University of Salford MANCHESTER

Advancing the Measurement of Radiation Exposure in Large Mammals

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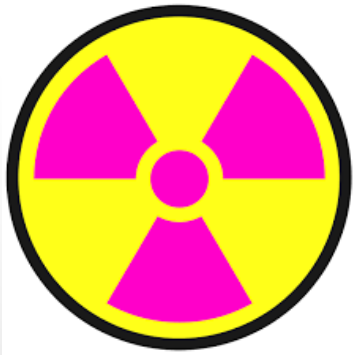
Aim

Develop practical dose measurement technologies for accurately assessing radiation exposure in wildlife under field conditions.

The primary focus will be on large mammal species in Chernobyl Exclusion Zone.



Objectives

1 Design and develop an environmentally robust method for dosimetry technologies.

2. Calibrate these methods for radionuclide energies and dose rate ranges that are likely to be encountered in the Chernobyl Exclusion Zone and around regulated sites.

3. Evaluate current, and where necessary develop new, conversion factors to convert measurements to whole body doses.

4 Test the methods and techniques developed through field research.

*** Develop voxel models to evaluate absorbed fraction values and estimate radiation exposure of specific organs in large mammal species.*

Methodology

- Systematic Review of literature: dosimeters technologies, parameters influencing radiation measurements under field situations, dose rate ranges and radionuclide profiles in CEZ and around regulated sites, *voxel models (esp. in large mammals)*.
- Design field dose measurement approach(es).
- Field testing of measurement approaches
- *Calculation of dose rates in specific organs by using a computer program code.*

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Thank you very much