Principles of Safety and Sustainability

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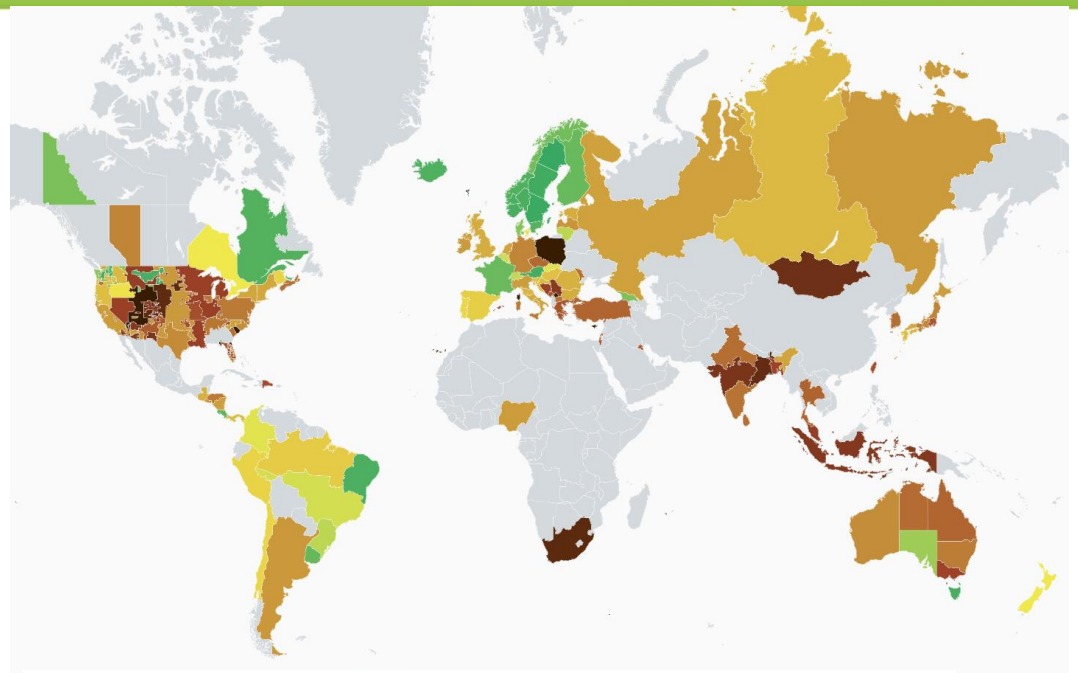
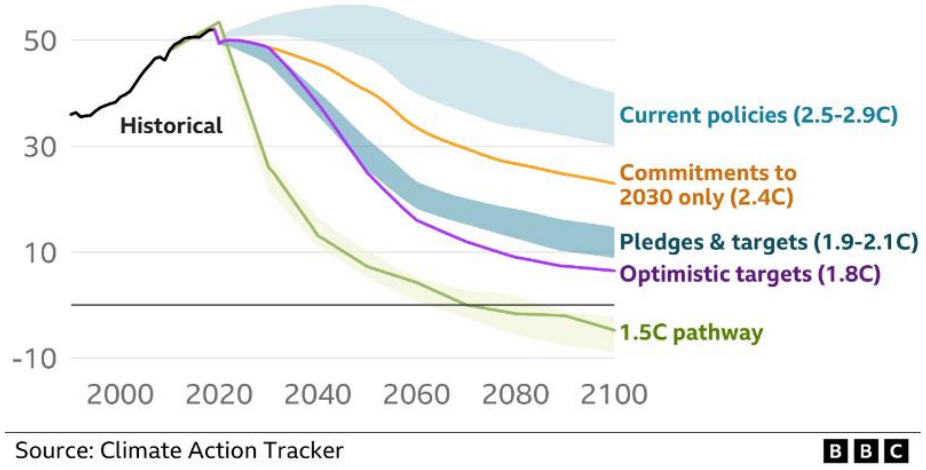
Why this conference is so important





Climate change is expected to cause an estimated **250.000 additional deaths every year** 2030-2050.

The direct health costs are estimated to be **$2-4 billion each year** by 2030 (excludes costs in agriculture and water and sanitation) WHO 2021

Why this conference is so important

Scaling up medical imaging would avert **3.2% of all cancer deaths** between 2020-2030, saving **55 million life years**.

(Lancet Oncology Commission on Medical Imaging and Nuclear Medicine 2021)

One third of the **€1.8 trillion** investments from the EU NextGenerationEU Recovery Plan will go towards the European Green Deal
(European Commission)

Asset managers globally are expected to increase their ESG-related assets to **US$33.9 trillion** by 2026
(PwC 2022)

Why this conference is so important

UN 2030 Agenda:

- end poverty and hunger
- protect the planet from degradation
- all human beings can enjoy prosperous and fulfilling lives
- peaceful, just and inclusive societies
- strengthened global solidarity

The ambition and importance could not be higher

The case for action

- Radiation safety compliance is regarded as a purpose in itself
- Safety and sustainability are seen as belonging to different parties
- The radiation protection principle requires only to ‘not unduly limit’ sustainable outcomes
- We have an opportunity to be part of the future

Safety: can build or limit progress

Applied positively	Applied indiscriminately
Build public trust	Delay or prevent activities
Reduce harm	Decrease business viability
Build employee engagement	Reduce efficiency
Culture of compliance	Stifle innovation

Safety often addressed in isolation by numbers

ALARA: driving lower numbers

Transport safety
1 Bq/g, 0.025 mSv/h

Worker safety
1E+06 monitored workers
Ave dose 0.4 mSv/a

Waste safety
'background radiation'

Environment impact
0.4 mGy/h

Public safety
0.3 mSv/a

Lifecycle analysis example: uranium production

Applying safety without considering impact

Public - trust

Efficient production

Jobs and community

Suppliers

Transport

Business

Future land use

Resource recovery

Things we

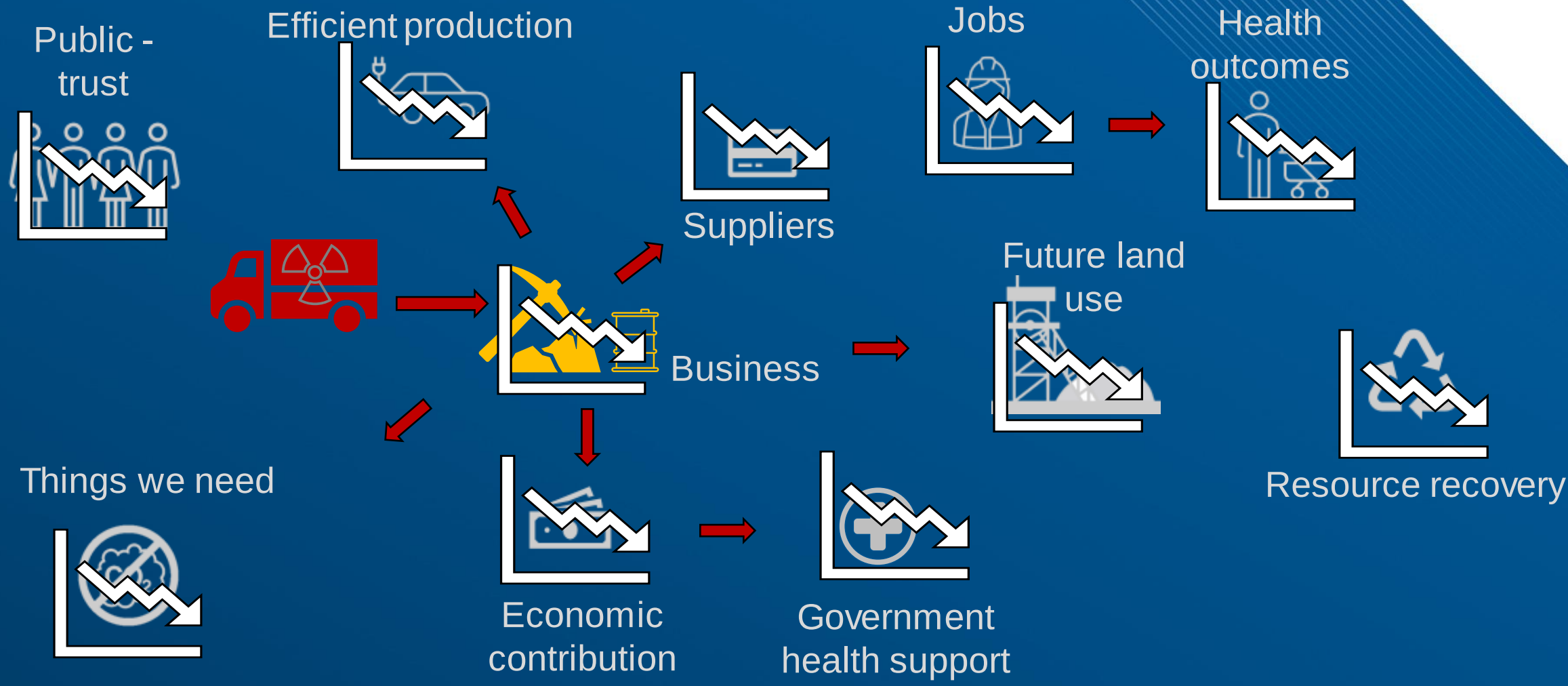
Example: new safety requirements disrupt transport of material (due to inappropriate criteria or lack of consultation)

Environmental impact

Economic contribution

Inputs

Unintended consequences can cause real harm



The good news: lifecycle analysis gives sustainability opportunities

UN SDGs: a framework and common language

Public - engaged

Products

Jobs and community

Transport - footprint

Pro ent

Future use

Circular economy

Products - low emissions

rs – social progress

Economy

Inputs

Environment - enhanced

This is complex… we need partners

International bodies

IAEA

Academia

THE UNIVERSITY of ADELAIDE

Regulatory Forum for Safety of Uranium Production and NORM (REGSUN)

Government

Industry

Community

Regulator

Conference themes – suggestions

Interrelationship between safety and sustainability in decision making

Target
8.2
Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

☒ More cost efficient methods for optimising protection

☑ Regulatory approaches that engage industry, understand business impact, and include business needs.
How safety approaches were modified to improve lifecycle sustainability outcomes

Practical experiences integrating safety and sustainability

Target
12.2
By 2030, achieve the sustainable management and efficient use of natural resources

☒ Recycling initiatives in a decommissioning project

☑ Radiological criteria and clearance approaches that considered and progressed circular economy principles

Conference themes – suggestions

Interrelationships in policy, strategy, legislation, and regulation

☒ How a graded approach ensured that safety was proportionate to risk.
How radiation protection principles were efficiently incorporated.

☑ How objectives for sustainable development were developed, and how they were integrated in legislation and regulatory approaches

Conference themes – suggestions

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"Por qué no los dos?"

We are interested in both safety and sustainability, but the conference will benefit most from learning how you integrated them

What might be interesting for the conference to explore

Ensuring Safety and Enabling Sustainability

Do we agree on the definitions of safety and sustainability?

Can UN Sustainable Development Goals be used for a common language?

What are the levers for change? What is the role of the IAEA?

Who are the partners and stakeholders we need to work with?

Where do we go from here, how do we build on this opportunity?

Thank you

Ensuring Safety and
Enabling Sustainability

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