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*The 20-th anniversary of Chernobyl Catastrophe is dedicated to
INTERNATIONAL CONFERENCE*

**HEALTH CONSEQUENCES OF THE CHERNOBYL CATASTROPHE. STRATEGY OF
RECOVERY**

May 29 – June 3 2006
Kyiv, Ukraine

ORGANIZERS:

Ministry of Public Health of Ukraine,
International Association "Physicians of Chernobyl";

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CHERNOBYL AND TIME

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Chernobyl. It would probably be difficult to find a person who has never heard of the name of this town. Not only has Chernobyl taken hundreds of thousands of human lives and affected the lives of millions more - it has also permanently changed our perception of time. For territories contaminated by radioactive materials, especially by plutonium isotopes, April 1986 has become the new reference point from which we have begun to calculate time, not in days or even years, but in tens of thousands of years. During the course of these thousands of years the process of the disintegration of plutonium will continue, producing ever more radioactive elements, with no visible end to this chain of events. A nuclear reactor, meanwhile, can rage out of control in mere seconds. In mere seconds a person can receive a deadly dose of radiation.

The future of any given country, as well as of humanity in general, has always been determined by the health of the current generation of mothers and children. It has been proved that consequences of the Chernobyl catastrophe will affect many generations to come due to the rise of genetic mutations it has caused. The level of mutation in the genome of children whose parents have received various doses of radiation from the Chernobyl accident is seven times higher than the natural level. The results of such mutations could only surface after these children have themselves become parents. Despite the considerable amount of information already available on the health problems of "the children of Chernobyl", the effects of long-term radiation on children are still uncertain. At present, 250 thousand children abide in three of the most contaminated regions of the Ukraine - Kiev, Zhytomyr and Rivne. This, coupled with the number of children who have suffered as a result of the Chernobyl catastrophe, living elsewhere in the Ukraine, raises the figure to an excess of 400 thousand.

Yet no one had asked these children or their parents whether they were prepared to sacrifice their health and their lives merely for the purpose of producing energy. It is possible that many who have not been directly affected by Chernobyl would see this as a philosophical question. For those on whom the consequences have had their toll, however, it is a question of life or death. Unfortunately the conclusions of the IAEA and the WHO regarding the consequences of the Chernobyl catastrophe on people's health are far from reality. More disappointing still is that their misrepresentation did

not occur due to scientific error, but for politically driven reasons. At the same time, I have no doubts as to what reply any representative of either the IAEA or the WHO would give when faced with the question of whether they would be prepared to part with their lives to provide energy for other people.

It is hard to imagine that anyone would actually think that in the 21st century it is permissible to continue subjecting millions of people to an unjustified risk by producing nuclear energy, so that others can enjoy what can be termed as the "privileges" of civilisation. There can be no argument that strong contradictions already exist in the fact that nuclear energy is still being produced and there are even plans of developing it. These contradictions are obvious enough:

The production of nuclear energy is dangerous. A catastrophe like Chernobyl can happen at any moment, on any nuclear reactor. The only questions are when and where;

Nuclear energy is expensive. Financial calculations for a full cycle of production of nuclear energy (including the hundreds of years during which it would be necessary to monitor and control the storage of radioactive waste, even in completely safe conditions), show that this is the most wasteful energy source on the planet;

Nuclear energy can never solve the problems of global warming, as it only produces electricity. Electricity constitutes less than 20% of worldwide energy consumption. Nuclear energy contributes approximately 17% to worldwide electricity. Upholding this figure alone would require massive programmes for construction of new reactors, taking into account both the increasing number of reactors that need to be shut down in the near future, and the predicted rise in energy consumption;

50 years and hundreds of billions of dollars in public subsidies on, no nuclear power plant can compete on the open market. Every single attempt to make nuclear energy competitive has failed miserably;

The nuclear industry provides a perfect target for terrorism. Without even mentioning of the possibility for the production of nuclear weapons.

These are only a few contradictions out of many...

However, despite everything, there are still plans to develop nuclear energy, even though it is absolutely clear that this would be a grave mistake - a principal mistake - both economically and politically speaking.

Firstly:

The 3rd statute of the IAEA states that the IAEA has the authority to "encourage and promote ... the development and practical application of atomic energy". This is a principal mistake as, if nuclear energy is a commercially prof-

itable industry, there should not be UN agency, which promotes it. I presume that everyone is aware of the fact that the given statute was produced at the time of the Cold War, when it was positive development. But who does it serve today? Why has this outdated statute not been changed as yet? Does it, perhaps, serve someone's financial interests? Or - even worse - someone's military interests?

Secondly:

From an ethical point of view, it is unacceptable to build installations, which could inflict harm on people without their voluntary agreement. Furthermore, any such potentially dangerous installation would be made operational only after the people it could affect have been insured against the risks (taking into account economic and medical aspects). In the worst case scenario, we may expect to witness situations akin to those we see now in the post-Chernobyl period - no one is singularly responsible for the catastrophe and no one can provide the due help to all its victims. With regards to nuclear energy, more questions arise - could you conceive of any insurance company that would give an insurance policy covering the population of half the globe? Could you conceive of any industry that would be capable of paying for such a policy? The latest assessments show that the damage inflicted by the Chernobyl catastrophe has amounted to hundreds of billions of dollars. Meanwhile, transboundary liability in case of nuclear installation accident is still limited to ... as much as 5 millions USD according to Vienna Convention!

Thirdly:

The people found responsible for the accident on the 4th block of the Chernobyl NPP were the director and a number of staff. But where are the people who were in truth responsible? Who has claimed political responsibility? No one. Should the entire nuclear industry not bare this responsibility?

In 2005 the IAEA went public in a press-release, saying that "persistent myths and misperceptions about the threat of radiation have resulted in "paralyzing fatalism" among residents of the affected areas." I would say that there is no such a thing among the residents. If anything, a misperception of nuclear danger has resulted in "paralyzing optimism" towards the nuclear industry and appropriate agencies. They simply ignore even the thought that Chernobyl can be repeated today. I think that they should be reminded about it.

It is now time to globally distribute and put into work market-ready renewable energy and energy efficient technology in order to start the energy revolution which is necessary to fight global climate change and help to end the nuclear threat.

THE LESSONS OF CHERNOBYL: DEFENSE FROM THE POTENTIAL EXPOSURE IN THE CASE OF POSSIBLE EMERGENCY SITUATION ON ACTING NPP OF UKRAINE

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The necessity of using the "Chernobyl experience" for preparation of emergency planning documents in case of radiation accident was signed. It is known, that there are 15 acting power units in Ukraine. Transfer of radioactivity after the accident on Chernobyl NPP lead to Caesium-137 pollution of areas more than 1 Ci/km² on distance 1000 and more km (Sweden, Finland). The spots of pollution of areas more than 5 Ci/km² was fixed on distance 600 km. So, territories 400 km in radius is the zone of high potential danger. In this zone must to be well trained specialists and resources for adequate action in case of accident. Known the location of nuclear blocs in European part of Russian Federation and on the territory of Ukraine, it should be prognose, that can be mutual radiation pollution of the territories of both countries in case of serious radiation accident. Moreover, power units in Ukraine was made in Russia. This 2 aspects needs on unite efforts of both countries for the defense of population from potential exposure and minimization of accident consequences, for unification of normative and also instructive and methodical documents on radiation-accidental reaction. For this purpose exist the interstate contract among AMS of Ukraine and All-Russian Centre of Accident Medicine "Defense" of Russia on united reaction in case of potential radiation accident. Since 2006 started the united science work.

DYNAMICS OF HEALTH INDICES OF THE CHILDREN'S CONTINGENT, LIVING ON POLLUTED BY RADIO-ISOTOPES TERRITORIES OF THE KALUGA PROVINCE AFTER THE CHERNOBYL ACCIDENT

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The children's population of polluted by radioisotopes districts of the Kaluga province continues to be exposed to long chronic influence (external and internal) of radiation small doses on all body mainly due to Cs-137. and during