivated by Greenpeace and other Greens. We come back to normalcy.

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