Nuclear decommissioning: Turning waste into Wealth

Legislation, health and safety regulations

Tzany Kokalova
University of Birmingham

Overview

Topics for discussion

- Site monitoring strategies and methods
- Hazard identification and reduction
- Environmental impact/risk assessment
- Environmental principles applicable to site decommissioning
- Strategies and technologies

Decommissioning policy 1

Typical elements of a decommissioning policy:

- Allocation of responsibilities
- Provision of resources
- Decommissioning approaches
- Safety and security objectives

Decommissioning policy 2

Typical elements of a decommissioning policy:

- Radioactive waste management
- Waste minimisation
- End points for decommissioning
- Public information and participation

Decommissioning strategy 3

Factors influencing the choice of strategy

- Meeting policy requirements
- Availability of resources
- Costs
- Spent fuel and radioactive waste management

Decommissioning strategy 4

Factors influencing the choice of strategy

- Safety and security
- Regulatory aspects
- Multiple facilities
- Knowledge management

Principles 1

The IAEA nuclear energy basic principles

- Benefits
- Transparency
- Protection of people and the environment
- Security

Principles 2

The IAEA nuclear energy basic principles

- Non-proliferation
- Long term efficiency
- Resource efficiency
- Continual improvement

Principles 3

The IAEA fundamental safety principles

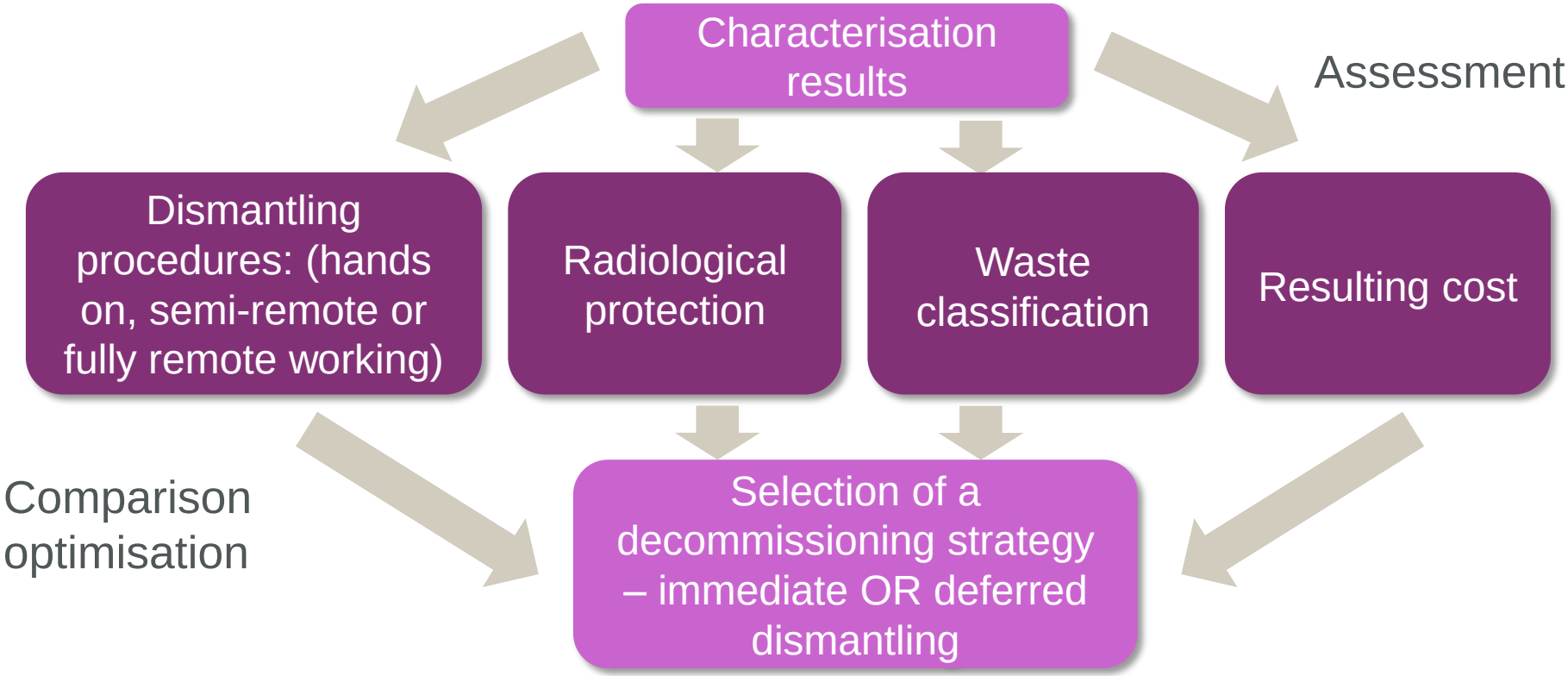
- Responsibility for safety
- Role of government
- Leadership and management for safety
- Justification of facilities and activities
- Optimisation of protection

Principles 4

The IAEA fundamental safety principles

- Limitation of risks to individual
- Protection of present and future generations
- Prevention of accidents
- Emergency preparedness and response
- Protective actions to reduce existing or unregulated radiation risks.

Decommissioning



Health and safety considerations 1

Decommissioning of a shut down nuclear reactor is a necessary step **to reduce radiological hazards** in accordance with national policy.

Similarly, adequate attention must be paid to the health and safety of workers who must be protected from **radiological and non-radiological hazards associated with the characterisation activities.**

Health and safety considerations 2

The results of the characterisation can be used for further planning of the decommissioning work to:

- Provide dose assessments
- Provide risk assessments
- Assess various scenarios to ensure compliance with the ALARP principle
- Identify the types of safety and radiological protection required for the protection of workers, general public and environment.

Bibliography 1

Sources

- Radiological Characterization of Shut Down Nuclear Reactors for Decommissioning Purposes, IAEA TECHNICAL REPORTS SERIES No. 389.
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Bibliography 2

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