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SOCIETY RESPONSE TO NUCLEAR ENERGY

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Energy demand in the world is growing increasingly, among other factors due to economic development. Every way of producing electricity has got their own drawbacks and has implicit environmental impact. Among all the energy sources, nuclear energy is the most polemic because of the way it is presented by the mass media. This aspect provokes controversy to occidental societies which reject this kind of energy with arguments normally based on a wrong and insufficient knowledge of the matter.

NEGATIVE FACTORS ASSOCIATED TO SOCIAL RESPONSE TO NUCLEAR ENERGY (1)

- **HISTORY.-** Nuclear science is born with a first military use and the antinuclear discourse takes good advantage of it. These groups work with the psychology of social mass to make them perceive that nuclear technology is influenced negatively by the “history” associated to the term “nuclear”.
- **NUCLEAR TERMINOLOGY.-** Nuclear language does not help much in some cases, as in the case of **reactor trip**, which in Spanish is translated as “**disparo**” (**shot**) the same word used with weapons.

Nuclear waste is stored in repositories. The translation of “**nuclear repository**” in Spanish is “**cementerio nuclear**” (cemetery or graveyard for people).

NEGATIVE FACTORS ASSOCIATED TO SOCIAL RESPONSE TO NUCLEAR ENERGY (2)

➤ KYOTO PROTOCOL.-

“iv) Research on, and promotion, development and increased use of, new and renewable forms of energy, of carbon dioxide sequestration technologies and of advanced and innovative environmentally sound technologies.”

(Kyoto Protocol to the United Nations Framework Convention on Climate Change. Page 2).

Nuclear energy was not mentioned as a good alternative free of greenhouse gas emissions. This fact has been widely exploited by antinuclear sectors.

THE ANTINUCLEAR DISCOURSE

The antinuclear discourse, promoted late in the seventies, has gone deeply into the collective social unconsciousness and has undermined public acceptance of nuclear energy due to 3 facts deeply exploited by antinuclear groups:

- **Nuclear Proliferation**
- **Accident of Chernobyl**
- **Nuclear Waste**

FINAL REPORT ON CHERNOBYL

According to the report: Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts and Recommendations to the Governments of Belarus, the Russian Federation and Ukraine.

The Chernobyl Forum 2003-05. Second revised edition: IAEA, WHO, UNDP, FAO, UNEP, UN-OCHA, UNSCEAR, WORLD BANK GROUP. – Belarus – The Russian Federation and Ukraine:

➤ **Dead casualties**

- **28** persons: from Acute Radiation Syndrome
- **2** persons: at Unit 5 from injuries related to radiation.
- **1** person: of coronary thrombosis
- **19** persons between 1987-2004 of various causes not certainly attributable to radiation exposure.

➤ **Cancer mortality**

- 1992-2003: 4000 thyroid cancer cases diagnosed and **15 deaths** related to the progression of the disease documented by 2002.

TO SOLVE THIS BAD PERCEPTION OF NUCLEAR FISSION ENERGY IN THE SOCIETY

It would be necessary:

- A positive and realistic position by governments which should establish the national energy policy as a **state matter** not a question related to ideologies or political parties.
- **To clarify the real figures** of the Chernobyl accident as reported by the United Nations, and to explain how Chernobyl was not a standard nuclear power plant for producing electricity.
- To present by means of mass media **a responsible advertising campaign** in which nuclear science is presented as a main science for civil purposes such as in medicine, agriculture and industry.

CONCLUSIONS OF IPCC

On 6 April, 2007 the Intergovernmental Panel on Climate Change (IPCC) had issued its report that included scientifically corroborated conclusions. **The Panel had concluded that climate change phenomena would cause extreme natural disasters, lead to serious food crises and increase health dangers, because of the changes in the ecosystems.** There was convincing evidence of the dangers. Clearly, depletion of resources could increase competition for food, energy and water. Other dangers included the loss of arable land, natural disasters and a rise in water levels, which could lead to an increase in the number of refugees and cause uncontrollable migratory flows. No one was immune, but the impact would be greater where accompanied by pre-existing vulnerability. The most vulnerable countries would pay the highest price, because of their low capacity to respond. The situation required decisive, urgent collective action to mitigate climate change and reduce its consequences to a tolerable level. The cost of failure to act was infinitely greater than the cost of taking action.

THE FUTURE: NUCLEAR FUSION

- The energetic future will be based on nuclear fusion, since one of its fuels is deuterium, found in the water and accessible to any country in the world.
- Nuclear fusion is the **best alternative** for several reasons:
 - It would avoid the present dependence of primary energies based on fossil fuel sources.
 - It does not emit greenhouse gases and, therefore, it is highly recommended after the “catastrophic” warning made by the IPCC.
 - It would be available for every country in the world, thus benefiting the economy of developing nations.