

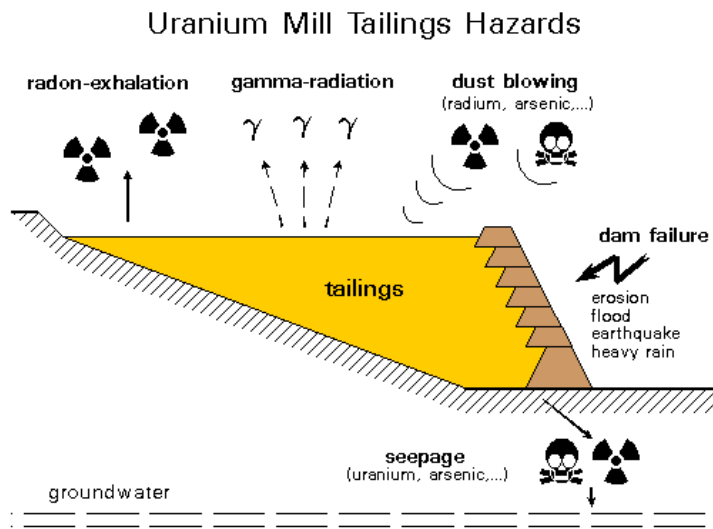
Review on environmental consequences of uranium mining and milling

V. Suolanen, VTT

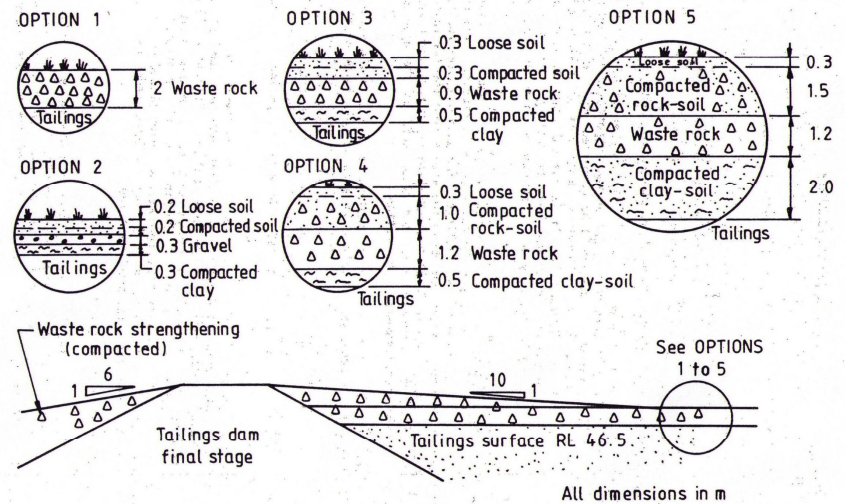
On the restriction of environmental consequences of uranium mining activities it is essential to try to reduce e.g. build-up of radioactive dust. Additionally, the milling tailings should be processed properly and isolated efficiently. Some main features of environmental phenomena for tailings management, consequence modeling methods and radiation dose estimates to the public are presented.

Tailings management

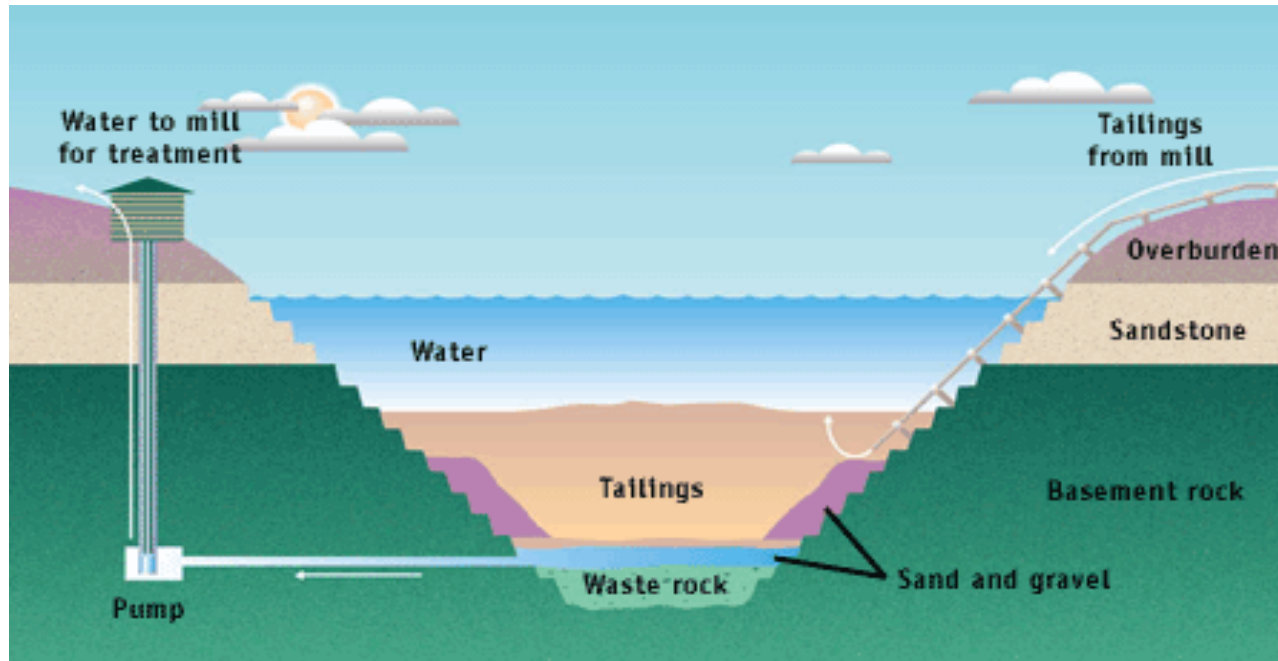
Potential, unfavorable hazards related to storage of uranium mill tailings



Tailings dam and various cover options over the tailings [OECD]

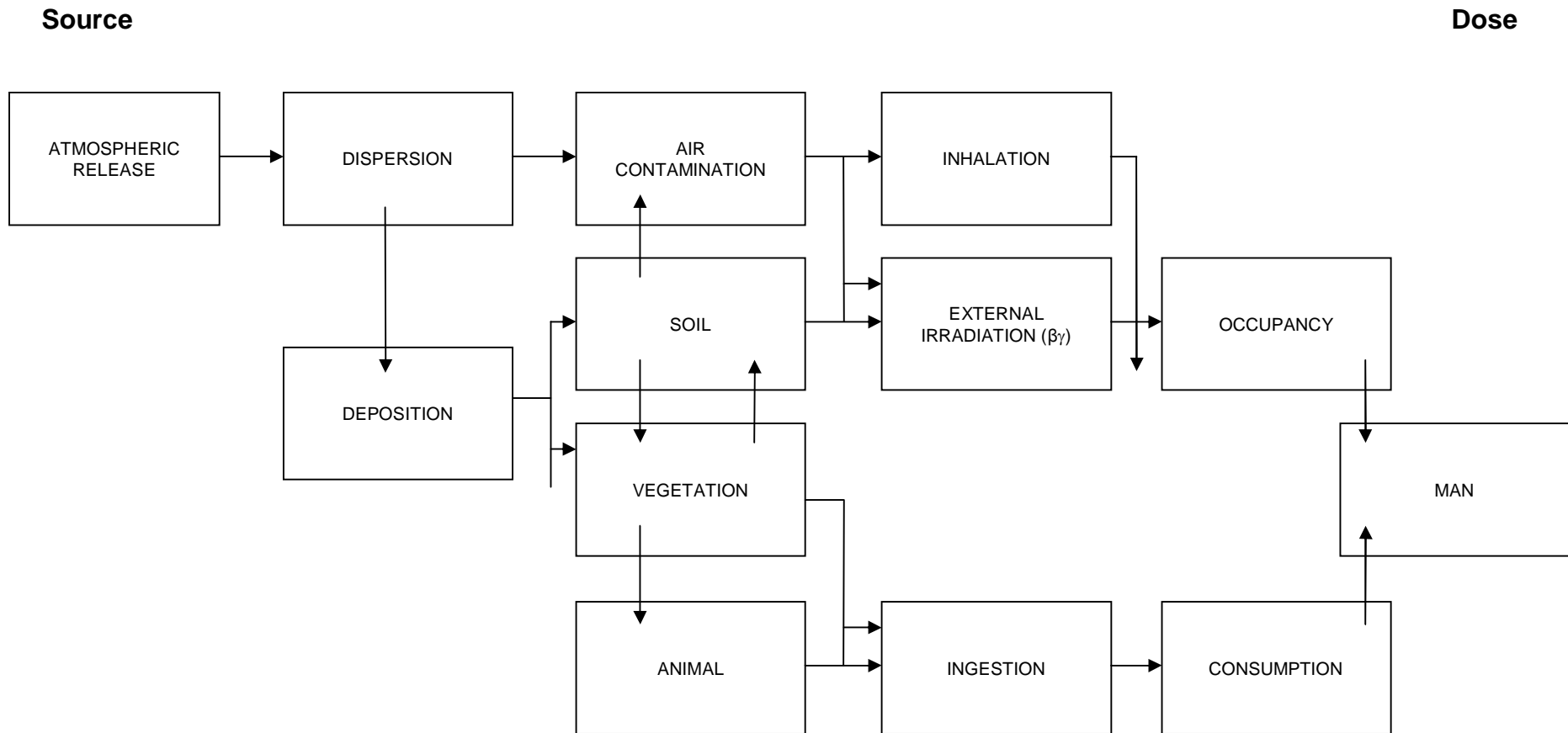


Tailings disposal in a pit (hydro-chemical stability might cause concern in the long-term)



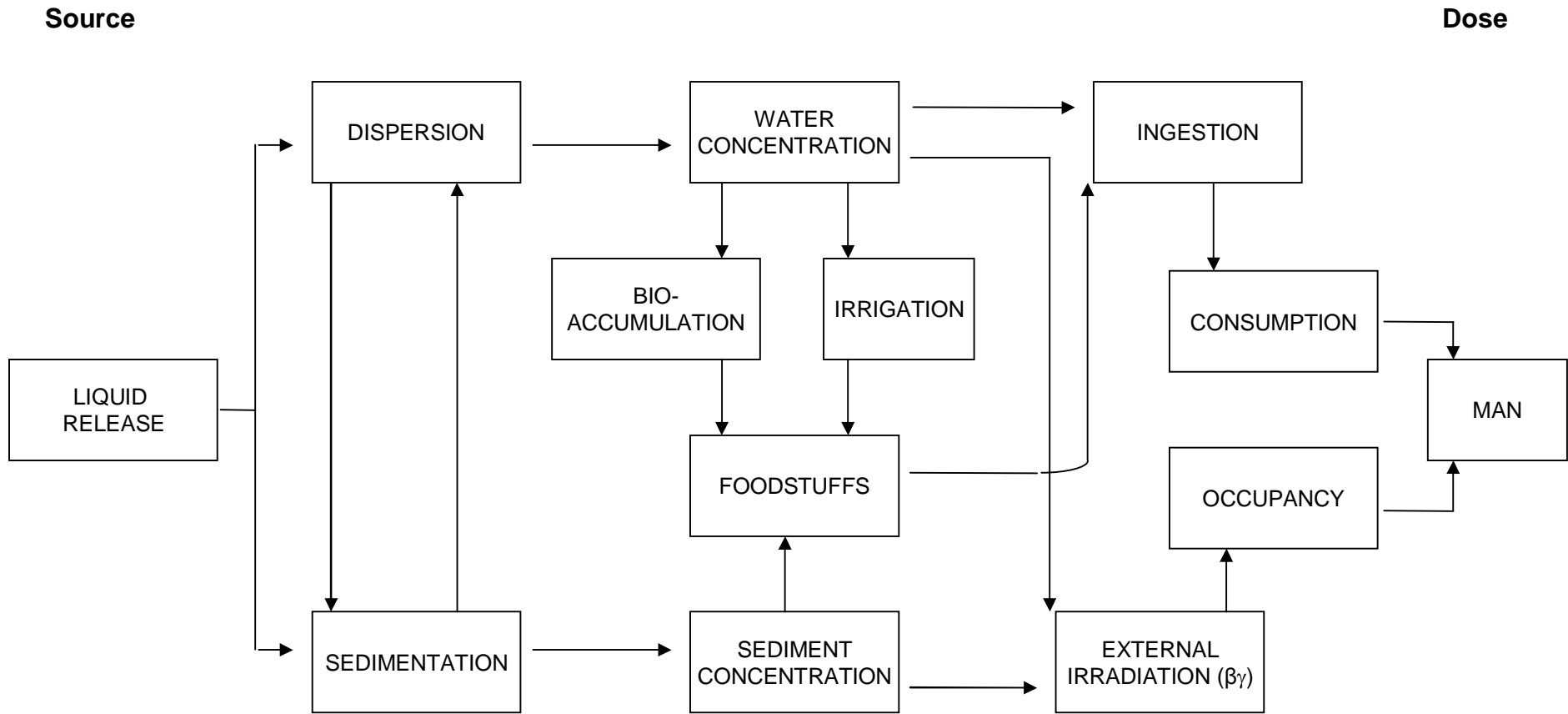
Consequence assessment methods

Exposure *via atmospheric pathways*:



[IAEA]

Exposure via aquatic pathways

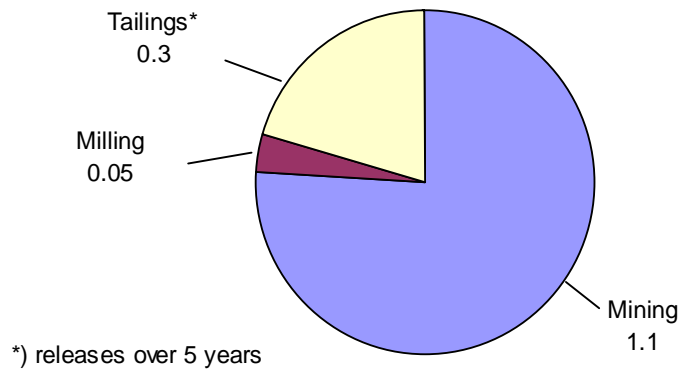


[IAEA]

Dose estimates

Normalised collective effective dose to the public from uranium mining and milling
[data sources: OECD/NEA & IAEA]

manSv per GWe/year



Shares of global average annual doses
[data source: UNSCEAR]

