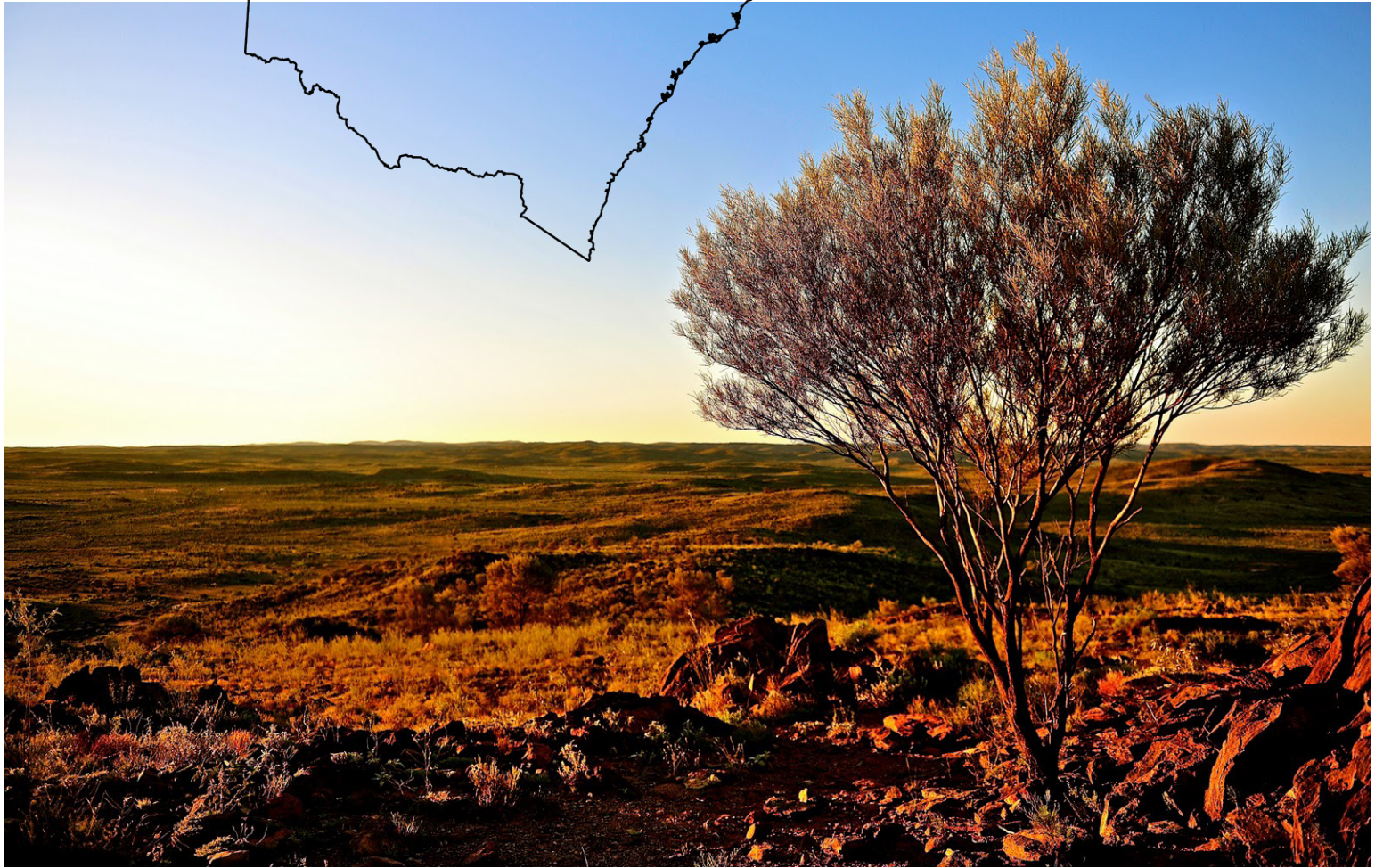
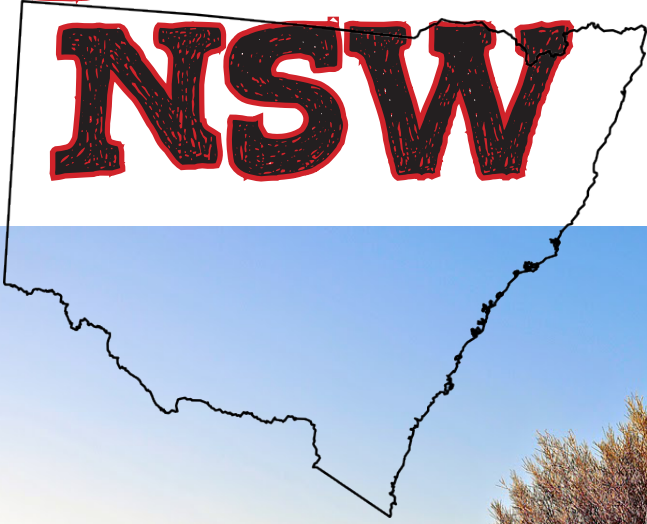


URANIUM EXPLORATION IN NSW



Broken Hill Region -Photo by Melissa Williams-Brown

“The uranium exploration ban was removed in 2012 without consultation with, or a mandate from, the people of NSW.”
-- Nature Conservation Council CEO Kate Smolski

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URANIUM EXPLORATION : PROPOSALS AND RISKS

Promoting the uranium industry in NSW now is like taking up smoking at thirty. This decision is poor policy and puts short-term vested interests ahead of any lasting community benefit. The government should not, need not and must not continue down this path.
--Dr Anne Noonan, Vice-President Medical Association for Prevention of War

Background

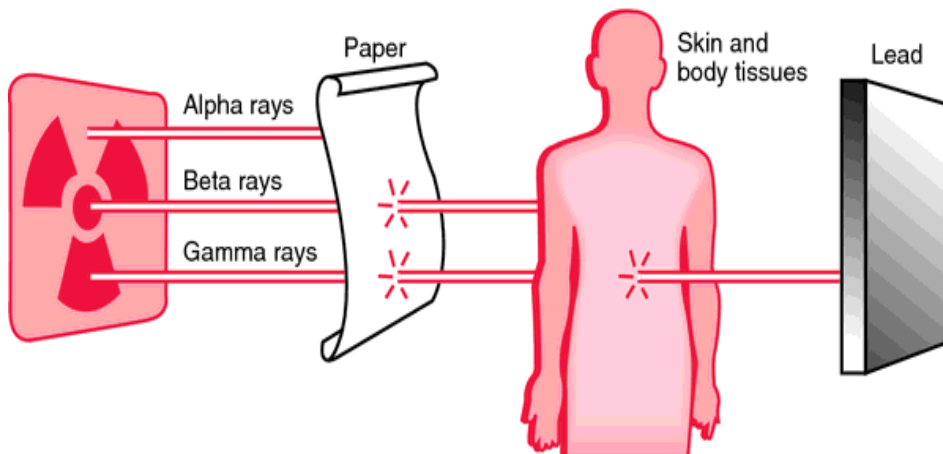
In April 2012 the NSW government overturned a 26-year moratorium on uranium exploration and passed the Mining Legislation Amendment (Uranium Exploration) Act. The long-standing ban had been implemented following a dedicated campaign by trade unions and wider civil society groups concerned about the long-term effects of nuclear projects on workers, communities and the environment.

Where is exploration likely to occur?

The NSW Government received 39 Expressions of Interest from companies and entities keen to explore for radioactive resources. Former Resources Minister Chris Hartcher signed a Memorandum of Understanding with the South Australian government in mid-2013 to facilitate cross-border uranium exploration projects. In September 2014 NSW Resources Minister Anthony Roberts announced that six companies-Australian Zirconia (Alkane), Callabonna Resources, EJ Resources, Hartz Rare Earths, Iluka Resources and Marmota Energy- had the opportunity to apply for uranium exploration licences near **Broken Hill, Dubbo** and **Cobar**. Other areas will be impacted by transportation of uranium and radioactive materials.

What is uranium?

Uranium is a naturally occurring heavy metal that emits radiation. The main form of uranium sought in the mining process, U235, has a half-life of 713 million years before eventually decaying into lead. U235 is used as the fuel for nuclear reactors and it is one of the explosive materials used in nuclear weapons (other nuclear weapons use plutonium as the explosive material). Radiation is energy given off to stabilise an element, and in the process change it.



Radiation comes in two forms:

- Ionising radiation travels in waves (X-rays, gamma rays) or as particles (alpha, beta, neutron). It carries very high levels of energy that can alter atoms creating electrically charged particles or ions.
- Non-ionising radiation (radio waves, heat, light) carries enough energy to excite atoms but not enough to create ions.

Risks from uranium exploration and mining

Exploration and mining disturb and release radioactive material into the environment, including radon, a gas that can be breathed into the body. Radon can be carried over significant distances, leading to risk of increased exposure by miner workers and local populations.

Uranium exploration and mining in NSW could result in severe environmental damage through the production of large volumes of long-lived radioactive tailings, including the permanent contamination of water. Uranium mine residues retain around 80% of the original radioactivity and pose a profound management challenge. Uranium mining is linked to the production of some of the world's most toxic and long-lasting industrial wastes and the proliferation of the world's most destructive weapons.

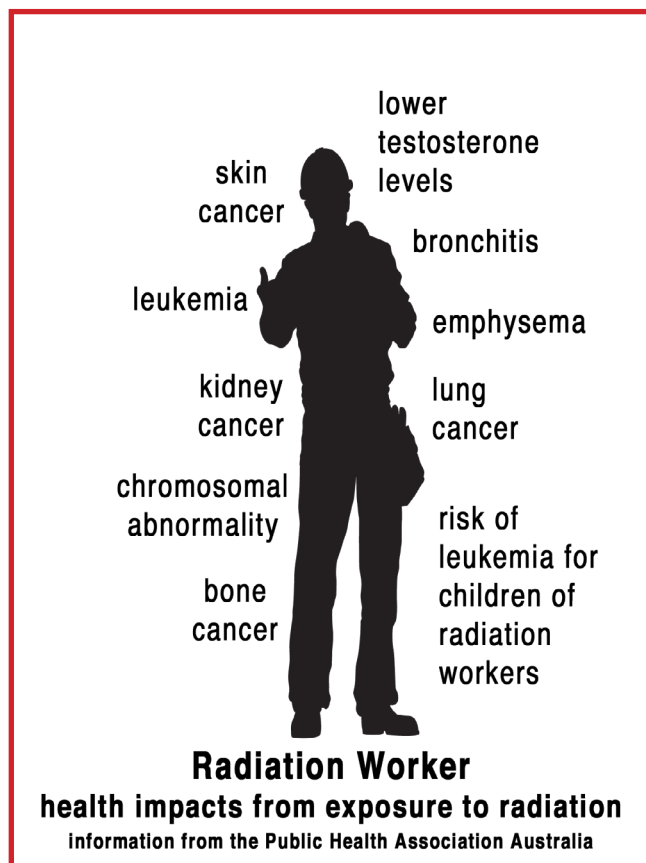
For examples of the environmental legacy left by uranium mines, see <http://australianmap.net>

Occupational health and safety

Uranium mine workers are often told that radiation doses they receive are below or close to background levels and below permissible limits - the implication being that these doses are 'safe'. However, doses received at the mine site are additional to background radiation so workers are at additional risk of fatal cancers.

International cancer incidence and mortality data demonstrate statistically significant links between radiation and all solid tumours as well as cancers of the stomach, colon, liver, lung, breast, ovary, bladder, thyroid, non-melanoma skin cancers and most types of leukaemia.

Over the years the permitted levels of radiation exposure for workers and the public have dropped dramatically as research, particularly from radiation biologists, indicates harmful effects still exist at much lower exposure levels. For workers, the permitted dose was set at 500 millisieverts per year in 1934, but lowered to 20 mSv (averaged over five years) by 1991. The limit for members of the public is just 1 mSv.



Inadequate regulation

A 2003 Senate Inquiry into the regulation of uranium mining in Australia reported "a pattern of under-performance and non-compliance", identified an "absence of reliable data on which to measure the extent of contamination or its impact on the environment", and concluded that changes were necessary "in order to protect the environment and its inhabitants from serious or irreversible damage".

There is a current attempt to 'streamline' and 'cut green tape' for environmental assessments, which raises further concern about regulation of exploration and any future mining projects. The NSW-Commonwealth bilateral approval agreement would see important Federal approval powers under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) handed to the NSW Government, with resulting reductions in regulatory rigour and scrutiny.

Australian uranium overseas

Australian uranium overseas results in a toxic legacy of high-level nuclear waste across the nuclear fuel cycle, including depleted uranium waste. After the Fukushima meltdown, the Australian Safeguards and Non-Proliferation Office said that: "We can confirm that Australian obligated nuclear material was at the Fukushima Daiichi site and in each of the reactors - maybe five out of six, or it could have been all of them." Over 150 000 people are still displaced and unable to return home and incidents of thyroid cancer in children have increased dramatically. 300 tons of radioactive waste water has been pouring into the Pacific Ocean everyday.

There is also an unacceptable risk of Australian uranium contributing to nuclear weapons proliferation, either directly or by freeing up domestic uranium resources for weapons production. Former Director General of the International Atomic Energy Agency, Dr. Mohamed El Baradei, has noted that the safeguards system operates on a "shoestring budget ... comparable to that of a local police department".

Australia has export agreements with all 'declared' nuclear weapons states (USA, UK, China, France, Russia), countries with a history of weapons research based on civil nuclear programs (South Korea and Taiwan) and countries that have not ratified the Comprehensive Test Ban Treaty (China, USA).

There is bipartisan federal policy to allow uranium exports to India, which has not signed or ratified the Nuclear Non Proliferation Treaty (NPT) and continues to produce fissile material for nuclear weapons and expand its weapons arsenal and missile capabilities. Former NSW Premier Barry O'Farrell indicated that potential sales to India contributed to the push for uranium exploration in the state.

Nuclear industry treatment of Traditional Owners

The Olympic Dam mine in SA is largely exempt from the SA Aboriginal Heritage Act. Sub-section 40(6) of the Commonwealth's Aboriginal Land Rights Act exempts the Ranger uranium mine in the NT and thus removed the right of veto that Mirarr Traditional Owners would otherwise have enjoyed. New South Wales legislation exempts uranium mines from provisions of the NSW Aboriginal Land Rights Act. The Western Australian government is in the process of gutting the WA Aboriginal Heritage Act 1972 at the behest of the mining industry.

There is also a long history of Aboriginal land rights and heritage protections being stripped away to facilitate the establishment of radioactive waste dumps. For example native title rights were extinguished to seize land for a radioactive waste dump in SA, and Aboriginal heritage laws and land rights were suspended with the push to dump nuclear waste in the NT.

The case for renewables

Renewable energy is the world's fastest growing energy sector and on track to become Australia's energy source of choice as costs fall and community support blossoms.

New South Wales is well placed to build on the state's technical and manufacturing base to become a leading producer and supplier of renewable energy. These would be real, lasting and clean jobs - with many based in regional areas. In contrast, uranium accounts for just 0.29% of Australian export revenue and 0.015% of Australian jobs (2002-2011 figures).

See the ACF report 'Yellowcake Fever: Exposing the Uranium Industry's Economic Myths'.

There are numerous reasons why nuclear power should be rejected as a climate change solution. Nuclear power is a high cost- low return sector that is a dangerous distraction to the real energy challenges we face.



NSW Uranium Free Charter and Campaign Groups

In August 2012 a broad coalition of trade unions, public health and environment groups launched the NSW Uranium Free Charter. The Charter states in part: 'The nuclear industry promotes nuclear power as a solution to climate change. It is not. We cannot solve one environmental and social problem by embracing another. Investment in renewable energy would create thousands of jobs, especially in regional Australia, without the health risks associated with uranium mining and nuclear energy.'

The full text is posted at: <http://uraniumfreensw.org.au/charter/>

Community campaign groups challenging the proposed exploration have formed across the state. Search facebook for **Uranium Free NSW (Sydney)**, **Uranium Free Dubbo** and **Nuclear Free Cobar**.

Image: Mural in Annandale, Sydney.

