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UNSCEAR Focuses on Chernobyl Accident in General Assembly Report

VIENNA, 6 June (UN Information Centre) -- The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) has just approved its UNSCEAR 2000 Report to the General Assembly. This is a detailed assessment of radiation sources and health effects. Particular emphasis has been given to the evaluation of exposures and health consequences of the Chernobyl accident.

The Chernobyl accident

According to the Committee's scientific assessments, there have been about 1,800 cases of thyroid cancer in children who were exposed at the time of the accident, and if the current trend continues, there may be more cases during the next decades. Apart from this increase, there is no evidence of a major public health impact attributable to radiation exposure fourteen years after the accident. There is no scientific evidence of increases in overall cancer incidence or mortality or in non-malignant disorders that could be related to radiation exposure. The risk of leukaemia, one of the main concerns owing to its short latency time, does not appear to be elevated, not even among the recovery operation workers. Although those most highly exposed individuals are at an increased risk of radiation-associated effects, the great majority of the population are not likely to experience serious health consequences from radiation from the Chernobyl accident.

Cancer risks

The Committee has further assessed the cancer risks from radiation exposures based on reviews of epidemiological studies and results from fundamental radiological research. The primary source of information remains the Life Span Study of the survivors of the atomic bombings of Hiroshima and Nagasaki. It includes about 86,500 individuals of all ages and both genders with good dosimetric data over a wide range of doses. About 5% of the 7,800 deaths from cancer or leukaemia in this group of exposed people is due to radiation.

For a population of all ages and both genders, the lifetime risk of dying from cancer is about 9% for men and 13% for women after an acute dose of 1,000 millisievert. For

comparison, the worldwide annual per caput dose is 2.4 millisievert from natural radiation.

Radiation sources

The greatest contribution to the world population's dose comes from natural background radiation. The second largest contribution comes from medical radiation procedures. Human activities cause further radiation exposure in addition to the natural exposure, for instance contamination from nuclear weapons testing and nuclear power production contribute to the radiation exposure of the public. Occupational radiation exposure is incurred by workers in industry, medicine and research. The table summarizes UNSCEAR's estimates of the annual worldwide average per caput dose.

Average radiation doses at year 2000 from natural and man-made sources of radiation expressed in millisievert (mSv)

| Source | Worldwide average annual effective dose |
|---------------------------------|--|
| Natural background | 2.4 |
| Diagnostic medical examinations | 0.4 |
| Atmospheric nuclear testing | 0.005 |
| Chernobyl accident | 0.002 |
| Nuclear power production | 0.002 |

For more information contact:

Dr Lars-Erik Holm
Chairman of UNSCEAR
Swedish Radiation Protection Institute
S-171 16 STOCKHOLM, SWEDEN
Telephone: 0046-8-729 7110, Fax: 0046-8-729 7108
e-mail: ssi@ssi.se

Note for editors

UNSCEAR was established by the United Nations General Assembly in 1955. It is composed of scientists from 21 nations and has previously published 13 major reports on the levels and health effects of radiation. UNSCEAR's mandate in the United Nations system is to assess and report levels and effects of exposure to ionizing radiation. Governments and organizations throughout the world rely on the Committee's estimates as the scientific basis for evaluating radiation risk, establishing radiation protection and safety standards, and

regulating radiation sources.

The UNSCEAR 2000 Report has ten annexes that are extensive scientific reviews and assessments on: exposures from natural radiation sources; exposures to the public from man-made sources of radiation; medical radiation exposures; occupational radiation exposures; DNA repair and mutagenesis; biological effects at low radiation doses; combined effects of radiation and other agents; review of radiation-associated cancer risks; and exposures and effects of the Chernobyl accident.

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