

Mines

Keywords

- > Uranium mines
- > Niger
- > AREVA
- > Tuareg rebellion
- > Aghir in Man NGO
- > Radioactive tailings
- > Radioactive contamination

INTRODUCTION

When uranium was discovered in impoverished Niger in the 1960s, many thought the discovery would contribute to the economic and social development of the country. Unfortunately, it turned out to be a poisoned gift. Niger today is one of the poorest countries of the world, ranking 186th out of 187 countries in the Human Development Index of the United Nations Development Programme (UNDP) in 2012. More than 40% of children are underweight for their age, water and access to improved water sources is scarce and almost three quarters of the population are illiterate.

Uranium was found in the area of the Air Mountains in the Agadez region, north Niger, approximately 800 kilometres (km) North of Niamey, the capital of Niger, and 210 km north of the town of Agadez, one of the main settlements of the Tuareg, the indigenous people of the Sahara desert (Figure 1). The mining area being far away from any infrastructure, the French companies SOMAIR and COMINAK (both subsidiaries of COGEMA, the French state-owned uranium mining company today known as AREVA), created the towns of Arlit and Akokan (Figure 1). With no electricity provided, the companies built a coal-fired power plant approximately 190 km south of the mining areas, near the village of Tchirozerine, exploiting comparatively dirty coal. Today, people in the area (more than 100,000 inhabitants) are complaining about respiratory problems, birth defects, leukemia and cancer. Death rates linked to respiratory problems are twice that of the rest of the country. The environment will suffer from pollution for thousands years to come. The water is poisoned (Figure 2) and the aquifers drained, the soil and the air are contaminated, making a return to the traditional way of life of the local agro-pastoralists very difficult if not impossible.

In spite of its wealth in mineral resources, Niger doesn't benefit from mining activities, while the nuclear French giant AREVA earns billions from



Figure 1: Location of uranium mines in Niger, Source: Cordula Meyer, Spiegel.de

its corporation, leaving little behind but environmental disasters and health risks for the people of Niger.

BACKGROUND

When France granted independence to Niger (and adjacent West African states) in 1960, contracts were made with the respective governments of these states granting France exclusive rights to mining and exploitation of minerals.

Mining of uranium started in Niger in the area of the Air Mountains in 1968 where a holding company and the first mine, SOMAIR, an open-pit mine, were created. Excavation began in 1971, with an open pit mine ranging from 50 to 70 m deep, located 7 km northwest of the mining town of Arlit. The second mine, an underground one, was created in 1974 together with the second holding company, COMINAK. With a depth of 250 m and over 250 km of tunnels, COMINAK is the largest underground mine in the world. These two mines were opened and are operated to this day, – the open-pit mine near the town of Arlit, and the underground mine, Akouta. A third mine Imouraren, originally set to start production in 2013, will be operative from mid-2015 due to security fears and to the increased mobilization of the local population.

Even after the concession of exploration licences to other mining companies from China, Japan and Canada by President Tandja in 2007, the uranium mines (Figure 3) in Niger are mainly operated by the French state-owned company AREVA which ranks first in the global





Figure 2: Poisoned water near the Akokan mine.
Source: Greenpeace

nuclear power industry, importing half of its uranium from Niger.

Mining activities have also contributed to the destabilization of the area. Niger is a divided country, with the Tuareg living in the north and the dominant Hausa ethnic group in the south. The capital is in the south, and the south controls the country. Uranium revenues from the north are used to buy weapons in the south, which the government then uses to keep the north in check. The Agadez Region is home of the Tuareg, the “Lords of the Desert”: estimated at 1.5 million, they are a tribe without a country. They have wandered the deserts of the Sahara since the 7th century, across the borders of present-day nation states. Both the French colonists and the modern-day governments that have followed have continued to marginalize the Tuareg and dismiss their claims to land rights and autonomy. By the time AREVA arrived, they had repeatedly lost the land and resources they need to survive. A lack of clean water and fertile soil, in particular, threatens to destroy these nomadic herders. Angry and desperate, a Tuareg rebellion arose two decades ago, and in 2007 they organized a rebel group called Mouvement des Nigériens pour la Justice (MNJ, Nigeriens’ Movement for Justice) that fights for self-determination of the Tuareg in the region and for a greater share of the revenues from northern Niger’s uranium wealth to be invested in the region. MNJ activities have caused instability and led to security problems that have continued on and off for many years despite negotiations.

AREVA’S URANIUM MINES

Niger is the world’s fourth-ranking producer of uranium. In 2011 it produced 4,351 tU (tonnes of uranium), and cumulative production from the country

was 114,346 tU to the end of 2010. Approximately 62,000 tU of this was from underground, and 52,000 t from open pit mining.

In the past 40 years, 52 million tonnes (t) of ore have been excavated, from which approximately 100,000 t of uranium have been mined by both mines in Niger: on average the mines produce more than 3,000 tonnes of uranium and net EUR 200 million in sales per year: since 2003, in Arlit production has been steadily increasing and in 2009 overall production was 1,808 tonnes of uranium. As of 2012, SOMAIR had produced more than 44,000 tonnes since the mine came into operation. The World Nuclear Association reported that SOMAIR was to increase the mine’s capacity to 3,000 tonnes of uranium per year; the other mine, Akouta, has the capacity to produce 2,000 tonnes per year and COMINAK has produced more than 55,000 tonnes of uranium since extraction began in 1974. Development of the large Imouraren deposit about 80 km south of Arlit and Akokan was confirmed in January 2008: the project is a EUR 1.2 billion investment, the production is expected to be 5,000 tU/yr for 35 years from late 2015. It will be the largest mining project ever undertaken in Niger. The deposit covers 8 km by 2.5 km and contains 146,000 tonnes of measured and indicated uranium resources: when Imouraren will enter production, Niger will rank as the world’s second largest uranium supplier.

The company built two hospitals in the towns of Arlit and Akokan officially open to the general population of the area, but basically only the mine workers benefit from this service while employed and only for three years after the retirement. According to first-hand witnesses and AREVA’s reports, during the 40 years of operations, not one case has been diagnosed with a work related illness

This document should be cited as:

Bassanese, Valentina. 2015. Areva’s Uranium Mines, Niger, EJOLT Factsheet No. 30, 4 p.



Figure 3: Uranium mine in Arlit
Source: blogs.blouinnews.com

and for AREVA, the diseases that have occurred to local population are not due to mining activities but are typical of desert zones: the causes of death of workers who passed away in the hospitals were given to the relatives as AIDS or malaria.

Impact

According to local population and to the findings of the independent studies carried on by CRIIRAD, Sherpa and Greenpeace, mining activities seriously affect local residents and the environment in different ways:

- 35 million tonnes of tailings which still contain 85% of the original radioactivity of the ore have been accumulated in the past 40 years: for 1 kg of uranium produced, 335 kg of tailings are left behind. They will remain radioactive for hundreds of thousands of years

- 1,600 tonnes of equipment and materials used to process the uranium became radioactively contaminated: the company gave scrap materials (Figure 4) to local people who made pots, pans, dishes, roof for their houses from the metal, spreading radioactive contamination all over the area

- Until the Chernobyl disaster in 1986, miners were not informed about the dangers of uranium and radiation; according to first hand reports, there was no protective clothing, no dust mask, no radiation badges. The miners ate their lunch sitting on the uranium rocks; they went home with their clothes full of uranium dust spreading the radioactive materials into the homes of the miners

- In 40 years of operation, a total of 270 billion litres of water have been used, contaminating the water and draining the aquifer, which will take millions of years to be replaced; historical data indicate a gradual increase in uranium concentration over the last 20 years, which can point at the influence of the mining operation. Some of the water samples even contained dissolved radioactive gas radon

- The concentration of uranium and other radioactive materials in a soil sample collected near the underground

mine was found to be about 100 times higher than normal levels in the region, and higher than the international exemption limits; on the streets of Akokan, radiation dose rate levels were found to be up to almost 500 times higher than normal background levels

- Death rates linked to respiratory problems are twice that of the rest of the country and a large number of birth defects, leukaemia and cancer are reported

- Inequitable distribution of the mining profits that undermine the self-determination of the local population

- "Everlasting pollution" instead of sustainable development that endangers the traditional agro-pastoralist way of life of the Tuareg tribes

Conflict and consequences

In 2001, after a number of miners and workers had passed away prematurely, their colleagues founded an NGO called "Aghir in Man", a Tamasheq word (the language of the Tuareg people), "a call for help". Aghir in Man, started to ask questions to the company in regard to the causes of the premature deaths that were never related to the mines as stated by the two hospitals in the towns of Arlit and Akokan (owned by AREVA).

In response to a call from local resident Almoustapha Alhacen, president of local NGO Aghir in'Man, CRIIRAD and French human rights organization Sherpa travelled to Arlit in December 2003 to evaluate the health and safety conditions and conduct a first review of the radiological environment. Since the first trip in 2003, CRIIRAD has carried out multiple studies and issued several reports documenting its alarming findings. In partnership with CRIIRAD, the French association Sherpa visited the mining region in 2003 and interviewed local doctors, citizens and workers to investigate the origins of health problems being encountered by the local population. Its work pushed people becoming conscious of the health risks the mine caused to the citizens of the area: this awareness led to the historic march of 6 May 2006, the first



Figure 4: Scrap materials from mining activities
Source: blog Beyond Nulear

official demonstration against AREVA in Arlit with more than 5,000 people.

After the first findings of CRIIRAD, in 2009 a Greenpeace team visited the uranium mining region of Agadez: the team's aim was to document the environmental impacts and associated human health risks caused by AREVA's uranium mines. The visit was prepared in collaboration with the French scientific laboratory CRIIRAD and ROTAB, a network of NGOs in Niger. The alarming findings reinforced the need for independent studies on the situation around the Niger uranium mines that AREVA never supported.

The mobilization of the local population is led by local EJOs, CSOs and NGOs like Aghir in Man, Coordination Société Civil d'Arilit, Le collectif AREVA ne fera pas la loi au Niger (AREVA won't rule in Niger), Alhak An Akal, Association des Femmes des Quartiers Périphérique d'Arilit (Women Association of Arlit peripheral neighbours), ROTAB (Réseau organisations transparence et analyse budgétaire (Publish what you pay) that ask for better work conditions, sharing of the mining revenues to stay in the Region, participation of local population and self-determination, the respect for the environment and health



and water
ilities. They
one date back
and peaceful sit-

in in the mining sites.

Apart from peaceful demonstrations, in 2008 and 2010 the MJN together with AQMI kidnapped French AREVA's workers near the town of Arlit, four of them still being held, while in May 2013 an AQMI bomb attack against the mining compound, near Arlit, was part of a twin car bombing that also targeted a military base in Agadez, with 15 people injured, one of which later died the same day.

AREVA has partially restarted uranium production at its SOMAIR mine since the bomb attack, but the present situation in the region is still highly charged, and seems to be far from reaching a peaceful resolution.

Chronology of major events

- 1960** independence of Niger and contracts between France and the new Government granting the "exclusive right to mining and exploitations of minerals to France".
- 1967-1968** Mining of uranium starts with the open pit mine of Arlit controlled by SOMAIR (a subsidiary of COGEMA, now AREVA).
- 1974** Underground mine of Akouta, COMINAK (now AREVA) Coup d'état against the President of Niger Diouri who asked France for an increase in uranium prices.
- 1990s** Start of Tuareg rebellion.
- 2001** Creation of AREVA
Creation of the local NGO "Aghir in Man" to find the causes of the premature deaths of a large number of miners.
- 2003-2004** First research made by the NGOs CRIIRAD and SHERPA which pointed out alarming findings of dangerous radiation in the area (soil, water, air). Starting of the mobilization of workers and citizens of Arlit and Akokan.
- 2007** President of Niger Tandja gives exploration licences to other States (China, Canada, Japan).
- 2007-2009** Second Tuareg rebellion.
- 2009** Greenpeace mission to Niger to document environmental impacts of uranium mines.
- 2010** AQMI (Al Qaeda au Maghreb Islamique) kidnaps french expats at the AREVA site of Arlit
Coup d'etat against President Tandja.
- 2012** AREVA postpones in 2015-2016 the opening of the Imouraren mine.
- 2013** Strikes of miners over labour conditions and financial improvements
Bomb attack at AREVA's sites in Arlit.

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This publication was developed as a part of the project Environmental Justice Organisations, Liabilities and Trade (EJOLT) (FP7-Science in Society-2010-1, under grant agreement no 266642). The views and opinions expressed in all EJOLT publications reflect the authors' view and the European Union is not liable for any use that may be made of the information contained therein. EJOLT aims to improve policy responses to and support collaborative research and action on environmental conflicts through capacity building of environmental justice groups around the world. Visit our free resource library and database at www.ejolt.org or Facebook (www.facebook.com/ejolt) or follow tweets (@EnvJustice) to stay current on latest news and events.