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# Nuclear Waster-Burden or benefit?

## Reflections from a philosophical perspective

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# 1. Definitions

- Definitions of what is waste and/or resources is not neutral!
- Dependent on an observer's intentions
- Definitions have significant impact on framing the discussion about different issues
- Open for political considerations but also questions for the scientific community – who should make the definitions?



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## 2. Technology

- Gen IV and closed fuel cycles can have promising implications for SNF management
  - Reducing volumes of waste
  - Shorten duration of hazards
  - Increase fuel supplies
- More R & D required - needs continuous commitment to nuclear power in some form
- Dependent on public opinion and political will



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### 3. Comparison/Evaluation

- Fuel cycles can be compared (relative to each other and to absolute criteria)
  - Ethical variables (equity and sustainability)
  - Operational variables (efficiency and savings)
  - Security questions
- Shows inconsistencies between important goals and values
- Tradeoffs are necessary – we cannot have it all!



## 4. General reflections

### Two perspectives on Nuclear waste

#### 1. Bottom up thinking

- SNF management is closely related to nuclear power
- The answer to the SNF management question will affect the conception of nuclear power

#### 2. Top down thinking

- SNF management is part of questions about energy systems and general consumption levels
- Both SNF management and nuclear power must be evaluated in comparison with all alternatives, including fossil fuels, renewable technology and reduced consumption