

Radiation Protection of the Environment: Anthropocentric and Ecocentric Principles

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Abstract

The second half of the XX century was dominated in the field of radiation protection by the anthropocentric concept stated by the International Commission on Radiological Protection (ICRP). According to this concept “if radiation standards protect man then biota are also adequately protected from ionizing radiation”. At the end of the XX – beginning of the XXI centuries in the area of radiation protection of nature an ecocentric strategy is beginning to develop where emphasis has swung to the protection of biota in their environment. Inadequacy of ICRP’s anthropocentric concept is reported. Issues are discussed such as ecological dosimetry, nonequidosal irradiation of man and biota, criteria for estimating radiation induced changes in biota and man, as well as the need to harmonize permissible exposure doses to man and biota. An urgent need is stressed to develop a single (synthetic) concept of radiation protection which simultaneously ensures protection of human health and biota well-being in their environment. This concept is to be based on the recognition of the integrity of socio-natural ecosystems where man and biota are considered as a unity.