alumina, bauxite, and .....

which side are we on?



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This brochure is dedicated to people across the world who, over the decades, have been making their voices heard to governments and profit making companies about the dangers of mining to the planet.

We, at Platform People First, stand by the people of Sijimali for their struggle to save the Eastern Ghat mountain range from mining giants Vedanta Resources and Adani Group; we are indebted for their courage and dedication.

Contributors

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&

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Platform People First is (PPF) is a forum of concerned citizens – health professionals, academics, lawyers, writers and social activists, who work closely with marginalised communities with particular focus on people with tuberculosis, victims due to indiscriminate mining and with low-waged migrant workers.

Foreword

The greatest danger of bauxite mining on Sijimali, Niyamgiri, and the other great mountains of southern Odisha, is its impact on the whole region's water wealth. Few understand that bauxite deposits on mountains act like clay, absorbing the monsoon rain, and releasing it in an abundance of perennial streams. These dry up when the bauxite is mined. The resulting desiccation of once exuberantly fertile landscapes can be seen around Panchpatmali in Koraput district, which Nalco has mined for over 40 years. Adivasi communities understand their mountains' life-giving capacity, and consider them as sacred entities. This symbiosis with the mountains is reflected in the naming of the mountains' base rock as 'Khondalite" by the geologist who first discovered bauxite here around 1900, T.L. Walker – "after those fine hill-men the Khonds". The Odia writer Gopinath Mohanty recounted how a Census official around 1941 told him that Konds answered his question "What is your religion?" by the single word "Mountains". This is why Adivasis and Dalits are prepared to risk their lives to defend their mountains: they are protecting not just their own futures, but that of Odias as a whole. If more of the mountains are mined, the results will be catastrophic over a wide region. It is little known that Vietnam has considerably more bauxite than India, whose mining was prevented by the foresight of the Vietnamese general who defeated the French and Americans, General Võ Nguyên Giáp.

This brochure gives a vivid introduction to the vital facts around the dangers of the aluminium industry. Most people don't realise that today's huge expansion of the aluminium industry in Odisha was first conceived by a British colonial geologist, C.S. Fox, who wrote books about Indian bauxite in the 1920s, and outlined the blueprint for aluminium factories, powered through big dams, with railways taking aluminium to the coast for export, all based on Odisha's bauxite. 100 years later, today's plans for more bauxite mining and alumina/aluminium factories are a prime example of "internal colonialism", treating the indigenous people of these mountains as second class citizens, to be "sacrificed" to make way for an unreal image of "progress". Aluminium factories are highly toxic in their impacts on water, land and air, as this booklet shows; and one of the forces driving the growth of this industry is aluminium's use in armaments – a "double death", through wars, as well as the processes of extraction and industrialisation, that is being forced on local people through increasing police violence and fabricated cases. It is so important that more and more people become aware of what is at stake, and WHY remote communities in Odisha are risking their lives to protect their mountains.

Felix Padel, an anthropologist and author of several books, has extensively researched into mining and environmental issues that affect tribal communities living in remote areas in India. We are grateful to Felix for writing the introductory page of this brochure.

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Summary

People in Sijimali region of the state of Odisha in India, living in harmony with mountains, forests and streams, are desperate to save their mountain from being flattened by Vedanta Resources Limited. Platform People First (PPF), a forum of concerned citizens - health professionals, academics, lawyers, writers and social activists, are committed to protect the rights of people in Sijimali.

Despite local residents opposing further expansion of bauxite mines next to their villages, India is going ahead with plans to expand bauxite mining and aluminium production. In recent years, indiscriminate mining in India has reached its heights as the country has prioritised mining and associated industries as key to the country's economic growth. Moreover, India has opted for private companies over state-owned mining authorities. The government has leased out Sijimali-Niyamgiri mountain range to Vedanta Aluminium Business, India's largest aluminium producer (a subsidiary of the mining giant Vedanta Resources Limited in the UK). Thus 'profit' is going to overshadow 'wellbeing of people' in Sijimali, since there are risks to environment in the region which will affect the safety of people. This brochure explores why and how. In doing so, it explains the process of aluminium production, starting from mining to its end product.

The unique quality of aluminium i.e. it is light weight, malleable but strong and rust-proof, makes it a metal in great demand in the global market. The use of aluminium is wide; from aluminium cans to cookwares to transport and aviation equipment to armaments like ballistic missiles. Beyond the metal aluminium, its usage stretches to medicines, vaccines, coagulum in water purification, anti-perspirants in perfumery.

Although benefits of aluminium outweigh risks, the risks of its production are lasting to health and environment. This is because the production of pure aluminium involves mining of bauxite, washing and crushing of the ore, then being sent to alumina in refineries and finally to smelting plants; in addition, the process requires heat that is generated in coal-fired power plants within the alumina complexes. 'Alumina is not Aluminium' explains the process.

The risk of aluminium to health and environment is not just the metal itself or its various products, it is the whole process involving mining of bauxite and coal during which various heavy metals are released in land, air and water as solids to fine particles, as fine as PM2.5. The chapters 'Is aluminium safe?' and 'Dust travels miles' explain.

Heavy metals, namely Aluminium, Arsenic, Boron, Chromium, Lead, Mercury contribute to higher incidences of specific health problems involving respiratory, cardiovascular, neurological, kidney, muscle and joints which are the *physical health* risks of aluminium production. People living near mining operations, miners and low-wage labourers take the major brunt of it. In addition to physical health risks, mining operations impact on lives and livelihoods of people, agriculture, animals, and above all the mental health. Mining destroys the social fabric of communities living near aluminium production processes.

In mineral-rich forests and mountainous remote areas, the impact of mining is devastating. Contributors have worked with communities living in such remote parts of the country. They have observed how people are determined to live amid blasting that shakes their houses, how they do not wish to be displaced from their ancestral land, how trucks ply day and night through villages carrying rocks from mountains nearby, how dusts from captive coal power plants pollute localities miles away, how liquor shops, fast-food counters and gambling booths spring up in an area that residents never imagined.

About this brochure

People of Sijimali in remote villages surrounded by mountains, forests and streams, are desperately trying to save their land and sacred hills from getting bulldozed by mining companies. Vedanta Limited looks for new mountains to dig bauxite to produce aluminium. Platform People First (PPF), a forum of concerned citizens – health professionals, academics, lawyers, writers and social activists, are committed to protect the rights of people in Sijimali region.



Vedanta Alumina Refinery, Kalahandi District, Odisha

Despite local residents opposing further expansion of bauxite mines next to their villages, India is going ahead with plans to expand bauxite mining vis-a-vis aluminium production. In recent years, indiscriminate mining in India has reached its height as the country has prioritised mining and associated industries as key to grow the country's economy. Moreover, India has opted for private companies over state-owned mining authorities. The government has leased out Sujimali-Niyamgiri mountain range to Vedanta Aluminium Business, India's largest aluminium producer (a subsidiary of the mining giant Vedanta Resources Limited in the UK). Thus 'profit' is going to overshadow 'wellbeing of people' in Sijimali, so there are risks to environment in the region which will affect the safety of the people living there. This brochure explores why and how. In doing so, it explains the process of aluminium production, starting from mining to its end product.

> Vedanta says, initially the area faced toughest socioeconomic turmoil; now, with a deep focus on enriching communities, the region has become the hub of opportunity, self sufficiency and development.

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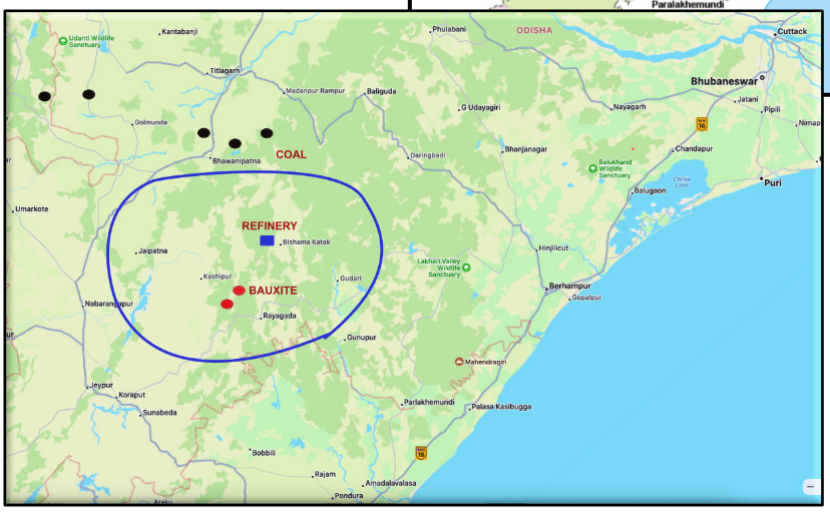
The risk of aluminium to health and environment is not just the metal itself or its various products, it is the whole process involving mining of bauxite and coal during which various heavy metals are released in land, air and water as solids to fine particles, as fine as PM2.5. 'Is aluminium safe?' and 'Dust travels miles' explain.

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Where is Sijimali?

Sijimali is an area of a mountain range with hills, protected (reserve) forests, wild life sanctuaries, and river basins, spreading over Kalahandi and Raygada districts of Odisha; about 400 km south-west from the capital Bhubaneshwar, the nearest city being Bhawanipatna, 40 km north. The area is also home to mining associated industrial operators like Vedanta Limited, Utkal Alumina International Limited (UAIL). The whole area including the adjacent state of Chhattisgarh, inhabited by tribal and other underclass communities, is rich in minerals – iron, bauxite, coal to gold.





Mining operations by Vedanta and UAIL in Sijimali (and Kutrumali) and the adjacent Niamgiri range have been the cause of public outcry not only by the resident villagers, but also outside India, particularly in the UK, where the former company is based or registered.

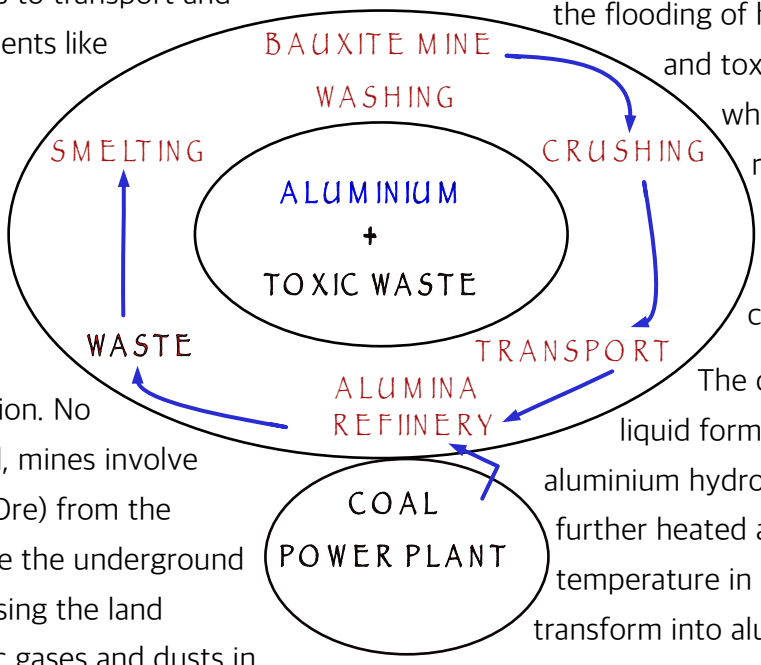
Protest continues, so do the ploys of the government and mining companies to further expand bauxite mines. In the meantime, the National Green Tribunal (NGT), the environmental protection agency of the government, at a recent hearing admitted the collapse of the dyke of process water lake at Vedanta Lanjigarh refinery in September 2024, resulting in the release of highly alkaline and toxic muddy waste water, called 'red mud' in the surrounding agricultural land and a nearby river. In the following chapter, we will examine bauxite and its toxic wastes.





Alumina is not Aluminium

The unique quality of aluminium, a light weight, malleable and rust-proof metal, that at the same time can be transformed into a highly strong alloy, has made it a highly in-demand metal with widespread use - from aluminium cans to cookwares to transport and aviation equipment to armaments like ballistic missiles. Here we will have a closer look into the production of aluminium from its ore bauxite to answer the question 'is aluminium safe'?



Mining is a hazardous operation. No mining is safe. Most, if not all, mines involve extraction of raw materials (Ore) from the underneath earth crust. While the underground mining carried risks of collapsing the land above and exposures of toxic gases and dusts in a confined space, the open cast mining carries equal risks, if not more. With the invention of high explosives and heavy digging machineries, the underground mining has now been replaced with that of open cast, resulting in toxic dusts and fumes being released in large quantities during each blast.

. From the mining of bauxite to the production of aluminium - each step of the whole process carries risks to health and environment. We will discuss the risks in the next chapter. The extraction of bauxite (a brittle clay-like rock) from opencast mines follows the transportation of it in trucks or other transportation means for further processing of the ore - washing with water to separate from other impurities like soil, other rocks, then crushing and grinding to smaller granules before it goes to refineries, as for example, the Lonjigarh Refinery of Vedanta. At refineries, the crushed ore is mixed with caustic soda and lime; the slurry is heated under high pressure, separating the liquid aluminium compound (Sodium aluminate) from the heavier muddy waste, i.e. red mud. Please note that in the previous chapter, we have mentioned about the flooding of highly caustic and toxic red mud when the dyke of red mud lake at Vedanta's refinery collapsed.

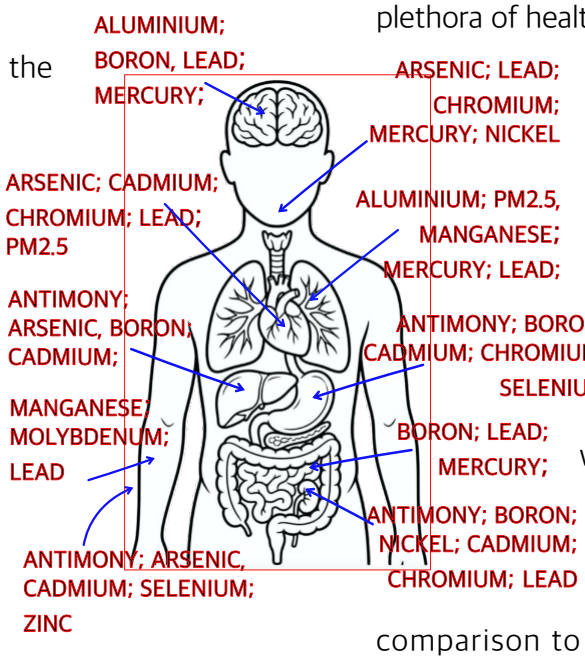
The cooling of the liquid forms crystals of aluminium hydroxide which is further heated at high temperature in kilns to transform into alumina powder. Alumina refineries require the generation of high temperature, hence the need of power generation plants along with the refinery complex, i.e. 'captive power plant', usually by burning coal. In short, Alumina production involves further releasing of toxic gas, dusts and solids in the form of harmful fly ash.

The final step of aluminium production involves the smelting of alumina - the mixing with cryolite salt in electrolysis chamber, separating pure aluminium in hot liquid form in furnace and pouring into moulds and producing Aluminium in solid form when cooled .

Is Aluminium safe?

While determining how safe aluminium is, we weigh the overall benefits of aluminium against the risks it poses to human body. As for the level of risks of an element (or a commodity), the toxicology information of the element, its routes of exposure (or consumption), and the amount of exposure during its production and usage are considered. It is not always straightforward as we stumble upon the benefits versus risks equation, at times one ignores certain risks that other would value high. The above question therefore draws divided opinions.

Taking into consideration the range of pathways of exposure, from mining to end products of aluminium, we at Platform People First have reasons to say, aluminium is unsafe. We consider wellbeing for all – from workers in bauxite mines and refineries to people living nearby the industry to city-dwellers using cookwares to beverage cans and so on. With regard to safety issues, we have looked into several research papers and statements by toxicologists, environmental scientists, and, food and health regulatory bodies. (Some are listed in the reference section at the end of this brochure).



The diagram at the centre is an overview of impacts of various heavy metals on our body. The pathways of detrimental effects of these metals are undeniably complex, and are dependent on the level and length of exposures. Aluminium, Arsenic, Cadmium, Chromium, Lead and Mercury are a group of heavy metals commonly released in most mining operations, be it aluminium or copper or iron or coal. They are released into environment in varied quantities during blasts, from burning of coal in captive power plants, and from toxic wastes during extraction processes.

Aluminium itself is a causal agent of gastrointestinal, respiratory, kidney, reproductive, neurodegenerative (Alzheimer's and Parkinson's) diseases. Combined with the above mentioned toxic metals, the synergistic effects, result in a plethora of health complaints – from skin to joints, from brain to kidney, from tuberculosis, asthma to cancer.

In this context, it is worth mentioning that no mine is dust free, no matter what safety measures are in place. And, strict safety measures for mine workers and people living around mines are not always in place, particularly in countries like India in comparison to Germany, UK or USA.

Finally, the current government in India considers mining and associated industries as part and parcel of country's economic growth, and prioritises privatising the industry. Private giants like Tata, Adani and Vedanta therefore have the major share of India's mining, from coal to iron to bauxite. Stricter measures for safe waste disposals and minimised release of toxic dusts are therefore at stake as such measures increase the cost of production thus reducing the profit.

Dust travels miles

The aluminium cycle, from mining to transportation to the production of end products is never dust and fumes free. One might feel safer by being far away from the above operations or by being extra vigilant by limiting ingestion or contact with aluminium products. Healthy living and limiting exposure of aluminium is rather a false sense of security because toxic dusts and fumes from mines and industries can travel miles. Thus one may justify the 'benefits versus risks' equation by ignoring those who have no choice but to live next to mines or the mentioned industries.

The risks are indeed less if one is far away from mines or associated industries. Yet arsenic, chromium, silica and so on can reach Bhubaneshwar, the capital of the state of Odisha, from Vedanta's refinery at Lanjigarh or smelters nearby. After all, radioactive dusts from the Chernobyl nuclear power plant reached parts of United Kingdom within a few days of the explosion.

No mine is safe. While benefits of minerals are not in question, risks often outweigh benefits. The precondition of bauxite mining is, therefore, a thorough assessment of its impact on lives and livelihood people and the environment they are in. At Platform People First, we oppose indiscriminate mining for aluminium.



ALUMINIUM: SOURCE; END PRODUCT; ROUTE OF EXPOSURE		
1. Mining		
Bauxite	Alu. compounds; other heavy metals	Air; land; water
2. Transportation; heavy machinery		
Diesel fumes	Nitrogen oxides; Coarbon monoxide	Air
3. Refinery		
Red mud	Alu. compounds; higly caustic water	Air; water
4. Captive coal-fired power plant		
Fly ash	Heavy metals in fumes and solid wastes	Air; soil; water
5. Smelting		
Fumes; solid wastes	Alu compounds; other heavy metals	Air; soil; water
6. Cookwares		
Pots & pans	Aluminium	Ingestion
7. Food storage		
Aluminium foils; beverage cans	Aluminium	Ingestion
8. Food/additives		
Certain fruit-plants; milk products;food additives	Aluminium & compounds	Ingestion
9. Perfumery		
Anti-perspirants; cosmetics	Alu. compounds	Contact
10. Pharmaceutica		
Antacids; vaccine adjuvants	Alu. compounds	Ingestion injection
11. Water purification		
Coagulum	Alu. compounds	Ingestion
12. Building construction		
Roofing/sliding doors	Aluminium alloy	
13. Transport		
Cars & similar vehicles	Aluminium alloy	
14. Aerospace		
Commercial; defense/ milirary	Aluminium alloy	
15. Armaments		
Missiles & explosives	Aluminium alloy	

Note: Exposure levels and harmful impacts are strikingly higher at or near the production of aluminium i.e. mining and associated industries, than through usages of end products except through direct contact with body or ingestion of food products that are in direct contact with aluminium. Exposure through inhalation of toxic air from mining and industries, even though appear to be far away remote areas, cannot be ruled out as dust travels miles.

Dusts & heavy metals: sources and impacts

SOURCE	IMPACT	HEAVY METALS
• Bauxite (Aluminium Compound) • Other heavy metals from Bauxite mines • Red mud waste Coal power plant – fumes and dusts • Fly ash – dust and waste deposit • Fumes – from trucks & diggers; city vehicles • Fumes – Smelters; Aluminium associated industries • Food storage – Beverage cans; Milk cans; Aluminium foils • Aluminium cookwares • Pharmaceutical – medicines; additives • Perfumery – anti-perspirants • Vehicles – cars, buses etc • Aeronautics • Armaments – Missile casings; Explosives	RESPIRATORY CARDIOVASCULAR NEUROLOGICAL SKIN JOINTS KIDNEY LIVER CANCER MENTAL HEALTH SOLASTALGIA SOCIAL DISRUPTION ECONOMIC AGRICULTURAL ANIMALS FOOD DRINKING WATER HABITAT	**ALUMINIUM** Long-term exposure of dust can cause scarring of lungs (pulmonary fibrosis) with symptoms of coughs and shortness of breath. May be linked to dementia. **PM 2.5** Particles less than 2.5 micron (0.0025 mm) can lodge deep in the lungs and can cause lung and heart diseases – decreased lung function, asthma attacks, heart attacks and cardiac arrhythmia. **ARSENIC** Ingestion of arsenic can lead to nervous system damage, cardiovascular issues and urinary tract cancers. Inhalation and absorption through skin can result in lung cancer and skin cancer respectively. **CHROMIUM** Ingestion of chromium can cause stomach and intestinal ulcers, anaemia, and stomach cancer. Frequent inhalation can cause asthma, wheezing, and lung cancer. **CADMIUM** May cause lung and prostate cancer and damage the reproductive system. Inhalation can irritate lungs. Ingestion can cause nausea, vomiting, diarrhoea and abdominal pain. **BORON** Inhalation of Boron can lead over the short time to eye, nose and throat irritation. Ingestion of large amounts can result in damage to the testes, intestines, liver, kidneys, and brain, and eventually lead to death. **LEAD** Exposure to lead can result in brain swelling, kidney disease, cardiovascular problem, nervous system damage, and death. It is accepted that there is no safe level of lead exposure, particularly for children. **MANGANESE** Long-term exposure can cause permanent brain damage. Inhalation irritates nose, throat and lungs, causing coughing, wheezing and shortness of breath. May cause harm to the liver and testes and decrease fertility in males. **NICKEL** Inhalation can irritate and damage nose, throat and lungs. Acute exposure can cause headache, dizziness, nausea and vomiting. Nickel is a probable carcinogen for lung cancer. It can cause chronic and scarring of lungs. Long-term exposure may harm liver and kidneys. [This list is not exhaustive; heavy metals like Mercury, Zinc, Molybdenum, Selenium are not here.]

Human Costs of Mining

How do we assess benefits of aluminium against the risks the metal poses? What are the human costs that we often do not take into account in assessing the real risk of aluminium?

The cost of producing aluminium is huge if costs to mitigate human risks (costs) associated with mining, refining and smelting alumina are taken into account. Miners, labourers and people living next to mines and refineries bear the brunt of aluminium we use, but their risks go unnoticed and are ignored. Such risks are less for those living far away from aluminium production, but cannot be ruled out. The section 'Dust travels miles' explains why.

Risks associated with mining are no less than that in a battlefield but little is talked about it. For the army, it is 'sacrifice', and ceremoniously glorified in parades and celebrations across the country. Benefits and compensations for the army are legitimised, and understandably so. On the contrary, miners, labourers and people living next to mines and refineries are kept out of the limelight. To put it into perspective, a landmine blast at the India-Pakistan border would be a national news lasting for days, whereas the collapsing of the red mud dyke at Vedanta Limited's alumina refinery in September 2024 that caused havoc to surrounding agricultural land and water streams required registering the event at the NGT; that too it took almost two years to bring to notice.



It is no surprise that private companies like Vedanta will not invest to mitigate risks that people living near mines and refineries endure. The costs of the final aluminium product would then be too high if human costs are incorporated.

Human costs: Heavy metals listed above are commonly released from most mines including bauxite and coal.

Bauxite and coal are two essential ingredients that are mined for the production of aluminium, the latter for heat generation by a coal-fired thermal power plant within the production complex. A range of heavy metals are released in the process, in solid to fine 2.5 PM dust forms, and they contaminate the surrounding land, water and air. Please refer to 'Dust travels miles' (page 11).

Exceeding levels of some of these heavy metals, namely Arsenic, Aluminium, Boron, Chromium, Lead, Mercury in soil, water and air are associated with higher incidences of specific health problems mentioned - indicative of human *physical health* risks from aluminium production.

The chart above (page 12) is an overview of risks with specific reference to bauxite from mining to manufacturing of end products. Mentioned risks are based on toxicology reports and health impact assessments in various mining settings. Health risks of aluminium production are, *neurological, respiratory, cardiovascular, kidney, skin, muscle and joints.* This is however only part of the story. Other risks, *disruptions of lives and livelihoods, habitats*, and more importantly *solastalgia are normally* not assessed thoroughly. *Unlike traditional nostalgia (grief for a home you have left) solastalgia is the emotional distress one*

feels when familiar landscape changes or degrades around one. Such risks or impacts remain obscured – the hidden costs of mining. Once thoroughly assessed, together with physical health risks, they give the whole and true picture of aluminium production. People living near mining operations bear the major brunt of aluminium production.

Mining companies acquiring lands, forests and mountains are not too far from localities. Heavy vehicles carrying rocks day and night from nearby mountains spreading dust everywhere, and siren warnings followed by blasts shaking houses, pieces of rocks dropping in people's courtyards, are not poetic imageries but crude realities that these people endure. They inflict physical as well as mental injuries.

The exacerbation of mental and emotional distress, *solastalgia*, is reflected in the rise in alcohol abuse, gambling, domestic violence in communities in and around mining operations, refineries and smelters. These societal damages are difficult to quantify but are associated with mining of aluminium. Mining companies like Vedanta setting up hospitals, schools, community amenities and income-generating activities are in fact their admission of the disruptions of social fabric that aluminium production causes.







While highlighting the hidden costs of mining, this section argues that if measures like strictly limiting impacts of blasts (e.g. anti-personnel landmine ban), provisions of proper rehabilitation and adequate compensation are in place for war victims, why should blasting of mountains not be limited; why should the impact on miners, labourers and populations living near mines not be properly assessed and accordingly compensated?



Costs, Profit & Economy

This brochure has looked into the processes involved in the production of aluminium and has highlighted that the metal is unsafe to health and environment. Those who live near its site of production, from mining operations to end-products, are the ones who bear the brunt of it. That is to say, miners, labourers and communities living in the midst of mineral-rich forests and mountains are affected most.

Aluminium affects people's lives and livelihoods; destroys their air, water and land; above all, it destroys the social fabric of the mentioned communities. The brochure argues that human costs are too high despite's aluminium's wide usages and that risks outweigh the benefits.

India has prioritised mining industry as the key to country's growth; indiscriminate mining has therefore reached its height. Then, by replacing state-owned mining authorities with private companies 'profit' has overshadowed 'wellbeing of people', putting lives and livelihoods of people at huge stake.

The mindset of making profit drives mining companies to keep production costs minimum. That is understandable but worrying because the safety of people – miners, low wage labourers and people living near mines becomes the last and the least important consideration. However, when policy makers (and politicians) take the side of mining companies then it is a serious concern. Their argument for aggressive mining disregarding safety and wellbeing of people in relation to country's economic growth does not make sense as it is an affront to human rights and is grave injustice to the society.

The brochure urges urban intelligentsia to make informed judgement about aluminium's lasting impacts on health, environment and on the lives and livelihood of people living near mining areas. The brochure presents the facts and exhorts you to choose to be on the right side of history.

Vedanta declared as preferred bidder for Sijimali Bauxite Block in Odisha

Press Release: 21 February 2023

New Delhi, 21 February 2023: Vedanta Limited has been declared as the preferred bidder for Sijimali bauxite block, located in Rayagada and Kalahandi districts of Odisha, under the mineral block auction conducted by the Government of Odisha.

The block is a strategic fit for Vedanta given its size, location, and bauxite quality. The block has estimated reserves of 311 million tonnes of bauxite.

About Vedanta Limited:

Vedanta Limited, a subsidiary of Vedanta Resources Limited, is one of the world's leading Oil & Gas and Metals company with significant operations in Oil & Gas, Zinc, Lead, Silver, Copper, Iron Ore, Steel, and Aluminium & Power across India, South Africa and Namibia. For two decades, Vedanta has been contributing significantly to nation building. Governance and sustainable development are at the core of Vedanta's strategy, with a strong focus on health, safety, and environment. Vedanta has put in place a comprehensive framework to be the ESG leader in the natural resources sector. Vedanta is committed to reducing carbon emissions to zero by 2050 or sooner and has pledged $5 billion over the next 10 years to accelerate the transition to net zero operations. Giving back is in the DNA of Vedanta, which is focused on enhancing the lives of local communities. The company's flagship social impact program, Nand Ghars, have been set up as model anganwadis focused on eradicating child malnutrition, providing education, healthcare, and empowering women with skill development. Under the aegis of the Anil Agarwal Foundation, the umbrella entity for Vedanta's social initiatives, the Vedanta group has pledged Rs 5000 crore over the next five years on social impact programmes with a thrust on nutrition, women & child development, healthcare, animal welfare, and grass-root level sports. Vedanta and the group companies have been featured in Dow Jones Sustainability Index, and was conferred Frost & Sullivan Sustainability Awards 2020, Golden Peacock Award for excellence in Corporate Governance 2022 and certified as a Great Place to Work 2022. Vedanta Limited is listed on the Bombay Stock Exchange and the National Stock Exchange.

For more information, please visit www.vedantalimited.com

About Vedanta Aluminium Business:

Vedanta Aluminium, a business of Vedanta Limited, is India's largest producer of aluminium, manufacturing more than half of India's aluminium i.e., 2.29 million tonnes in FY23. It is a leader in value-added aluminium products that find critical applications in core industries. Vedanta Aluminium ranks 2nd in the Dow Jones Sustainability Index (DJSI) 2022 world rankings for aluminium industry, a reflection of its sustainable development practices. With its world-class aluminium smelters, alumina refinery and power plants in India, the company fulfils its mission of spurring emerging applications of aluminium as the 'Metal of the Future' for a greener tomorrow.

For more information, please log on to www.vedantaaluminium.com

Before it is too late

Sijimali seems too far away from Bhubaneswar, the capital of the state of Odisha in India. While the state thrives on Sijimali, people in this mineral-rich region live in fear. The mountains they consider sacred have been leased for bauxite mining. Communities have already witnessed the surrounding forests are being cleared; they know their sacred mountains are going to be flattened by dynamites.

City's hustle and bustle blurs our imagination of how people live amid blasts that shake their houses or dusts from captive coal power plants pollute the air they breathe. Imagine trucks ply day and night with rocks from nearby mountains leaving red dust all over the area; imagine liquor shops, fast-food take away joints and gambling booths flood the area overnight. Constant fear and anxiety engulf the minds of local residents that their life is not going to be like before.

Well-paid managers, engineers and media specialists at Vedanta's headquarters in Mumbai and London will never have a clue about the plight of the people in Sijimali. The same is true of development economists in Delhi.

Platform People First are reaching out to all who strive for a better world. India's opting for aggressive mining disregarding wellbeing of people and the future of the planet is a cause of concern. Bauxite mining for the production of aluminium is going to have a lasting impact on all of us.

It is time we join and say 'No' to mining, before it is too late.









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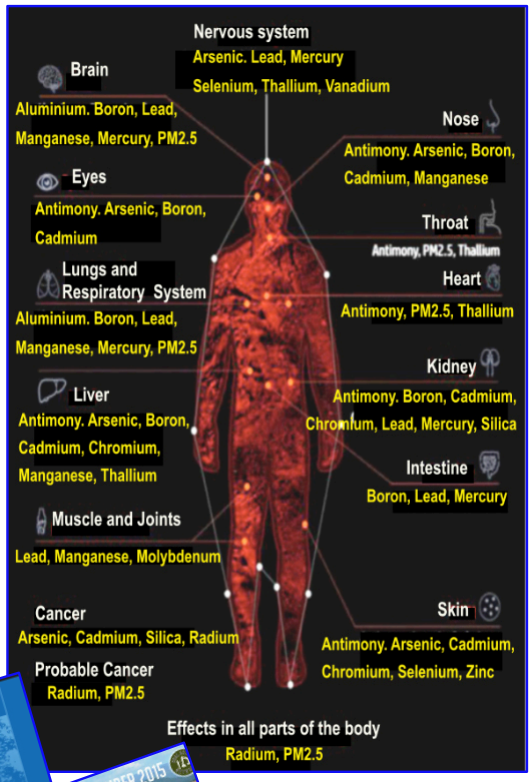
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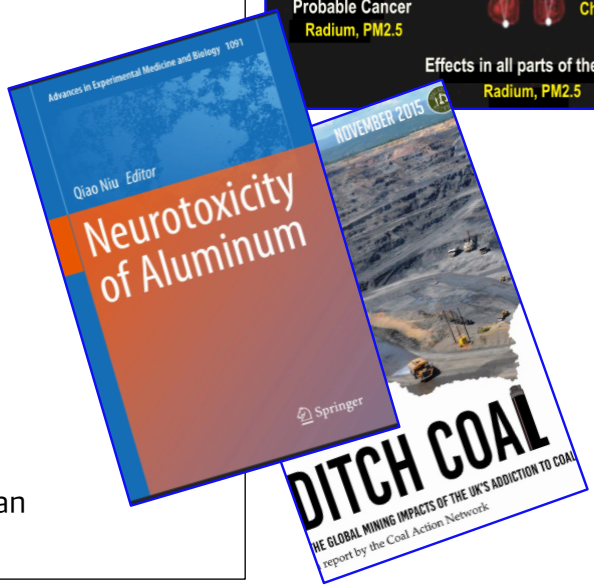


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alumina, bauxite, and ..... which side are we on?

Contributors to this brochure are immensely concerned about India's indiscriminate mining. In recent years, it has reached its heights as India has prioritised mining industry as the key to grow the economy. India has opted for private companies over state-owned mining authorities. Thus, 'profit' has overshadowed 'wellbeing of people'.

In mineral-rich forests and mountainous remote areas, the impact of mining is devastating. Contributors have worked with communities living in such remote parts of the country. They have observed how people are determined to live amid blasting that shakes their houses than being displaced from their ancestral land, how trucks ply day and night through villages carrying rocks from nearby mountains, how dusts from captive coal power plants pollute localities miles away, how liquor shops, fast-food counters and gambling booths spring up in these areas.

This brochure is not a desktop compilation of research papers but from real life experiences by taking part in impact assessment studies in communities living close to mines.

Manan Ganguli is a medical doctor who has worked in tribal communities for over four decades. He has been involved in designing and conducting studies to assess the impact of mining on people living near coal mines in the states of Chhattisgarh and Jharkhand.

Sankalpa Satapathy is a public health researcher and an academic who teaches at the Institute of Public Health, Kalyani, West Bengal.

She is interested in matters relating to social justice, climate change, disability and gender discrimination.

Ranjana Padhi is a writer, feminist activist and has a long association with people's movements.

She has worked with communities in mining areas and is deeply concerned about the plight of people living close to mines.

Randall Sequeira is a medical doctor who has been working in mining areas in Odisha over a long period. He is passionate about reaching out to people who do not have access to healthcare.

Dr Randall is particularly interested in addressing the needs of people with tuberculosis.

The human cost of this aluminium can is not included when Coke is priced for the market. The cost would then be too high. People in villages of the Sijimali region in Odisha in India with hills, forests and streams all around, protest to save their hills from being taken away by Vedanta Resources Limited. Indian state authorises companies like Vedanta, Adani to blast India's hills and destroy forests to dig up bauxite ore (for aluminium), smelt and make money from you and I. People in Sijimali and other villages are facing countless criminal cases because they wanted to live without JCB diggers, pipelines and roads carrying coal, bauxite, iron, chromite through their villages. Recently BBC News has covered Sijimali, "Why a tribal group is taking on one of India's mining giants".

