

Toxic shadow: phosphate miners in Morocco fear they pay a high price

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Abdellatif Ben Maarouf is tired. His health is deteriorating. He can't breathe through his nose and has lost his sense of smell. During conversation he gasps for breath.

"For 26 years, I worked eight hours a day, every day, exposed to dust and gases from ammonia, fluoride, phosphoric and sulfuric acid," explains the father of two. "We had little protection, just a disposable face mask for the dust. No one ever explained to us what we were inhaling."

Three years ago, Maarouf, now 53, was diagnosed with throat cancer. He retired shortly after from his job as a mechanic in a fertilizer factory in the Moroccan port of Jorf Lasfar. The factory, run by the state-owned mining giant OCP, converts phosphate rock into fertilizer and phosphoric acid, a common additive in soft drinks.

Morocco and Western Sahara sit on around 75% of global reserves of phosphate rock, and although it's not running out, shortages in supply can occur.

Another of OCP's fertilizer plants is located in the city of Safi, about 130km along the coast south of Jorf Lasfar. The town is shrouded in smog. Aoutil Lahssent, a resident, lost his brother, aged 59, to cancer a couple of years ago, shortly after he had retired from his job in the factory.

"My brother had no idea about the level of toxicity of the chemicals he was exposed to daily," Lahssent explains to the Guardian and Swiss National TV. "The containers are labelled, but in English, German or Polish – languages we don't understand."

Nouaoui Abderrahim, 56, worked in the factory in Safi for almost three decades. Now, he is crouched on a sofa, his eyes dark and sunken. He has a tumor in his right kidney. "Why weren't we educated on the risks we were taking working in this environment?" he says.

Few recent studies are in the public domain on work-related illnesses in the Moroccan phosphate industry. However, studies are published elsewhere. Greenpeace and the World Nuclear Association have found that Moroccan phosphate is particularly high in cadmium and has appreciable quantities of uranium, two heavy metals associated with cancer, kidney failure and bone disease. Uranium is so abundant, in fact, that in 2012 OCP announced plans to combine it with phosphate.

The US Environmental Protection Agency has conducted extensive research on managing phosphogypsum, a radioactive waste byproduct generated during fertilizer production. In the US, this low-value waste is hauled off as slurry to stacks located far from people. In Morocco, it is simply dumped in the Atlantic.

"OCP doesn't recognize the connection between these illnesses and our work environment," says Lahssent. "But when we see so many of our colleagues aged around 50 contracting the same illnesses, and we compare to other jobs where this doesn't occur, well, it's a painful comparison that leaves us concerned about the direct impact on our health."

About 80km inland from Safi is Youssoufia, a town that sprang up around one of OCP's big mines. Scattered around its perimeter are giant mounds of dry waste, stacked in close proximity to the local population. According to a World Bank study, these may contain heavy metals and other environmental contaminants. Without proper precautions, these pollutants can leach into waterways or escape as dust.

"Every morning we wipe 2mm of dust off our belongings," says Souhami Moundir, a pharmacist who was born and raised in another mining town in central Morocco. "Within a 15km diameter of OCP's sites, it's endless. It pollutes the water and the air."

Both OCP and Morocco's ministry of health declined to comment.

The ministry of the environment said: "Air quality analysis stations have been set up in Safi, El Jadida and Jorf Lasfar. No alarming results were found [on atmospheric pollution from the phosphate industry]." However, the documents detailing these results are apparently confidential.

The ministry declined to comment on water pollution or industrial waste management. A 2006 study found significant contamination of cadmium in shellfish around OCP's discharge points. Another from 2013 recorded high levels of heavy metal contamination in saltwater lagoons near OCP sites.

The challenge of safely managing the industry's byproducts is not unique to Morocco. Environmental concerns have caused mines in Europe and the US to be shut down.

OCP says it has invested in the safe disposal of another toxic byproduct known as PCB, increased its water efficiency and use of solar power, and implemented a host of corporate social responsibility projects.

On 10 October, Ben Maarouf died. His younger brother continues to work in the factory in Jorf Lasfar. "Industry is all that remains here now, and I have a family to feed," he says. "What choice do I have? If only the company would invest in regular medical screenings, maybe we could catch these illnesses before it's too late."