

## **What is the most problematic in Rio Tinto's plans?**

Exploitation of lithium from jadarite ore, the only mineral in the world, without the established practice of exploitation and good practice, is a complex procedure of ore extraction and processing for the purpose of lithium extraction. The ore that would be extracted, after crushing, would be treated with concentrated sulfuric acid at a temperature of 250 degrees, which is also the most risky part in the process of exploitation of lithium from jadarite, because it is necessary to provide a large amount of water and energy. The vapors of aggressive acids that will be used for the extraction of lithium and its conversion into lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) will evaporate into the atmosphere and corrode the green cover, as well as the lungs and skin of humans and animals. If hydrofluoric acid (HF) is used to lower the process temperature to destroy the silicate structure that permeates jadarite, extremely toxic silicon fluoride gas ( $\text{SiF}_4$ ) will develop which will also go into the atmosphere and pose a constant risk to human and animal health, and for which there is no ecological solution to prevent its emission into the air. The range of influences on air pollution can be tens of kilometers, depending on the direction and speed of the wind in which dangerous substances will be carried through the atmosphere.

In an interview with Balkan Green Energy News, Dragana Djordjevic, a scientific advisor at the Institute of Chemistry, Technology and Metallurgy (IHTM) of the University of Belgrade, says that citizens are forced to organize themselves due to lack of information and state passivity, which is what is happening. She is convinced that the mine will bring more damage than benefit Serbia. By the way, she is one of the representatives of the academic community who joined the citizens in the fight against environmental damage, not only in this case, but also in the construction of small hydroelectric power plants and air pollution.

## **How will wastewater from ore processing be disposed of?**

There is no information on how the mine wastewater will be treated before it enters the Jadar River. River overflows, which usually occur during high waters and during floods, will be more frequent due to climate change. Polluted waters from Jadra will flow into the fertile fields of the valley of this river and disperse toxins on agricultural land, polluting it permanently, and it will also penetrate into groundwater because surface and groundwater are connected. Groundwater is an important resource of drinking water, and its pollution is practically permanent because it is almost stagnant water that takes centuries and even millennia to clean up. Jadar is a tributary of the Drina, where protected species live, but the Sava is also endangered across the Drina. All cities in their coast are supplied with water

from the alluvium of these rivers.

### **Does the public have enough information about Rio Tinto's plans?**

So far, the public, apart from the fact that there is a deposit of lithium jadarite ore in the area of western Serbia near Loznica, has not had any information on how this ore will be exploited, what this ore contains from dangerous elements, because ores in our area contain extremely toxic elements. such as mercury arsenic, lead, which chemicals will be used in the process, how much water will be delivered from the Drina, some sources state that it is about 1,000 tons per day and even more. It is known that the amount of wastewater from the flotation in the river Jadar will be discharged, which is 50% higher than the one that will be delivered from the Drina. The question is what the additional 50%, ie 1,500 tons of wastewater, and more, will contain. The excess of about 500 tons will certainly come from impurities from the ore, acid residues and their salts, but also the toxic elements that the ore contains.

### **When we look at the pros and cons, does it pay off to have this mine?**

On the one hand, the price of lithium carbonate on the global market is rising, but that doesn't mean much for Serbia because the owner of the ore will practically be Rio Tinto, or someone else if this company sells the exploitation right, and the state of Serbia has an ore rent of only 4%. The environmental disasters that follow and which will be permanent and require huge investments to rehabilitate or keep them under control. After the end of exploitation, the company will withdraw without any obligation according to the problem it will leave behind, which will endanger the environment and human health in the decades and centuries to come. Also, with the opening of the mine, all agriculture in its vicinity and along the river Jadar, but also beyond, will suffer, due to contamination of water with toxic elements from the ore itself and the remains of acids and their salts, which will make Jadar a dead river. Considering that the area where lithium exploitation is planned is fertile agricultural land, with developed fruit growing and beekeeping, but also the entire Adriatic valley with the most fertile land in that area, lithium exploitation will seriously endanger this valuable resource, from which people have always lived in this area, and whose price will only increase in the future, given that arable land is rapidly and irreversibly disappearing globally due to climate change, landslides, erosion, urbanization, industrialization, mining. It is expected that the consequences of the operation of this mine will be far-reaching and permanent, and the resulting damage will far exceed the ore rent of 4%. The permanent destruction of valuable agricultural land and water, which has recently been listed on world

stock exchanges and whose price will also rise rapidly in the future, is unprofitable due to the insignificant ore rent.

**What is the public interest in this case, when it comes to environmental protection, and who should protect it?**

In the era of the 4.0 industrial revolution, everyone is obliged to protect the environment, which is in the public interest, in the domain of their actions and economic growth. Only a healthy environment ensures a healthy and quality life for all of us. Polluted environment (air, water, soil) is a sure way to get sick from the most serious incurable diseases, shorten the average life expectancy of the population, but also domestic and wild animals, premature and sudden deaths due to heart failure with fatal outcomes, permanent decline in intelligence and Alzheimer's diseases. State institutions, among which are primarily the Ministry of Environmental Protection, the Environmental Protection Agency, the Ministry of Health, the Institute of Public Health, but also all other institutions, are obliged to take care of living in a healthy environment. Unfortunately, these institutions and the state itself do not act in the direction of preserving a healthy environment, but on the contrary import the dirtiest technologies in the world for which there are no environmental solutions and encourage polluters to increasingly impair the quality of life in this area, grossly violating the Constitution of a clean healthy environment.

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