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PAPER TITLE THE USE OF THE WILLINGNESS TO PAY APPROACH FOR THE DETERMINATION
OF MONETARY VALUES OF THE MAN-SIEVERT

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ABSTRACT (See instructions overleaf)

The monetary valuation of the man-sievert used for the optimisation of radiological protection is based on the loss of life expectancy associated with one unit of collective exposure and is estimated using the ICRP risk coefficients of radiation-induced cancer and genetic effects, and thus refers to the monetary value of statistical life. The review of the literature on the value of life derived from the willingness to pay approach clearly demonstrates a large range of values according to the various risk situations that can be considered in the society.

In order to apply the willingness to pay approach for the valuation of the man-sievert, a specific questionnaire has been established. Preliminary results have been obtained concerning occupational exposures in nuclear power plants. According to the framework developed for the determination of the monetary values of the man-sievert, including risk aversion considerations, a baseline value for the risk of cancer can be considered and compared to the human capital approach as well as the risk aversion coefficient driving the increasing function of the value of the man-sievert associated with the individual level of exposure.