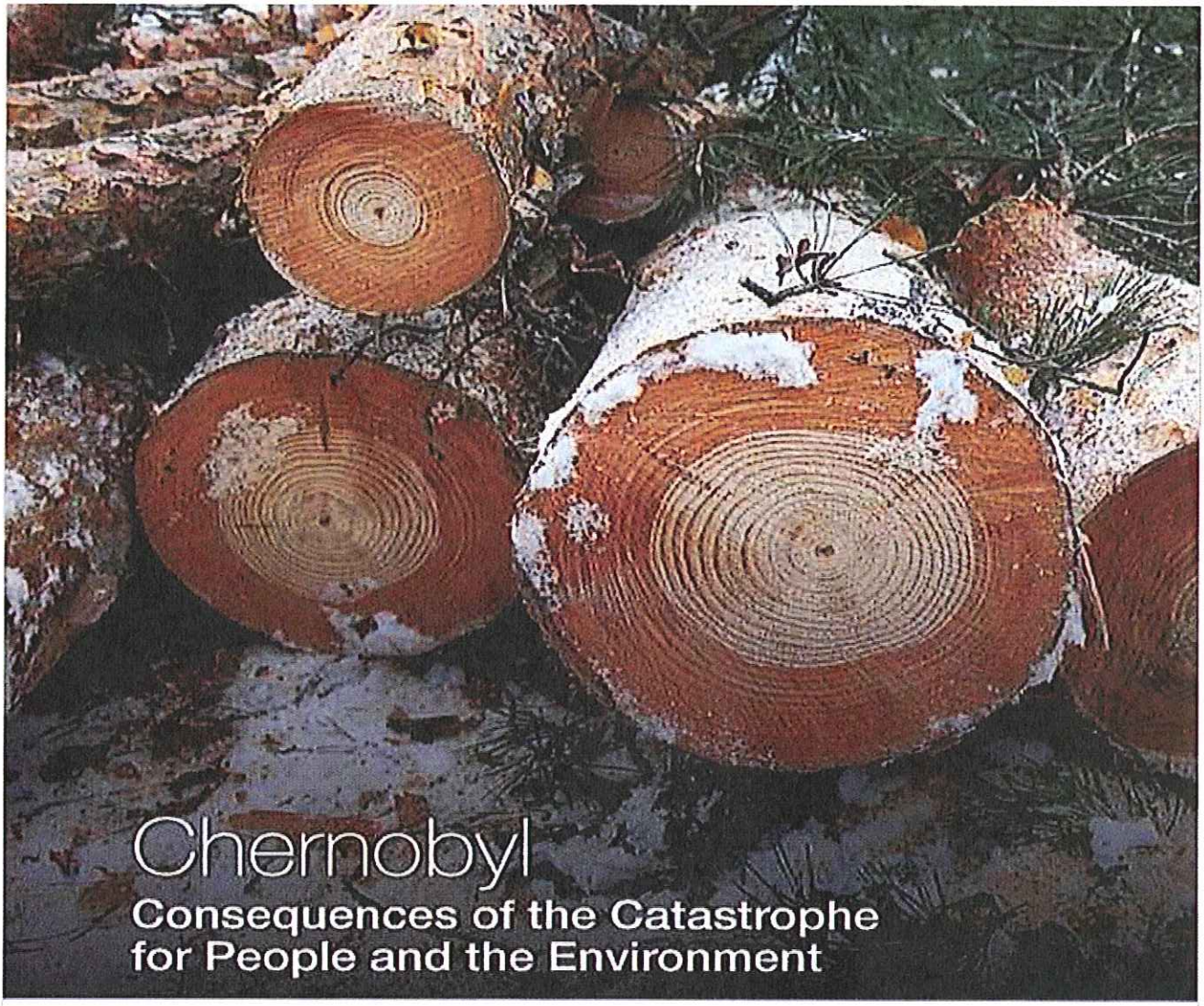

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Foreword

More than 22 years have passed since the Chernobyl catastrophe burst upon and changed our world. In just a few days, the air, natural waters, flowers, trees, woods, rivers, and seas turned to potential sources of danger to people, as radioactive substances emitted by the destroyed reactor fell upon all life. Throughout the Northern Hemisphere radioactivity covered most living spaces and became a source of potential harm for all living things.

Naturally, just after the failure, public response was very strong and demonstrated mistrust of atomic engineering. A number of countries decided to stop the construction of new nuclear power stations. The enormous expenses required to mitigate the negative consequences of Chernobyl at once "raised the price" of nuclear-generated electric power. This response disturbed the governments of many countries, international organizations, and official bodies in charge of nuclear technology and led to a paradoxical polarization as to how to address the issues of those injured by the Chernobyl catastrophe and the effects of chronic irradiation on the health of people living in contaminated areas.

Owing to the polarization of the problem, instead of organizing an objective and comprehensive study of the radiological and radiobiological phenomena induced by small doses of radiation, anticipating possible negative consequences, and taking adequate measures, insofar as possible, to protect the population from possible negative effects, apologists of nuclear power began a blackout on data concerning the actual amounts of radioactive emissions, the doses of radiation, and the increasing morbidity among the people that were affected.

When it became impossible to hide the obvious increase in radiation-related diseases, attempts were made to explain it away as being a result of nationwide fear. At the same time some concepts of modern radiobiology were suddenly revised. For example, contrary to elementary observations about the nature of the primary interactions of ionizing radiation and the molecular structure of cells, a campaign began to deny non-threshold radiation effects. On the basis of the effects of small doses of radiation in some nonhuman systems where hormesis was noted, some scientists began to insist that such doses from Chernobyl would actually benefit humans and all other living things.

The apogee of this situation was reached in 2006 on the 20th anniversary of the Chernobyl meltdown. By that time the health and quality of life had decreased for millions of people. In April 2006 in Kiev, Ukraine, two international conferences were held in venues close to one another: one was convened by supporters of atomic energy and the other by a number of international organizations alarmed by the true state of health of those affected by the Chernobyl catastrophe. The decision of the first conference has not been accepted up to now because the Ukrainian party disagrees with its extremely optimistic positions. The second conference unanimously agreed that radioactive contamination of large areas is accompanied by distinctly negative health consequences for the populations and predicted increased risk of radiogenic diseases in European countries in the coming years.