

Coping with a big nuclear accident

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The NREFS Project: Management of Nuclear Risk Issues: Environmental, Financial and Safety

- Sponsored by the Engineering and Physical Science Research Council as part of the UK-India Civil Nuclear Power Collaboration.
- 4 UK universities, led by Philip Thomas, formerly at City University London, as principal investigator:



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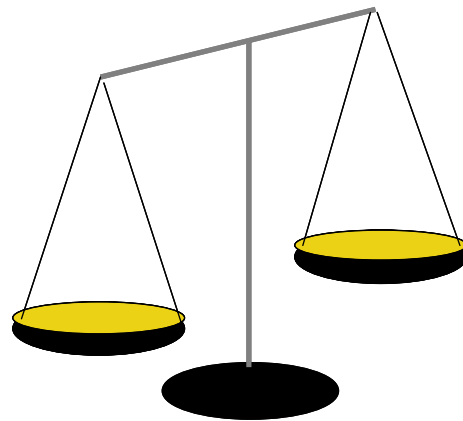


The stand-out message from the research is that nuclear power is a lot less scary than many fear **even when it goes badly wrong:**

1. The loss of life expectancy **due to radiation** amongst the most threatened members of the general public is likely to be small after even after a very big nuclear accident: **9.3 days** for the **116,000 early evacuees at Chernobyl**, the world's worst nuclear power disaster.
2. Relocation after a big nuclear accident should be used sparingly. Only about **17,000 people** should have been relocated after Chernobyl, **not the 335,000** actually moved permanently.

NREFS concentrates on objective methods, starting with the Judgement- or J-value

- The J-value balances the **gain in life expectancy** that a safety measure brings against the **cost** of providing it.



You are spending too much if J is bigger than 1.0

Some numbers to bear in mind

- **80** is the life expectancy at birth in the UK.
- **42** years is the population-average life expectancy in the UK.
- **3½** years is how much life a Londoner **loses** by moving to Manchester.
- **4½** months is how much life a Londoner **loses** as a result of air pollution.