Learning from recent international TSF Accidents

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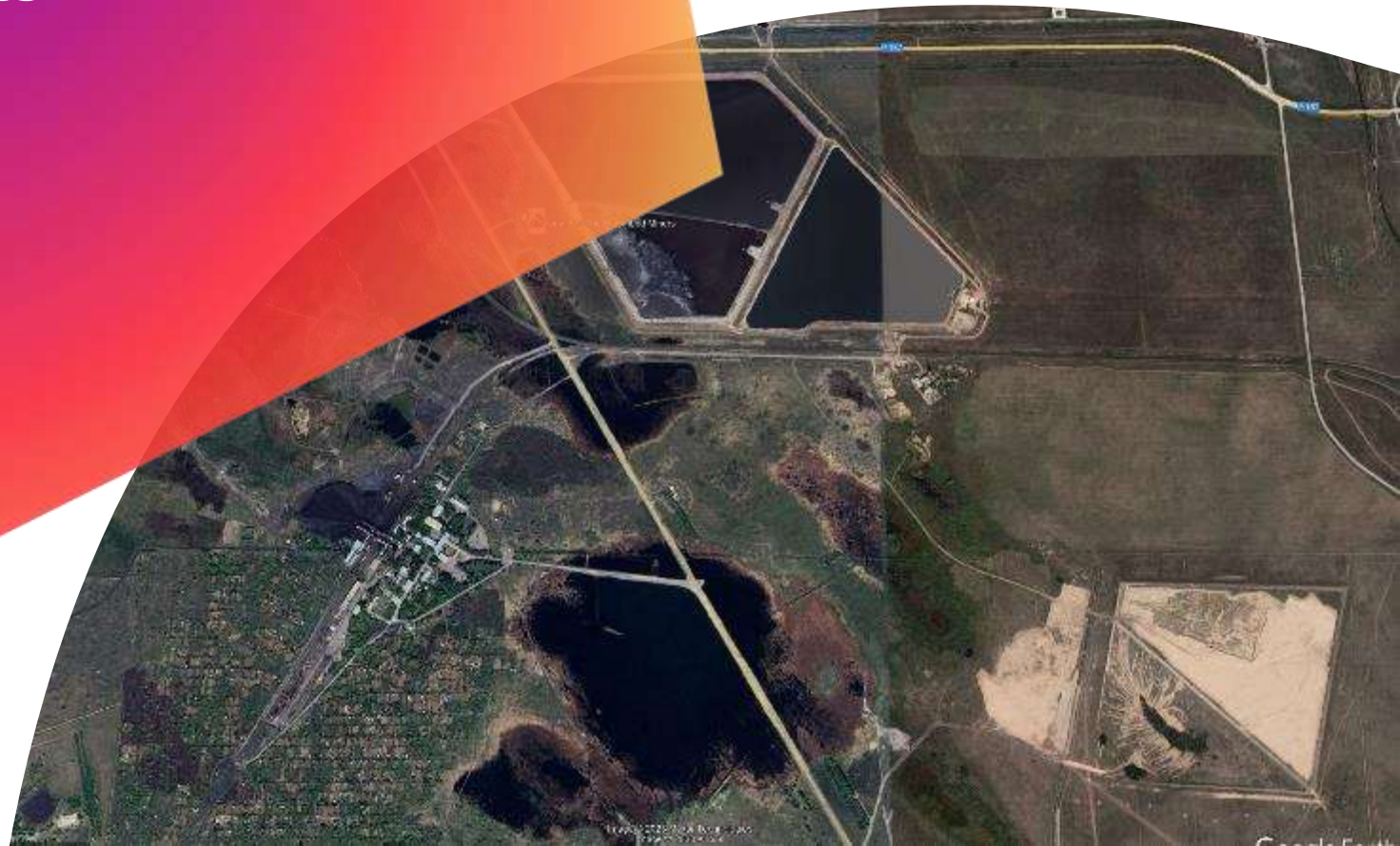
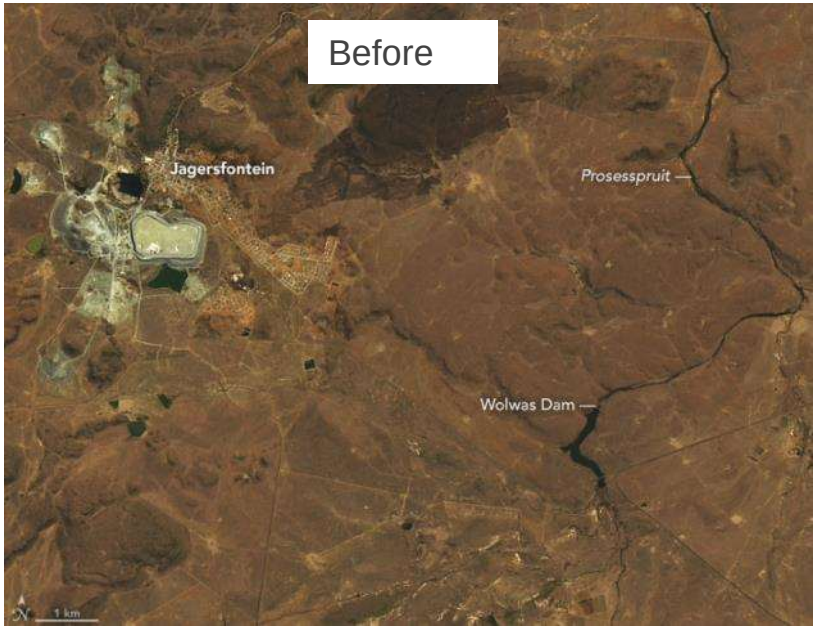
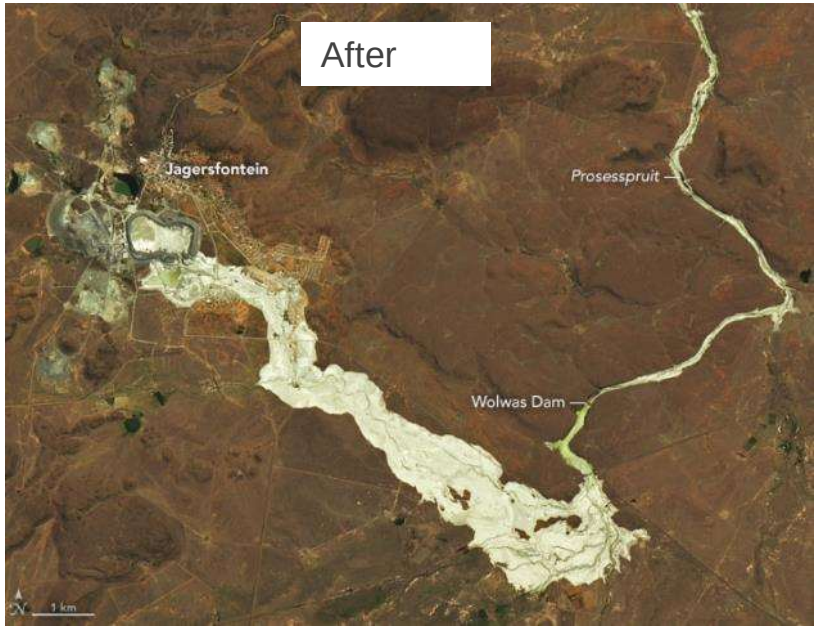


Recent Tailings Dam Failures - Jagersfontein

- On September 11, 2022, a dam collapsed at a diamond mine in Jagersfontein, South Africa, and released a watery mixture of mining waste known as tailings. The sludge poured across the landscape, destroying homes, inundating rivers and grazing land, and injuring dozen
- https://youtu.be/k3kaQKl0h1E





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What Lessons have we learnt?

Tailing dams are mostly hazardous. Therefore, release of a large amount of tailings could lead to serious and long term ecological effects with very high cleanup costs.

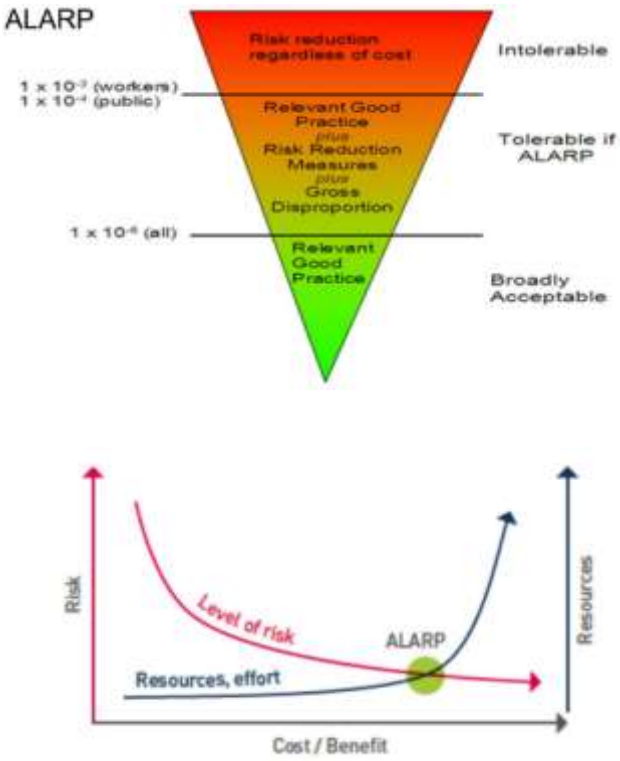
A literature survey shows that the main causes of tailing dam failure are:

- poor design,
- improper site,
- irresponsibility and
- lack of control (tailing management)

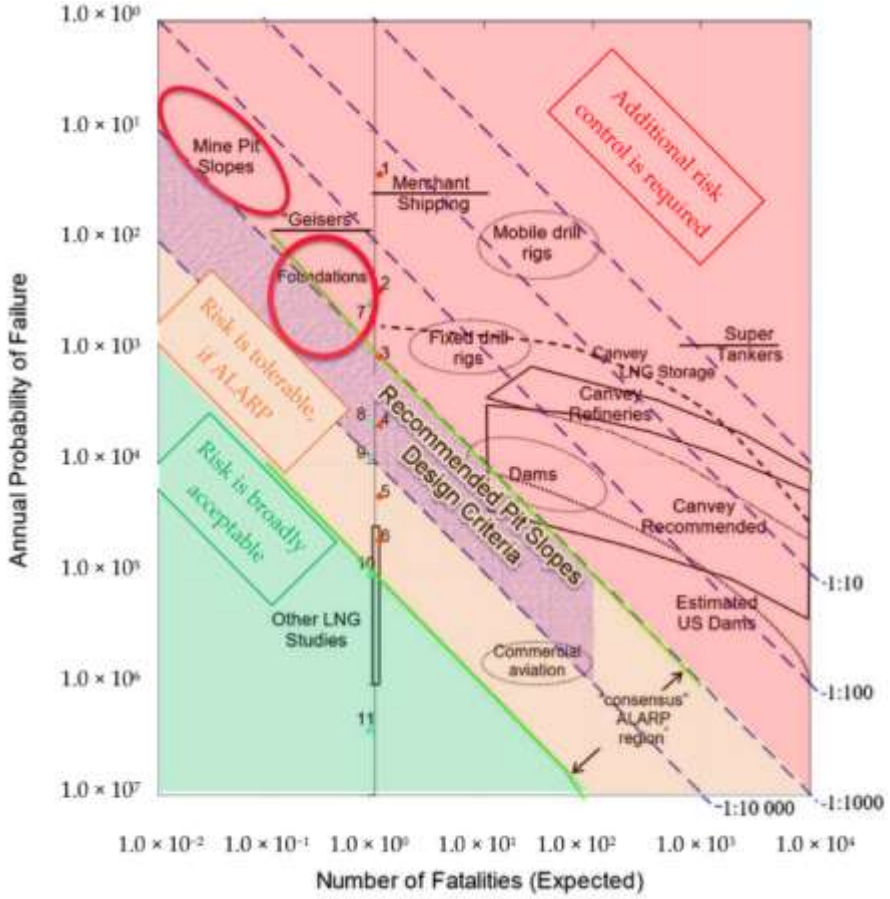
Lessons Learnt

- To avoid of tailing dam failure awareness about the root causes and the severity of impacts on environment and human health is very important
- This study is focused on a case to identify the causes as a base for proposing some important safety factors to prevent failure of tailing dams.
- The past experiences show that efforts should be put on prevention rather than reacting after the event
- The Global Industry Standard on Tailings Management, which is the outcome of the Global Tailings Review process, is an important milestone towards the ambition of zero harm to people and the environment from tailings facilities
- Underpinned by an **integrated approach to tailings management**, the Standard aims to prevent catastrophic failure and enhance the safety of mine tailings facilities across the globe. It goes beyond existing guidance on the management of tailing facilities addressing crucial issues, including:
  - meaningful engagement of project affected people throughout the lifecycle of the mine tailing facility;
  - raising the bar on human rights related requirements;
  - strengthening of environmental protection requirements, including stronger attention to the evolving climate change impacts on mine tailing facilities and to restoration;
  - application of a structured and robust approach to the risk classification of existing and planned facilities;
  - establishing a governance mechanism for the management of tailing facilities, as well as identifying high level responsibility for the implementation of the standard, in direct communication with the Board;
  - public disclosure and transparency of information on mine tailing facilities to stakeholders.

Risk Analysis and level of acceptable risk?



Sweet spot



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Thank you

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Our Life Saving Golden Rules

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