

## Documentaries & Factual - Human/Social Interest



### Power Scramble

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There is a race in the West to secure their supply for a list of critical metals, such as rare earths. These are resources that are essential for high tech applications, including in defence, as well as a carbon-free future. Yet China dominates the market for quite a few of these resources.

How did China come to dominate, and just why is the fight heating up? Kartik Kuna has to explore every step of the supply chain to find out, starting from a newly operational rare earths mine in Western Australia. Why did it take over 10 years for them to come into operation?

Kartik also looks at how the supply chain eventually spans the globe, as he finds himself in Malaysia and China. Both are involved in downstream processing for rare earths. But why is Malaysia protesting against the existence of this plant?

And as China announces a ban on the export of gallium and germanium, Kartik heads out to Vietnam to understand why this valuable resource of gallium is left untapped.

Host: Kartik Kuna

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### Episode 1 – Why the rush for rare earths?

We want the newest gadgets, the most advanced electric vehicles, and a fully electrified future, but behind all of that is a class of critical metals: rare earths.

These are the only metals in the world, to date, that can be used to create powerful and portable magnets, essential to everything from EVs to wind turbines.

So why the worry? For decades, China has maintained an iron grip on the entire supply chain for rare earths. Today, demand is skyrocketing for rare earths, because the world is racing to electrify just about every part of our lives.

Kartik Kuna is the first outsider to gain filming access to a particular magnet factory in Dongguan, China, one of many Chinese factories that are producing a huge majority of the world's rare earth magnets. Just why is it so hard to outcompete China in this space?

Kartik also witnesses for himself a startling statistic – China is building up offshore wind power capacity at breakneck pace... all of which requires rare earths.

### Episode 2 - Hidden Fallout from Rare Earths

Without superpowers a superhero is nothing.

It's much the same with rare earths - a powerful group of metals - without which nothing is possible.

Rare earth metals make computers, tablets and smartphones supersmart. They are crucial for fighter jets, and high-tech weapons. Without them, the world's shift to green energy would cease.

Everybody wants these magical metals. But only one country controls them.

In this episode, host Kartik Kuna confronts the consequences of this global imbalance.

He discovers the hidden fallout on ordinary people in unlikely corners of the world. From the violent hilltops controlled by Myanmar's military, to the villages of rural Malaysia that conceal a sinister truth, or to the arid bushland of Western Australia; no one is untouched in this scramble for 'critical metal' power.

### Episode 3 - Quest for Gallium

Gallium is a critical metal to develop green technologies like electric vehicles and solar panels. Yet, one country supplies over 90% of this critical resource – China.

So, when China began to restrict exports of gallium, it sparks a global scramble to find alternative sources.

Gallium is usually extracted from bauxite. This leads our host Kartik Kuna to travel to China's southern neighbour, Vietnam. Vietnam holds one of the world's largest reserves of bauxite. Yet Kartik realises that having bauxite in the ground, doesn't automatically translate into gallium riches. Wrapped up in this global pursuit for gallium are complications that could even impact your cup of coffee!

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