

For more than 15 years, Rio Tinto in Serbia has been researching the extraction and production of the mineral jadarite, named after the valley of the river Jadar where it was discovered. Jadarite contains lithium and boron, both relatively rare and industrially important elements. Lithium is used for lithium batteries; boron is used in alloys, ceramics and glass. According to some media reports, there are an estimated 200 million tons of lithium of borate lithium ore in the Jadar Valley, which would make future mines one of the largest lithium deposits in the world, supplying 10% of world lithium demand.

However, despite the economic potential in the mining industry, the project threatens the existing economy based on high-quality agriculture. The Jadar River and its alluvial plain, together with upstream tributaries and streams near the border with Bosnia and Herzegovina, are one of the relatively well-preserved parts of Serbia, where most of the locals are engaged in agricultural production. According to the latest census, about 20,000 citizens in the region are actively relying on agriculture. This region is suitable for the production of honey, grapes, fruits, vegetables and livestock. The new mine threatens to change all that and has resulted in mass opposition from citizens.

The Government of Serbia promotes this investment as *a project of the century*, “a project that will put Serbia on the map of high technologies” and which should serve as the leading success of both Rio Tinto and the Government of Serbia. However, there are a number of problems with the project, mainly because Rio Tinto has not disclosed key information about how lithium will be extracted and what impacts it will have on the population; the Government of Serbia did not inform the Governments of Bosnia and Herzegovina and Croatia about the planned project through cross-border consultations; It offered illegal support to facilitate the start-up of the mining company; and the project will drastically and irreparably change the environment and the lives of the residents who live there.

Missing project parameters

Through a series of meetings with civil society and community members in 2020, Rio Sava, a subsidiary of Rio Tinto in Serbia, revealed different versions of the project parameters under consideration. However, the current spatial plan and strategic environmental impact assessment do not contain details on the technologies that would be used to produce lithium; any description of the amount of products, waste and water consumed from the rivers Jadar and Drina; details of the impact on surrounding towns and municipalities; or what will happen when Jadar floods areas where Rio Tinto plans to set up chemical plants, flotation, storage of hazardous materials or explosive chemicals.

Despite enormous efforts and over \$ 200 million spent, Rio Tinto did not disclose the final

design of the process, claiming it was its intellectual property. Obviously, it does not matter that this “intellectual property” will directly jeopardise hundreds of square meters of well-preserved landscape and villages.

The special-purpose spatial plan, presented in December 2019, requires an assessment of economic feasibility and environmental and social impacts. They have not been implemented or made available to the public. The plan states that the project will cover 293.9 square kilometres in the Loznica and Krupanj areas, where there are four partially or completely protected areas, the most important of which is Tršić – Tronoša. The jadarite deposit itself is located in the river valley on agricultural land, and the mineral is at a depth of 100 to 720 meters.

According to the spatial plan, the mining activity zone will cover 854.8 hectares; the production and industrial activities zone will cover an area of 646.5 hectares; other land that will be used for industrial waste disposal, construction of access roads and accompanying infrastructure, will cover an area of 358.5 hectares. It will be necessary to purchase some land and real estate and relocate households. Nevertheless, the plan did not provide specific information on how the project will affect the surrounding area and the people who live there.

The company’s presentations also did not reveal exact numbers on the amounts of water, sulphuric acid and other acids, heavy metals and other toxic substances that will be used, citing commercial confidentiality.

According to currently developed technologies, lithium extraction is a set of chemical processes in which lithium, a highly reactive alkali metal, is isolated from a sample. After the mineral material is removed from the ground, it must be heated and broken. The crushed mineral powder is combined with chemical reagents, such as sulphuric acid, and then the slurry is heated, filtered and concentrated by an evaporation process to give lithium carbonate. The resulting wastewater is treated for reuse or disposal.

Rio Sava lists about 16 chemical reactions needed in lithium mining, and about 500,000 litres of water are usually needed to extract one ton of lithium. Such a need for water from the local environment would affect farmers, who would be deprived of valuable resources for livestock and crop irrigation. In addition, a toxic cocktail of chemicals used to extract lithium from the ground could also seep into nearby rivers, streams and water supplies. This is exactly the kind of catastrophe that happened in 2016 on the Lika River in Tibet, where mining operations contaminated the water and resulted in thousands of dead fish and numerous cases of cattle poisoning.

However, Rio Tinto has not yet revealed what technology it will use to extract lithium from

jadarite. Because the ore in this region has a unique composition, the extraction technology is still unknown and is being tested at the Bundoor Center for Technological Development in Melbourne, Australia.

Unclear costs of lithium mine exploration and preparation

One of the most problematic issues regarding the Jadar project is the confusing figures related to Rio Tinto's investment in research so far. According to some 2016 reports, Rio Tinto invested \$ 60 million, but in 2015 it reported that it had already invested \$ 70 million in research. In 2019, they reported a total investment for the same purpose of \$ 200 million, while in July 2020 they stated that they had invested \$ 250 million.

In July 2020, Rio Tinto approved an additional investment of nearly \$ 200 million for the further development of the Jadar project. Currently in the Project Feasibility Study phase, the team is focused on completing the technical documentation, completing the Resources and Reserves Study in accordance with Serbian regulations and obtaining the necessary permits and purchasing land.

Questionable state participation

In July 2017, a memorandum was signed between Rio Tinto and the Serbian government, represented by Prime Minister Ana Brnabić, confirming that lithium production will begin in 2023. Although there is a high level of institutional support for a completely private mining company, the Serbian government has decided to use government and other state capacities to facilitate obtaining permits, claiming that the project is "in the public interest". This constitutes illegal administrative support. Such project classification also resulted in indirect financial support to Rio Tinto in obtaining the necessary land and property for project development.

The government also plans to provide infrastructural support to the project in the form of investments in the removal of regional roads, construction of new roads, provision of high voltage network, gas connection, and most devastating of all is providing water from the Drina River in large daily quantities.

The Serbian NGO Coalition for Sustainable Mining (KORS) has already filed a constitutional complaint stating that the acquisition of land and property for mining is an exclusive private activity that has acquired the status of public interest, which is obviously contrary to the Serbian Constitution and European standards on state aid.

On 26 November 2020, the government established a government body to oversee the project. This group consists of ministers, state secretaries, representatives of Loznica and public companies, which are members or close allies of the ruling party and are therefore

unlikely to challenge authoritarian and undemocratic decisions, and are unlikely to be any real or democratic discussions of alternatives.

Residents were not informed

Residents affected by the project, especially in the villages of Loznica and Krupanj municipalities, were not properly informed by the government or Rio Tinto about the project. They learned from secondary sources that a large project was being prepared that could endanger their lives and the environment. They revealed that public consultations for this strategic plan have been announced, but none of the citizens have been informed about it.

At the end of November 2020, none of the representatives of interested NGOs or the local population was invited to participate in the detailed feasibility assessment process. Moreover, Rio Tinto and the Serbian government have neither conducted any socioeconomic studies on mine-free development scenarios, nor studies on how much potential agricultural production will be lost and the cost of toxins entering water, food, air and soil in the region. When they found out about Rio Tinto's plans, the residents quickly took action trying to stop the project. They are still feeling the negative effects of nearby lead mines and processing plants, most of which have been closed for more than a decade. They believe that it is impossible for such destructive industrial activities to coexist with the diverse, high-quality agricultural production they rely on to generate income.

Citizens are fighting back

Despite the organized threats of Rio Tinto and the government, the opposition of the citizens in Loznica and throughout Serbia is growing. In early October 2020, approximately one hundred citizens protested in front of the Rio Tinto Information Center in Loznica, demanding that a referendum be held before the mine opens. Several organizations issued proclamations demanding the cessation of all research, administrative and legal proceedings and activities related to mine construction; abandoning the lithium exploitation project; and withdrawing decisions on a special-purpose spatial plan for Jadar.

It is clear that this project will have cross-border effects if it moves on, due to its position near the border with Bosnia and Herzegovina and the fact that the Jadar flows into the Drina River, which continues in B&H.

KORS and the NGOs for Jadar and Radjevina Protection informed the activists of non-governmental organizations from B&H, and in the autumn of 2020 these activists called on the B&H government to request cross-border EIA, as waste from the mine, which would be carried by the Drina from Serbia, would then pollute arable land in B&H.

The Serbian government ignored mass opposition and continued to co-operate with Rio Tinto and hold diplomatic meetings with representatives of the United Kingdom, Australia, the United States, the World Bank and the EU Delegation to Serbia, who also support the project.

If everything goes according to plan, mine development should start in 2022. Rio Tinto has started purchasing properties (houses and land) at locations where it plans to open the entrance to the underground mine and processing plant (some 40 households included), so it can start construction work immediately after the final project decision. The intention is not to use expropriation, but to obtain the necessary land by agreement. However, during these purchases, Rio Tinto told the owners that if they do not sell the land at the offered price, they will be expropriated. This reinforces the conclusion that Rio Tinto has a preferential status with the Serbian government and that it directly manipulates and uses the administrative power of the state to its private advantage.

Source: bankwatch.org