



August 2015



safcei

SOUTHERN AFRICAN FAITH COMMUNITIES' ENVIRONMENT INSTITUTE

KAROO URANIUM MINING - ANOTHER THREAT AFTER FRACKING?

By

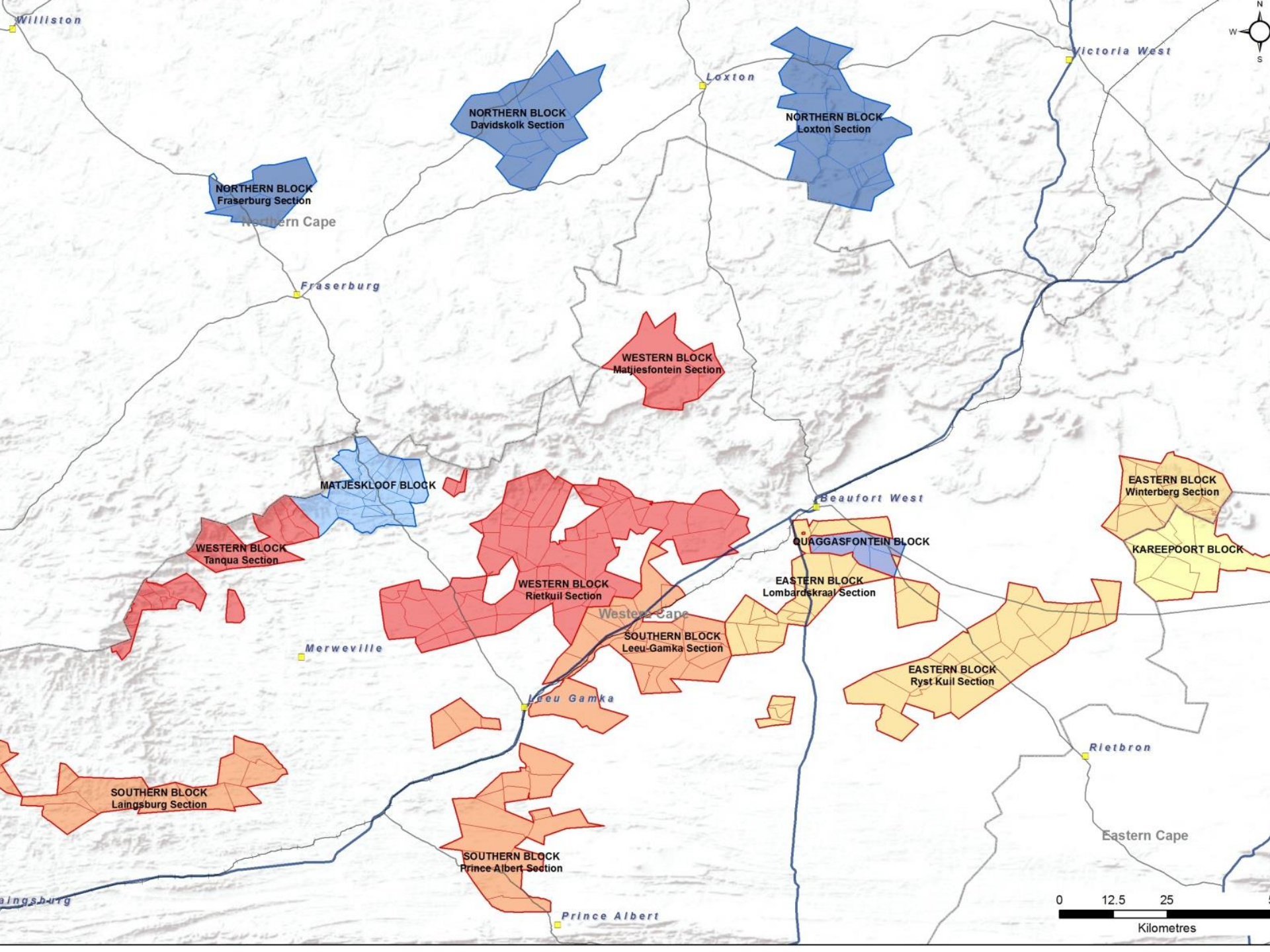
Dr Stefan Cramer, SAFCEI Science Advisor

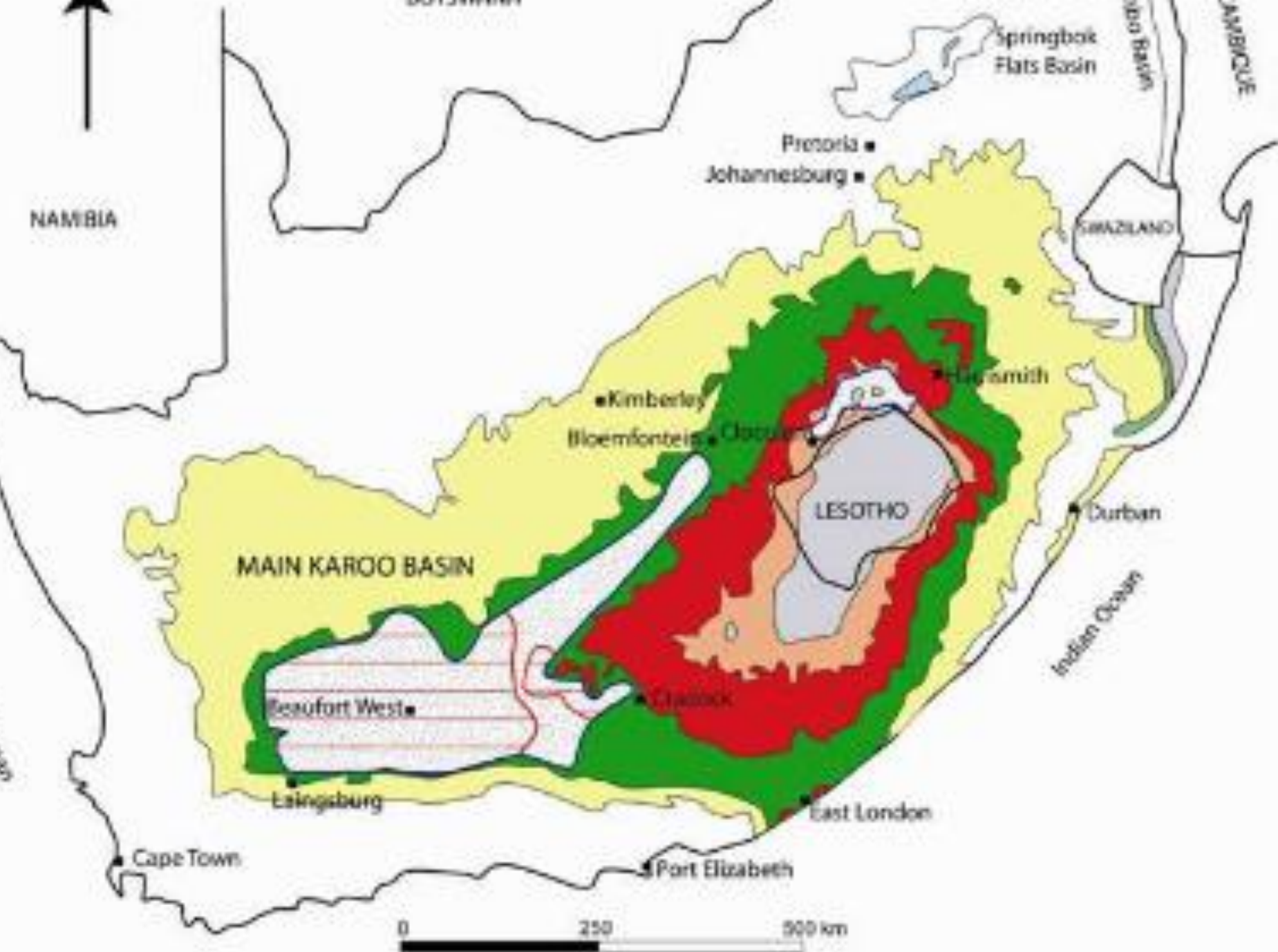
What I want to present over the next 15 minutes:

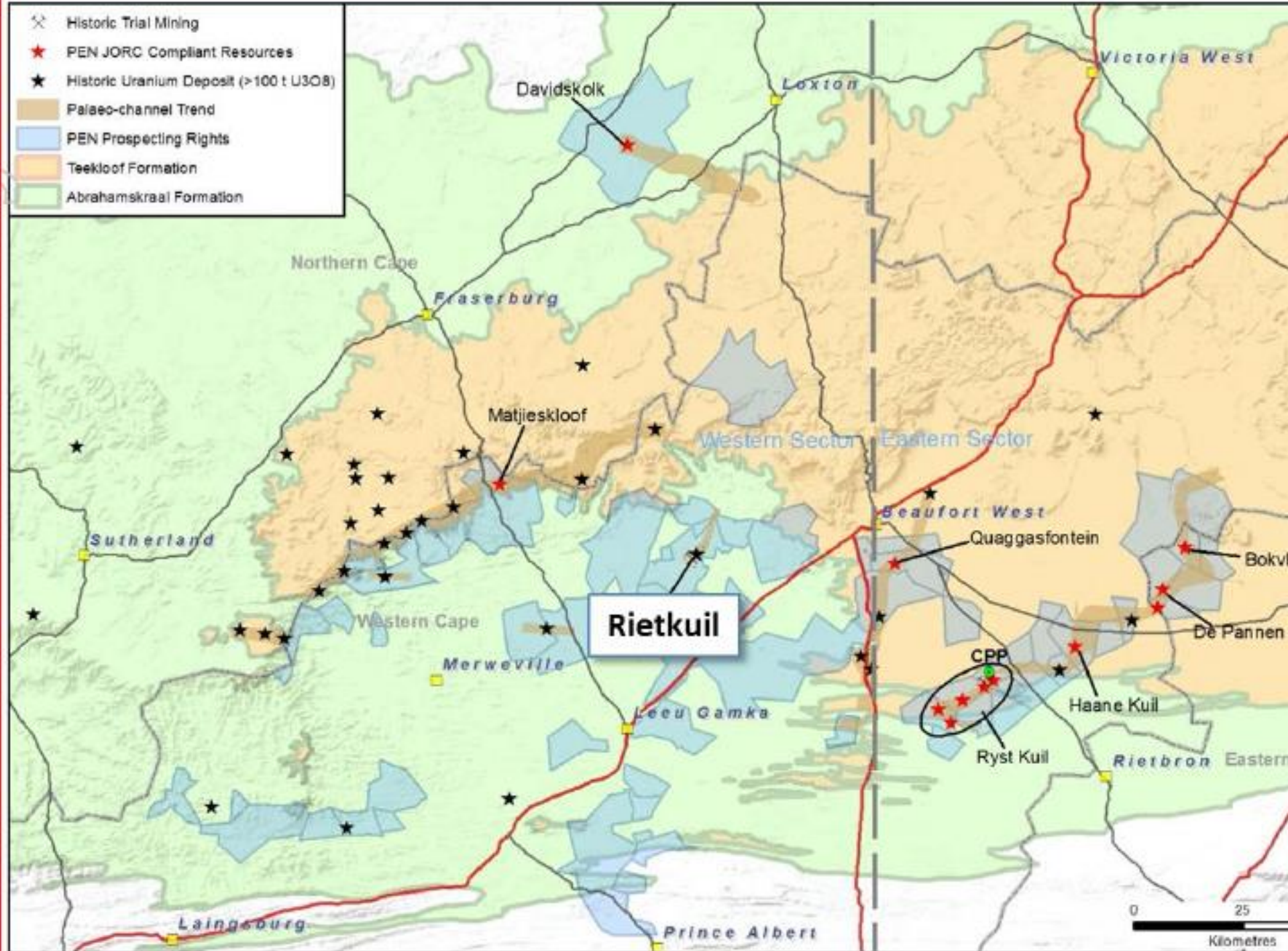
- 1. What is planned and where?**
- 2. How it may look like?**
- 3. What are the possible consequences?**
- 4. Who is behind these plans?**
and
- 5. What can we do to stop it?**

1. An old and new threat: Uranium Mining in the Karoo!



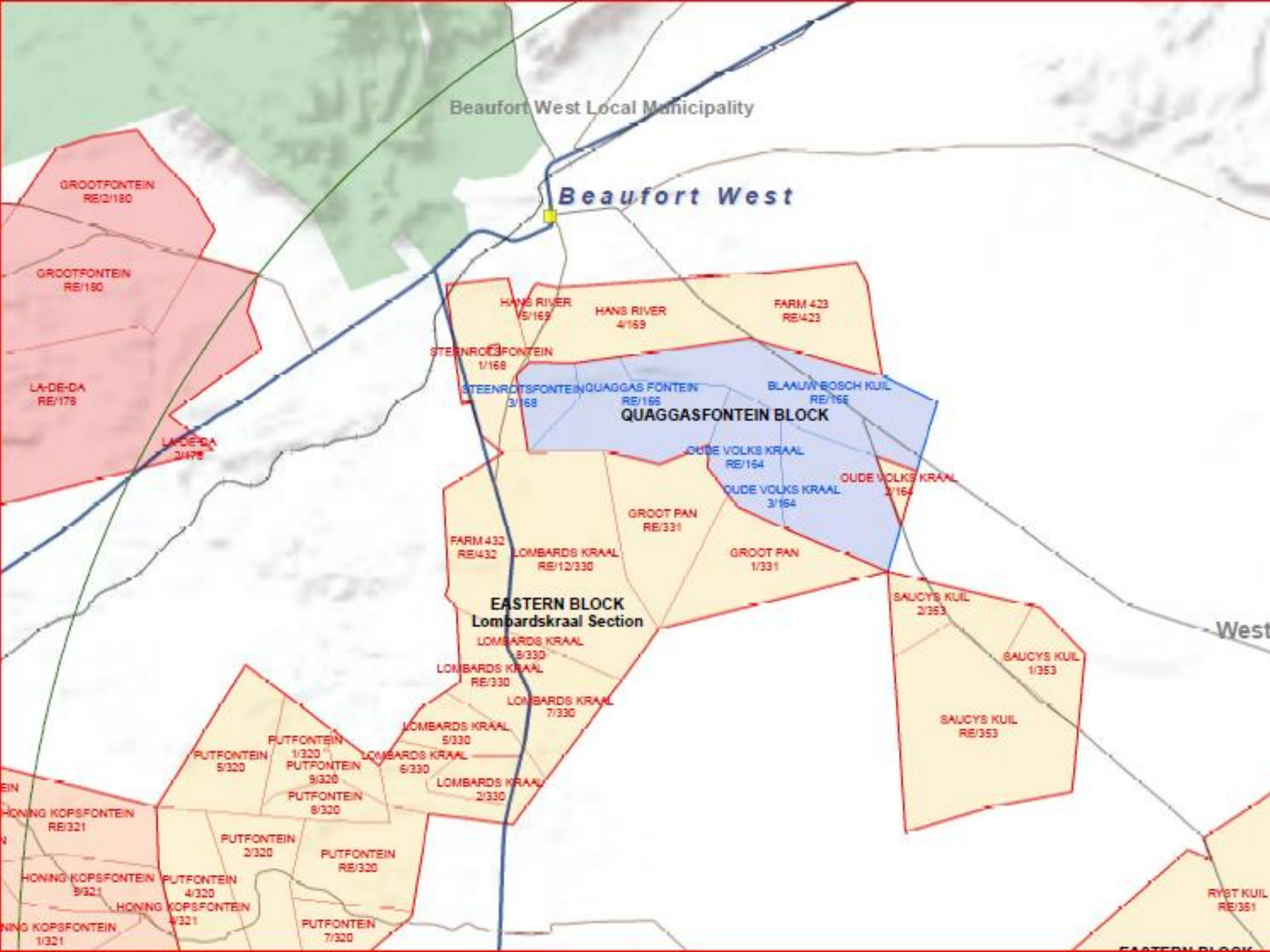


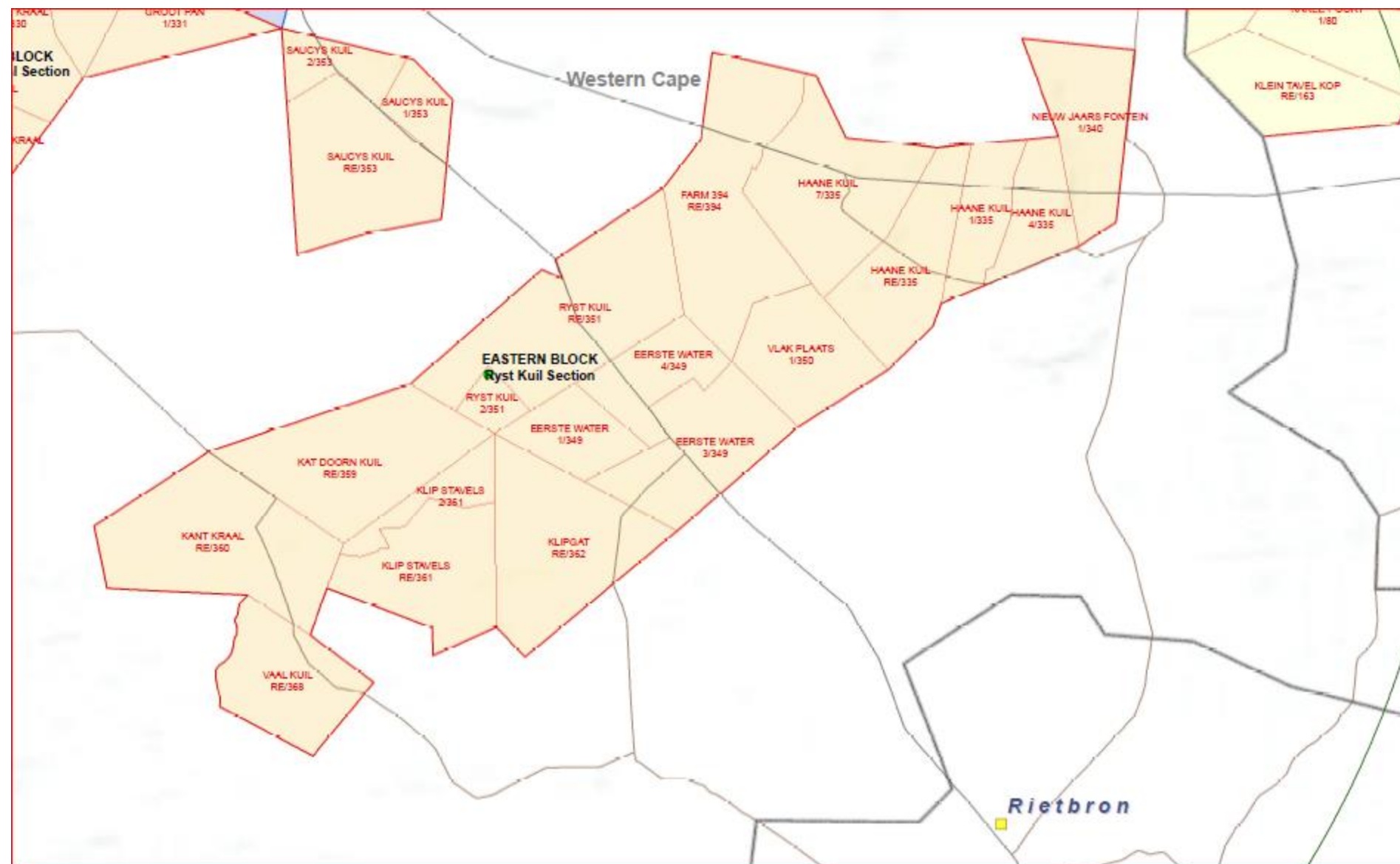




Beaufort West Local Municipality

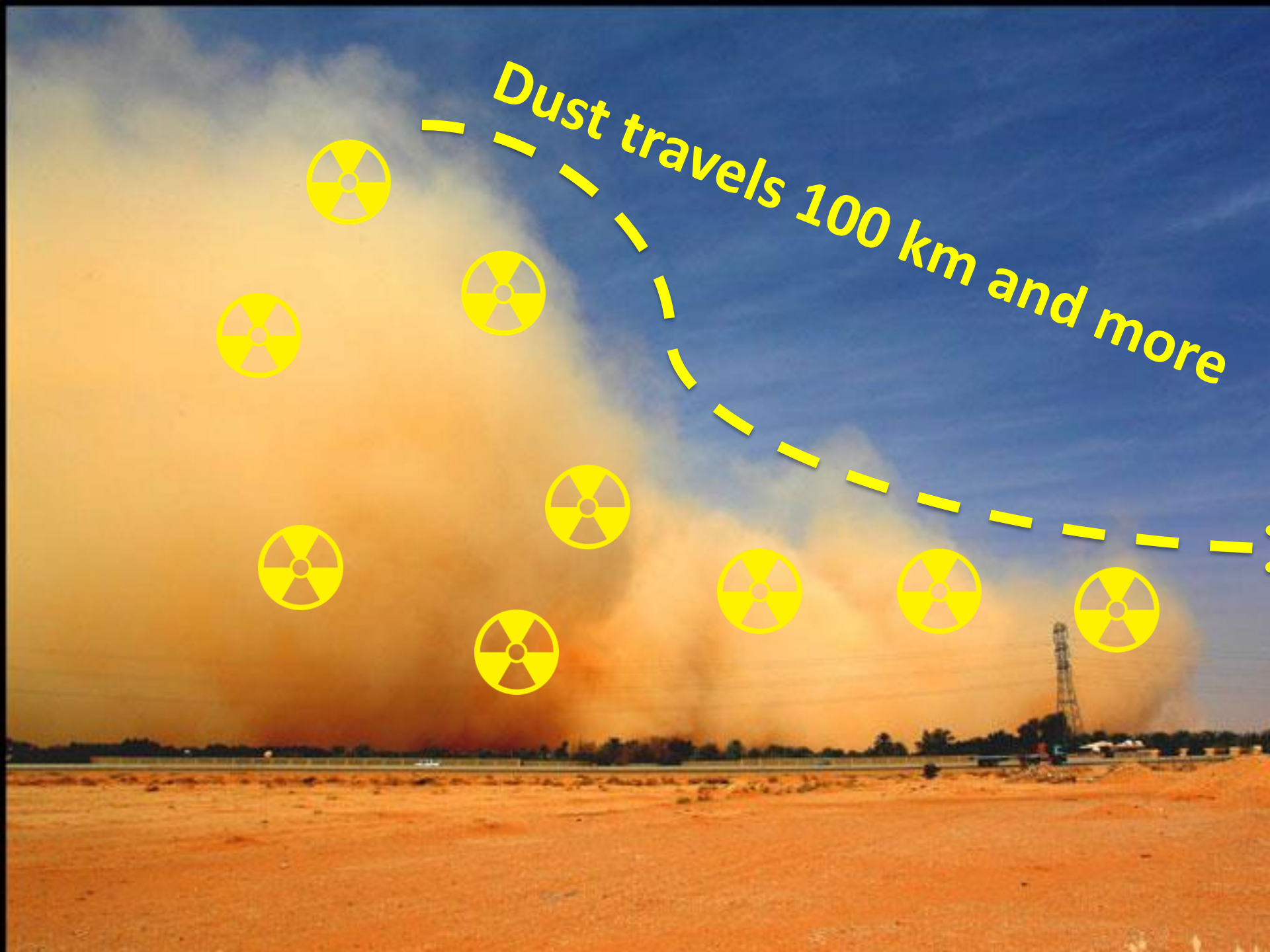
Beaufort West







Dust travels 100 km and more



2. So what is next? How it may look like?



Drilling for wastewater disposal



Reactor tanks for uranium recovery



Figure 2.1.5. Reactor tanks for uranium recovery within the GPR.

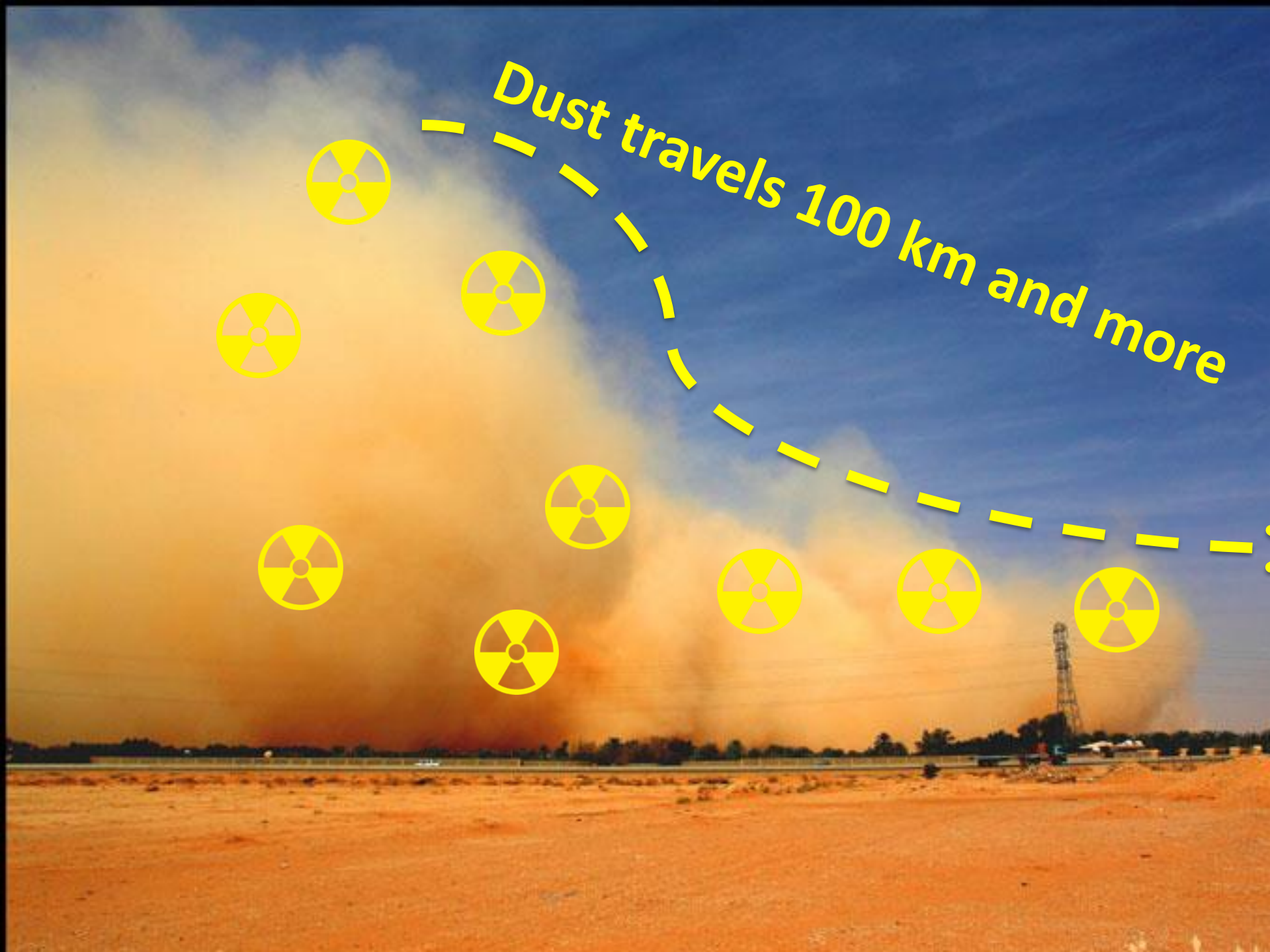
Open pit mining of uranium ore from sandstones





Load uranium ore on dump trucks

Dust travels 100 km and more



Dust at every step of the mining process







Dust everywhere trucking takes place





Trucks everywhere

Mining infrastructure springs up in several places

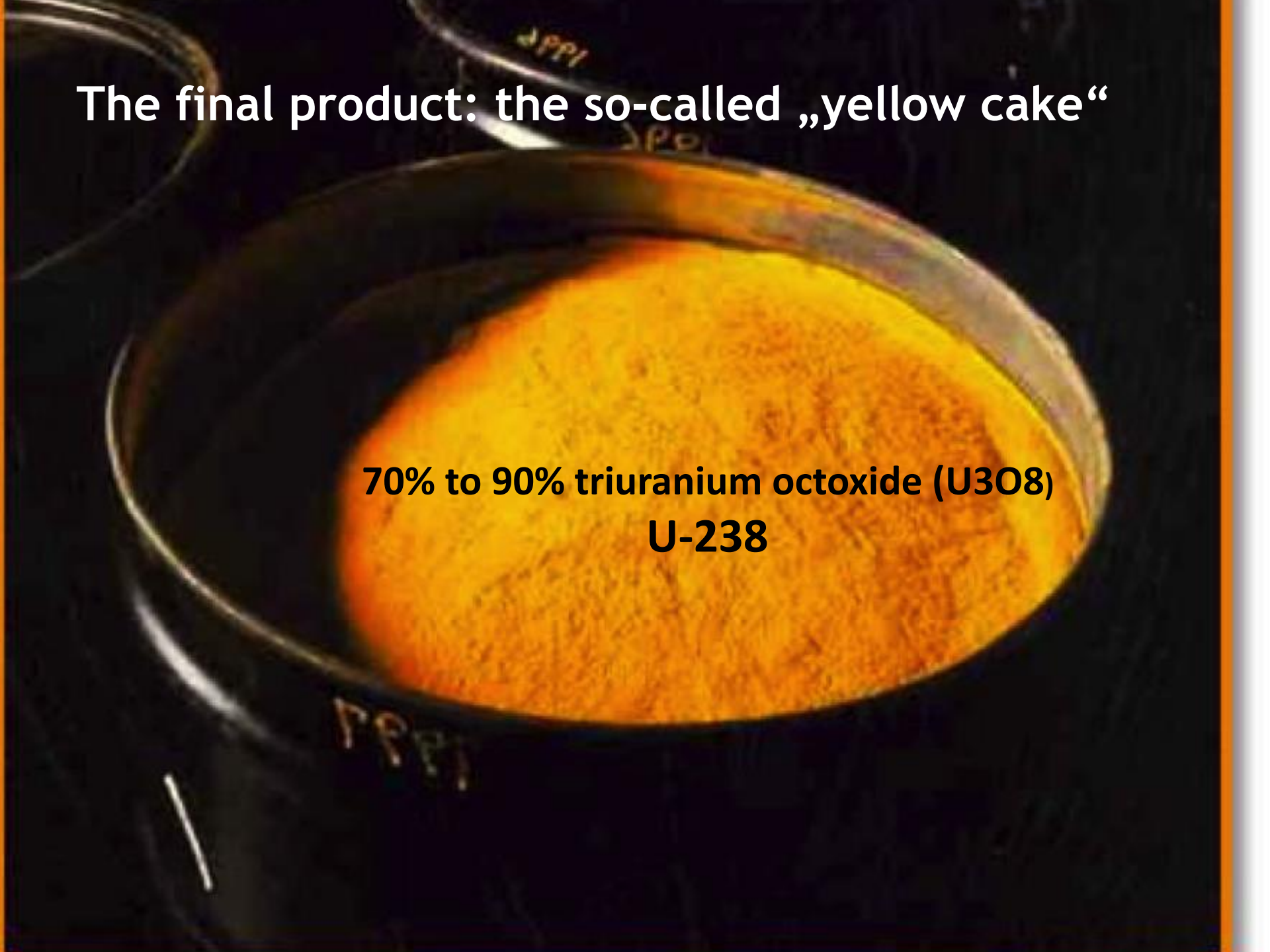


a large treatment plant

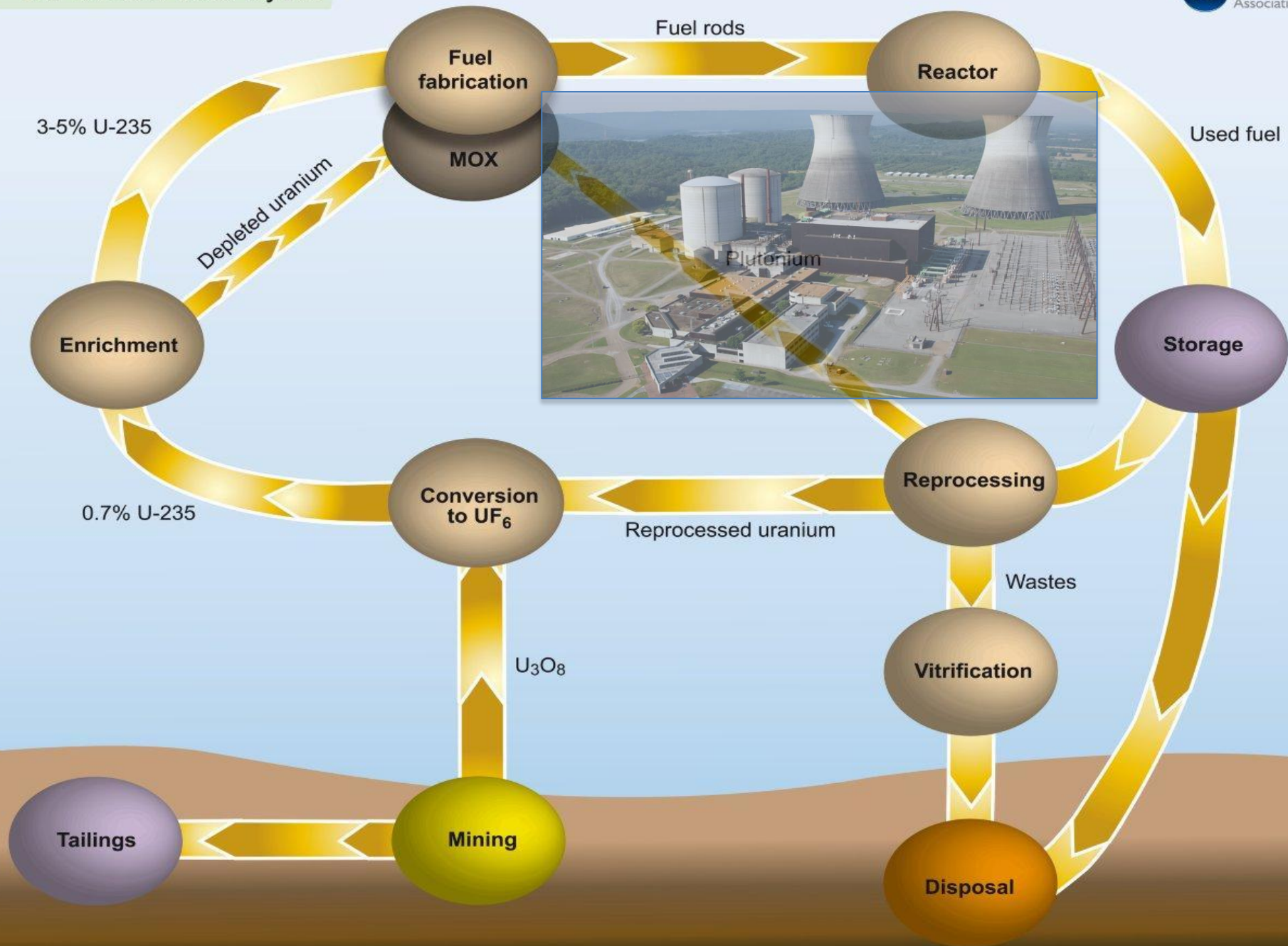


The final product: the so-called „yellow cake“

**70% to 90% triuranium octoxide (U_3O_8)
U-238**



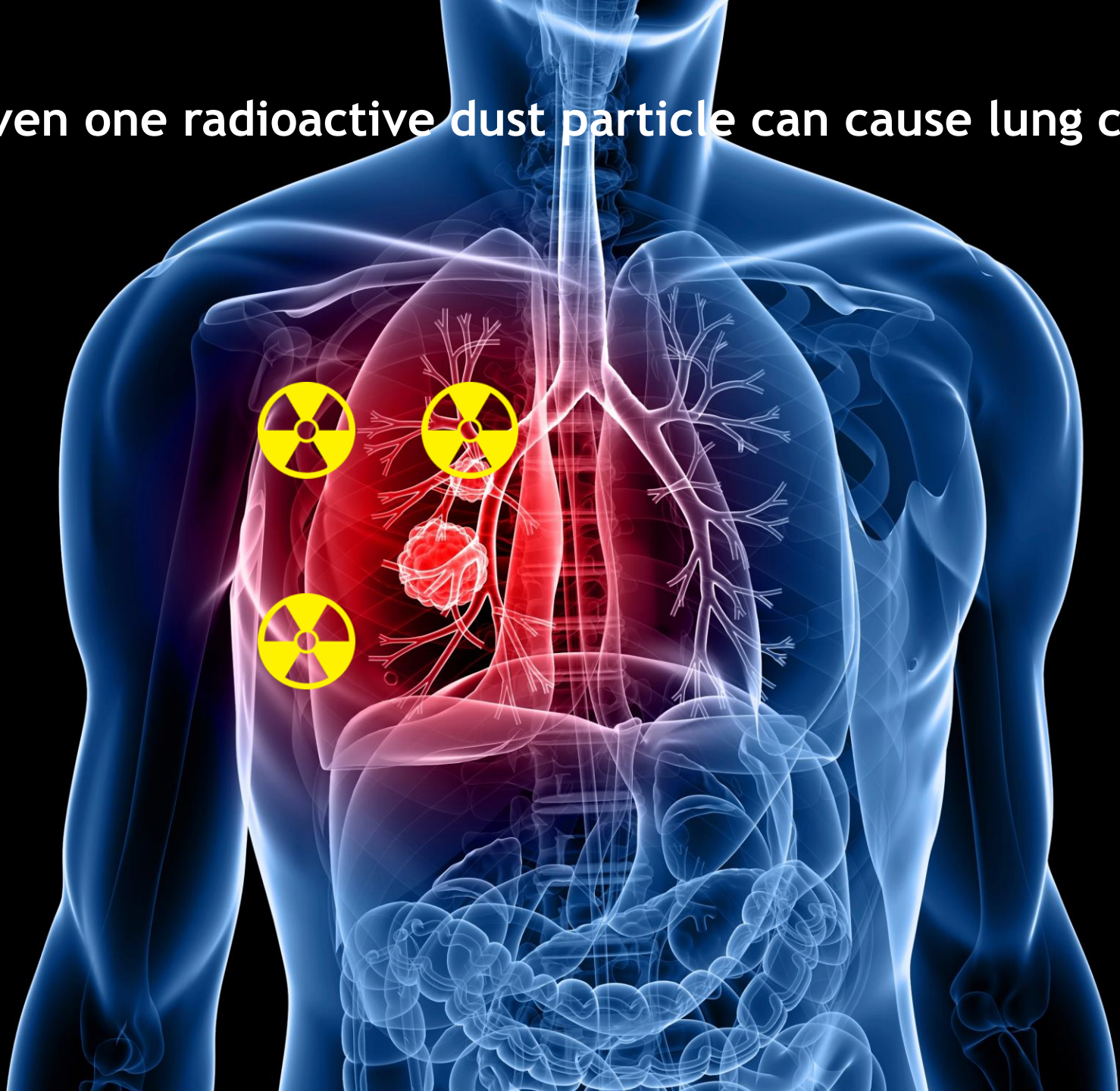
The Nuclear Fuel Cycle



3. What are the possible consequences?

- 1. Health problems from radiation and dust**
- 2. Water shortage and contamination**
- 3. Traffic and accidents on dust roads**

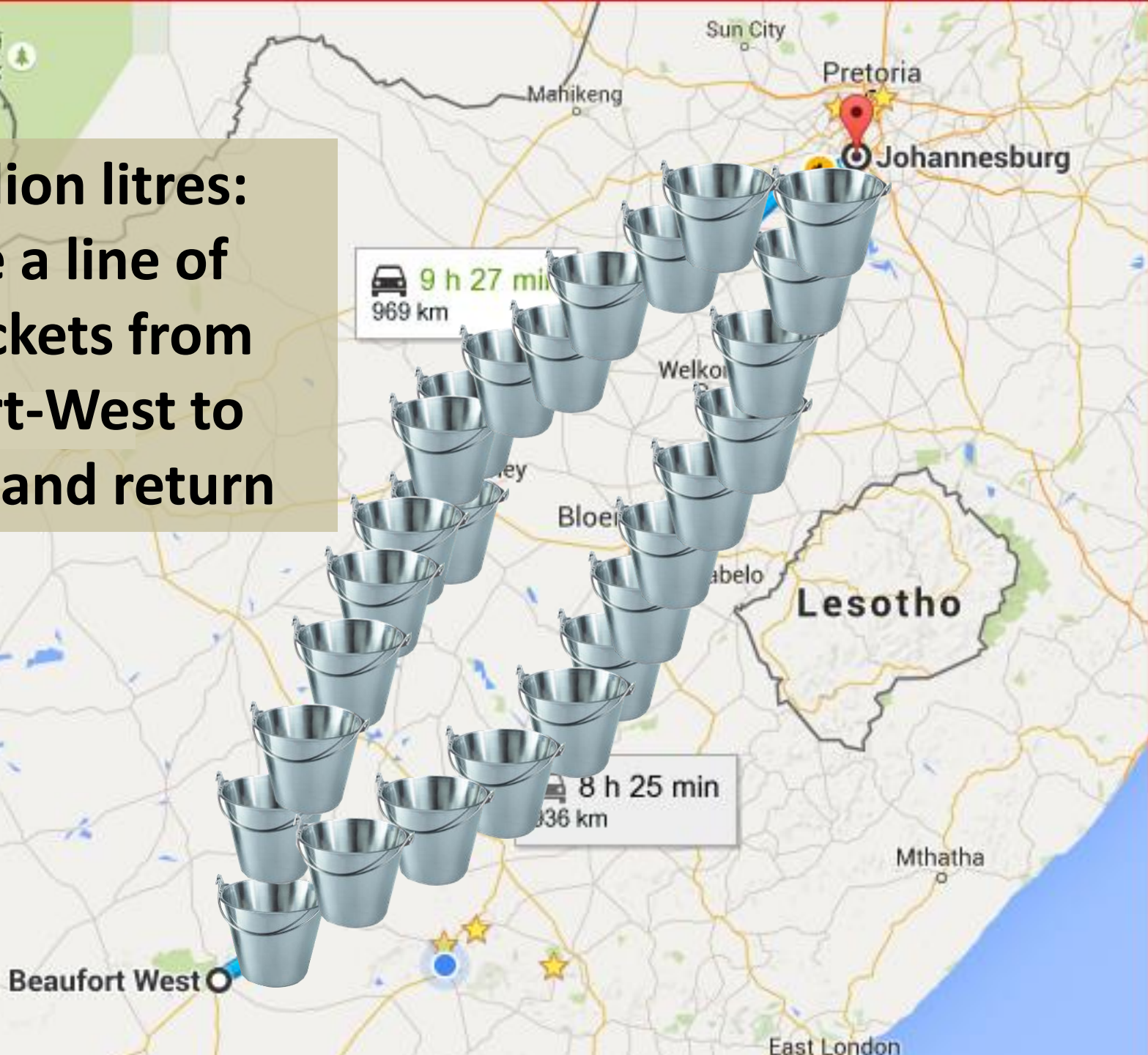
1. even one radioactive dust particle can cause lung cancer



2. Huge Water Consumption

- PENINSULA ENERGY plans to apply for a license to use 700 million litres annually for ist Central Processing Plant alone
- That is the half of the total water consumption of the entire Central Karoo Municipality!

**700 million litres:
Imagine a line of
20-l-buckets from
Beaufort-West to
Jo'burg and return**





and horrible road accidents

Waste disposal at Ryst Kuil - the legacy for thousands of years to come



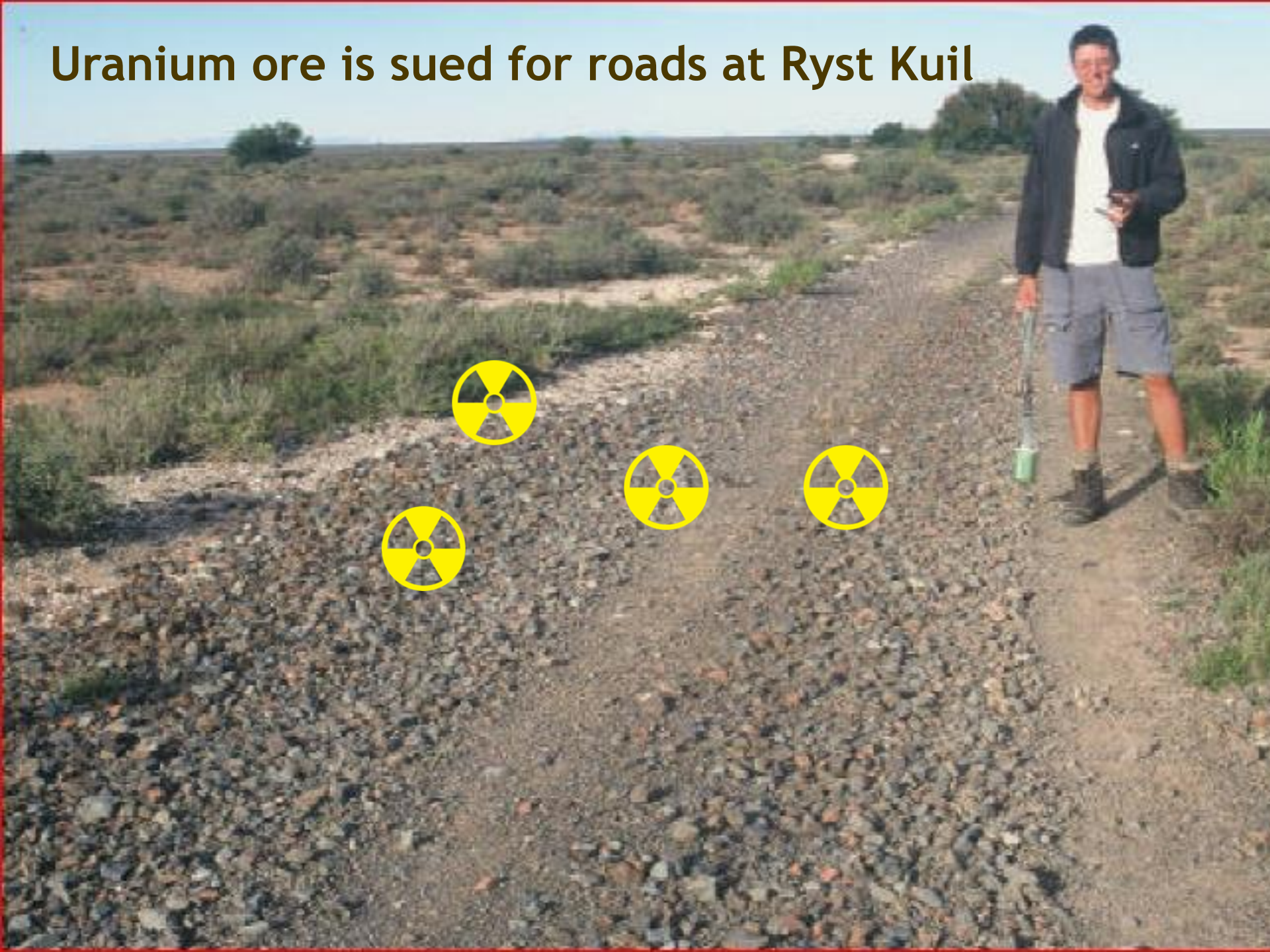
Barrels filled with uranium ore - abandoned at Ryst Kuil



Damaged uranium ore barrels at Ryst Kuil



Uranium ore is used for roads at Ryst Kuil



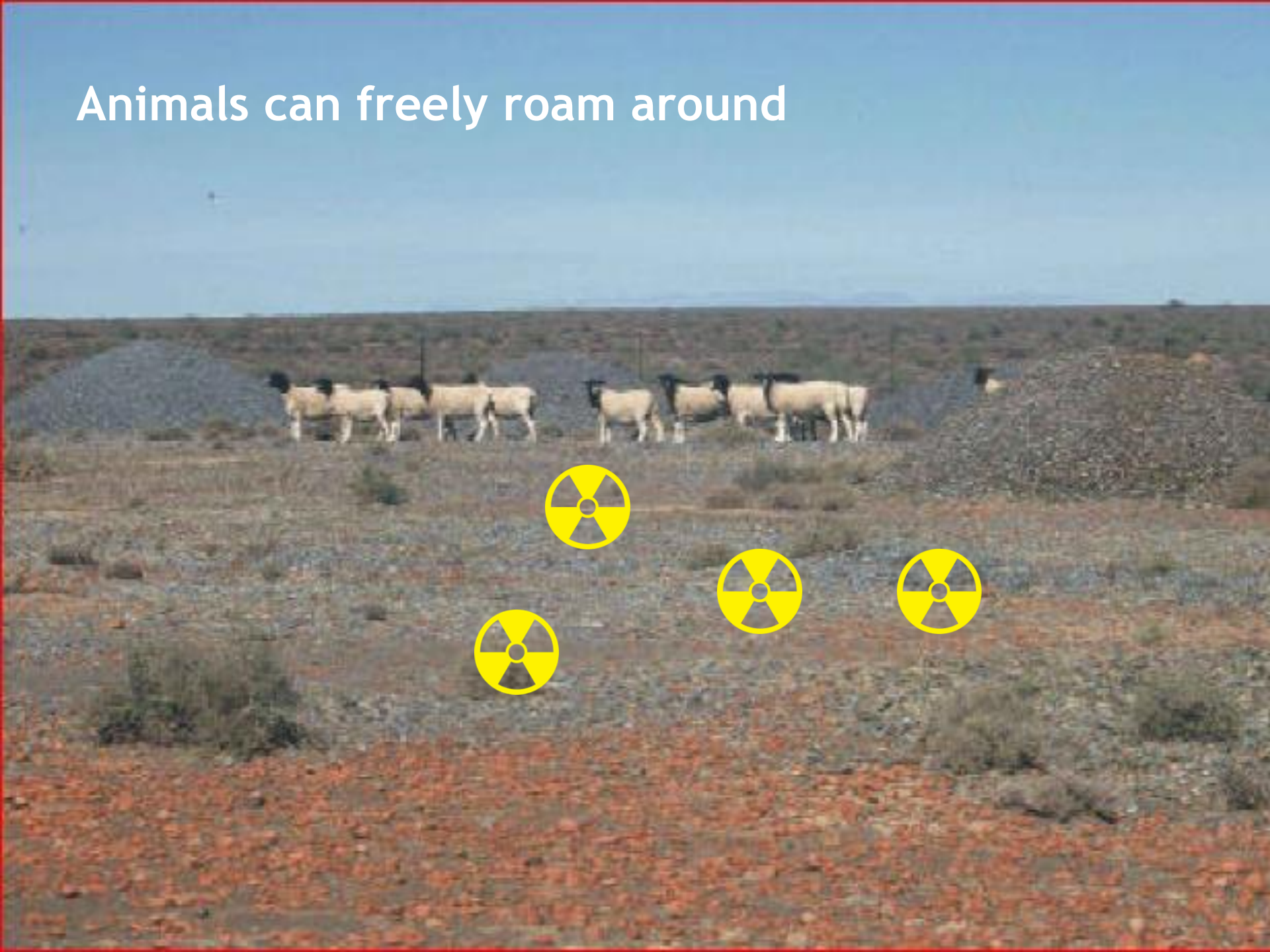
Toxic material can seep into the groundwater



Ist not only uranium, there are many other toxic elements in the ore...

Nb	25.9	30.9
Ni	20.4	22.0
Zn	72.2	65.6
Cr	46.6	54.3
Cu	11.7	15.5
V	98.7	119.5
Y	24.4	23.7
Sc	8.0	10.4
Co	21.0	11.8
As	38.45	58.07
Pb	53.86	60.68
Mo	76.56	88.55
U	810.28	1174.82

Animals can freely roam around



4. Who is behind these plans?

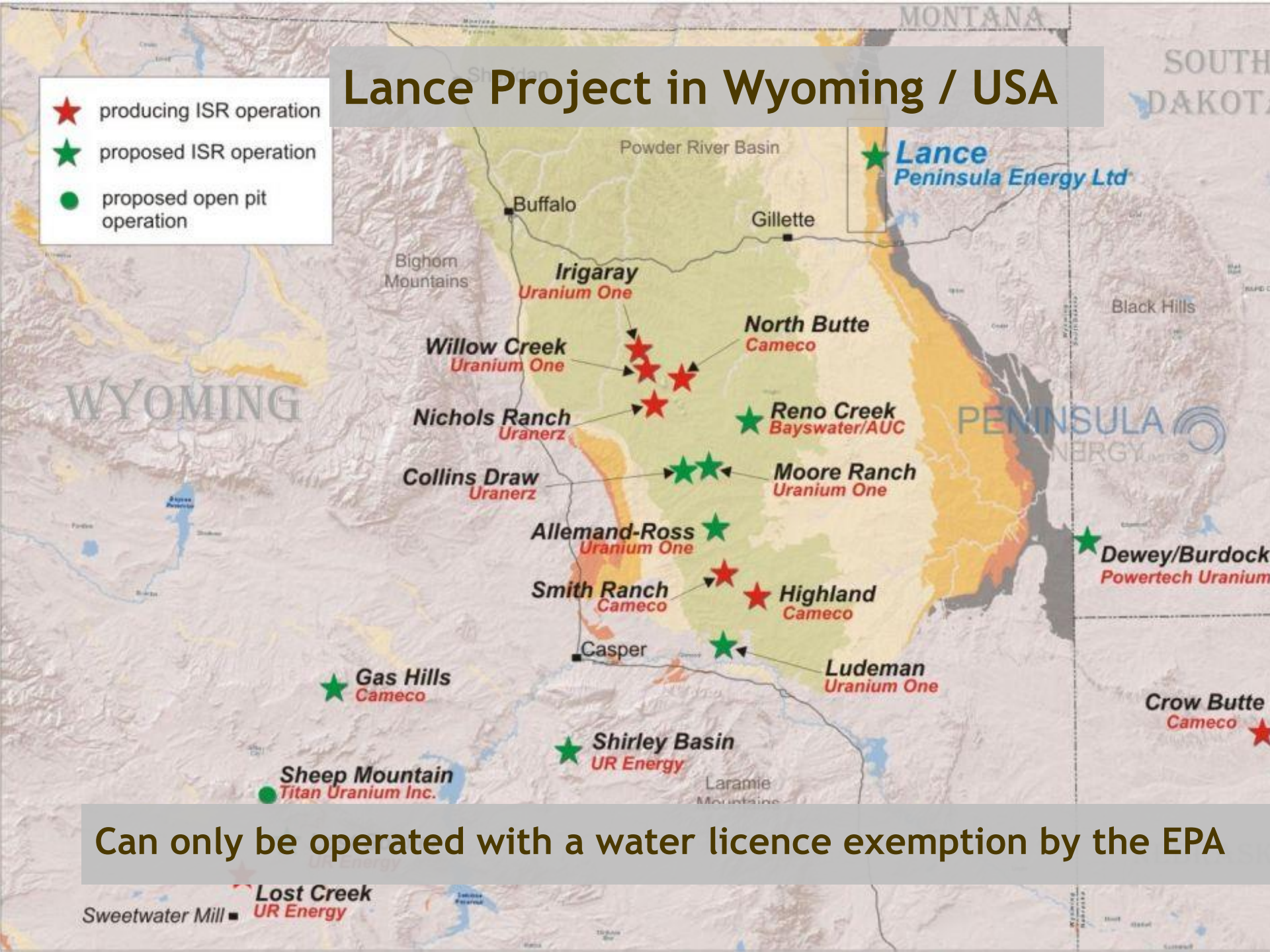


**Gus Simpson,
Executive Chairman**



Lance Project in Wyoming / USA

- ★ producing ISR operation
- ★ proposed ISR operation
- proposed open pit operation



Can only be operated with a water licence exemption by the EPA

The money trail

Shareholding	Shares
Pala Investments	505m
HSBC	66m
John (Gus) Simpson	91m
JP Morgan	53m
Top 20 Shareholders	826m

Pala Investments Ltd.

Pala Investments Limited was founded in July 2006 and is based Jersey, United Kingdom with an additional office in Zug, Switzerland.

www.pala.com

Key Executives for Pala Investments Limited

[Mr. Evgenij Iorich](#) (Russian)

Vice President

Evgeniy Iorich, Russian billionaire, son of Vladimir Iorich



Russian-born 1980,
German citizenship in 1995
Lives in Switzerland.
PALA Office in Gotthardstrasse 26 in Zug/Switzerland



There is a 28 % BEE partner operating under the name of LUKISA JV Company (Ltd)

Their director: Andile Nkuhla

- owner of LUKISA INVEST 100 and MAGO RESOURCES, operating from a residential address in Atteridgeville (Gauteng)
- a former ANCYL leader, crony of then Brett Kebble
- became Chief Director in the Department of Public Enterprises (1996 - 2004, suspended in 2002) and
- co-founder of the Congress of People (COPE) but went back to the ANC
- is now Executive Director at Nkwe Platinum Plc



5. What can we do to stop it?

1.Information

2.Consultation

3.Education

4.Legal challenges

5.Monitoring

1. Exploration drilling near Rietbron



2. A public consultation?



3. Education is urgently required



4. Legal challenges: High Court in Pretoria



5. Monitoring: Even the exploration boreholes are contaminated



Let us say:

- NO TO URANIUM MINING IN THE KAROO



