

Misreading China Could Delay Green Energy Transition

A more nuanced understanding of the rising super-power would benefit efforts to reach net zero

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With protectionism on the rise globally, confrontations between China and western democracies could be major hurdles for the transition to net zero. China plays a crucial role throughout supply chains for transition minerals (TMs),¹ and reducing this concentration is a pressing need. But cooperation with China could be the best way to achieve this while protecting existing supply.

China is often treated as a monolithic opponent rather than a heterogeneous country that must be a vital partner in the energy transition. Political realities make this perception hard to shift. This document aims to give those working on TMs a better understanding of Chinese perspectives by outlining some of the key factors that have shaped these viewpoints. Please contact Orlando Bowie (orlando.bowie@asktmp.com) for more information.

¹ These materials are key for energy transition technologies, like renewable energy, electric vehicles (EVs), and electricity grids, and include lithium, copper, rare earth elements (REEs), graphite, cobalt, nickel and manganese, amongst others.

CHINA'S CHALLENGES

This brief picks out four key challenges facing China that could have serious implications for transition mineral (TM) supply chains. China will struggle to address these challenges alone, and some are being made worse by the West's strategy and communication around TMs.

- 01** An unprecedented economic slowdown is undermining the legitimacy of the Chinese Communist Party (CCP), increasing its focus on security. Supporting efforts to adapt to this new normal would benefit the West's relations with China.
- 02** Fear of containment² is a major concern for Beijing and has been exacerbated by the West's efforts to reshore TM mining and processing. Diversifying production without cutting out Chinese players will help maintain cooperation.
- 03** Strained relations with many of its neighbors add to the geopolitical tensions and fears of containment. International agreements on fishing rights that recognize the impact of climate change on food security offer a possible path towards de-escalation.
- 04** Our data³ shows that a large proportion of China's TM assets are highly exposed to widely underestimated climate change impacts and social license risks, which could substantially restrict global supplies. Protecting social license to operate while building resilience to climate impacts will help ensure availability.

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- 2 The fear of foreign powers trying to contain and suppress China's economic and diplomatic development. https://ciss.tsinghua.edu.cn/info/subemail_wzjx/6361, <https://www.163.com/dy/article/ISGNQMUI0552EZ9J.html>, <https://zhuanlan.zhihu.com/p/681439690>, <https://www.bbc.co.uk/news/world-asia-china-64857194>
 - 3 Our unique data has a near-term focus (i.e. the next 5-10 years), is focused on extreme climate events (like droughts or heatwaves), and combines climate data with contextual information on social, economic, political, environmental and demographic factors.

01 SLOWING GDP GROWTH

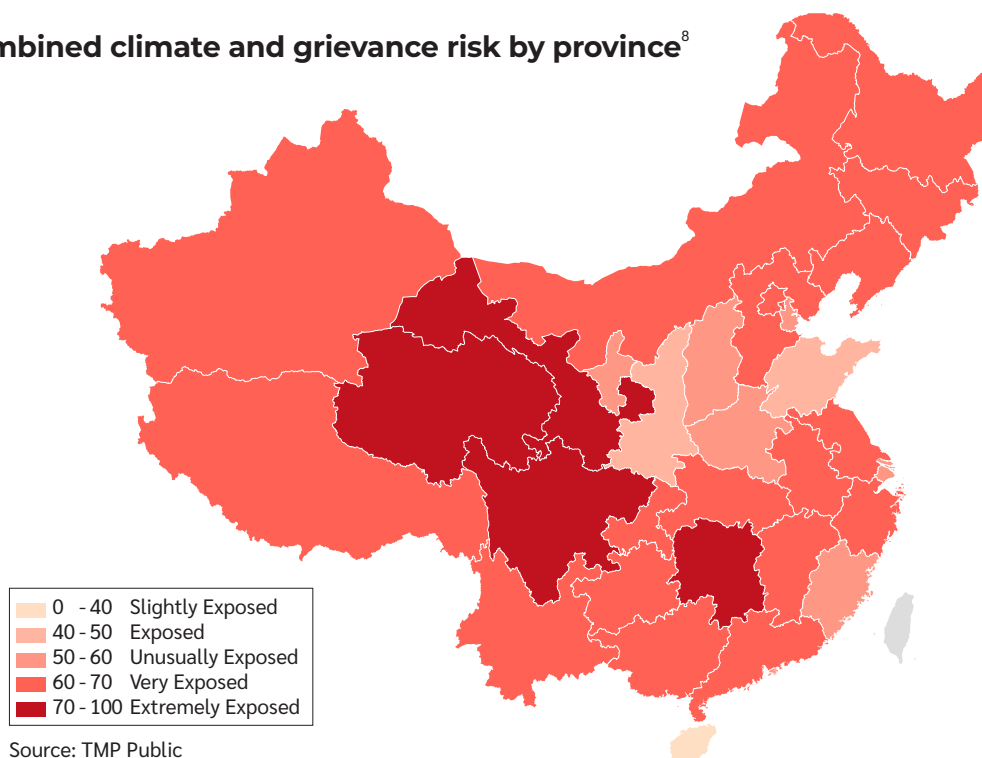
The ongoing slowdown in China's economic growth⁴ is distracting policymakers from constructive diplomacy and economic reforms, while increasing their focus on security. This slowdown is of particular concern to the CCP given that its ability to deliver growth had been a lynchpin of its social contract, which had already started to fray due to overzealous zero-COVID policies.

China's economy faces a range of unprecedented systemic problems including over-reliance on exports amid weak global demand and rising protectionism; a fast-aging, shrinking population; high youth

unemployment; a deteriorating property sector; and high local government debt.⁵

China's legislature set an ambitious GDP growth target of 5% at its Two Sessions (两会)⁶ annual meeting in March but produced little policy support⁷ to meet this goal. Moreover, extreme climate events this decade could exacerbate the slowdown, with China among the most highly exposed countries globally to near-term climate and grievance risks, according to our preliminary data. Of China's 33 provincial-level administrative regions, 22 are rated as "very exposed" or worse, including four that are "extremely exposed".

Combined climate and grievance risk by province⁸



4 <https://asia.nikkei.com/Economy/China-s-economy-is-headed-for-slower-growth-IMF-says>

5 <https://www.ft.com/content/21255a46-6a6e-4bba-b5b2-df72cf1dc969>

6 <http://lianghui.people.com.cn/2024/n1/2024/0306/c458561-40189768.html>

7 <https://www.ft.com/content/9e2b59be-1f06-4001-bf68-91974951ec59>

8 We considered eight climate variables including increases in extreme temperature, unseasonably warm temperature, change in annual precipitation, change in annual dry days, unseasonably high rainfall, unseasonably low rainfall, change in consecutive dry days, and change in consecutive wet days. We then combined these indicators with a social risk model (Landscape) that TMP developed to identify grievance risk for real infrastructure assets. The social risk model draws on 14 indicators of ESG risk, including corruption, vulnerability to poverty, asset ownership, and others. More information can be found at the following link: https://tenurerisks.com/landscape_methodology.pdf

02 FEAR OF CONTAINMENT

The longstanding fear of foreign powers suppressing China's rise⁹ adds another layer to Beijing's feelings of insecurity that could push it to make geopolitical moves which are counterproductive for the energy transition. This fear of containment – a common theme in Beijing's discourse¹⁰ – has been enflamed by policies, such as the US's Inflation Reduction Act (IRA), that have been recently introduced by the US and EU to “de-risk” supply chains.

Signs of rising trade protectionism among countries hitherto unaligned or even allied to

China, such as in Latin America,¹¹ could feed such fears as the country looks to export its way out of its economic downturn. China has responded angrily to US and EU re-shoring efforts with measures such as export restrictions on graphite¹² and rare earths processing equipment.¹³ This tit-for-tat dynamic could easily escalate if Beijing feels pushed into a corner, further delaying transition efforts.

03 AGGRESSIVE TERRITORIAL CLAIMS

China has also strained its relationships with neighbors by aggressively asserting territorial claims that serve to increase geopolitical tensions in the region and globally. These include its claims over Taiwan and parts of the South China Sea¹⁴ (e.g. the Philippines) and on its Himalayan border with India.¹⁵

China's provocative approach to policing its borders means that clashes involving coast

guards, fishing boats and border patrols could metastasize into more serious conflicts. China's land reclamation efforts in the South China Sea have also been much more aggressive than those of its neighbors.¹⁶ Increased competition over natural resources likely to result from climate change will only serve to fuel tensions arising from overfishing.

9 Underlying these sentiments are historical grievances rooted in the “century of humiliation” (c.1845-1945) when the country was fragmented and exploited by foreign powers. This helps legitimize policies that attempt to level the playing field and restore China to its pre-eminence on the global stage (<https://education.cfr.org/learn/reading/how-does-history-inform-chinese-communist-partys-domestic-and-foreign-policy-goals>).

10 https://ciss.tsinghua.edu.cn/info/subemail_wzjx/6361, <https://www.163.com/dy/article/ISGNQMUI0552EZ9J.html>, <https://zhuatlan.zhihu.com/p/681439690>, <https://www.bbc.co.uk/news/world-asia-china-64857194>

11 <https://www.bloomberg.com/news/features/2024-05-21/latin-america-steel-tariffs-on-china-imports-show-relationship-strain>

12 <https://www.csis.org/analysis/chinas-new-graphite-restrictions>

13 <https://www.csis.org/analysis/what-chinas-ban-rare-earths-processing-technology-exports-means>

14 <https://blogs.voanews.com/state-department-news/2012/07/31/challenging-beijing-in-the-south-china-sea/>

15 <https://www.crisisgroup.org/asia/south-asia/india-china/334-thin-ice-himalayas-handling-india-china-border-dispute>

16 This involves dredging reefs to create larger islands, severely damaging marine biodiversity. <https://features.csis.org/environmental-threats-to-the-south-china-sea/#group-section-II-Reef-Destruction-RRkF3AdSA>

Territorial claims in the South China Sea



Source: [Voice of America](#)¹⁷

Again, history helps to explain China's actions. The CCP contentiously claims sovereignty over territories administered by the Qing dynasty (1644-1911). China's claims over the South China Sea meanwhile are based on maritime borders established by the Japanese

Empire and backed up with tenuous evidence.¹⁸ Tribunals have found that these territorial claims have no basis under international law.¹⁹ But the CCP will struggle to back down from this position following decades of state propaganda around the issue.

¹⁷ <https://blogs.voanews.com/state-department-news/2012/07/31/challenging-beijing-in-the-south-china-sea/>

¹⁸ <https://www.economist.com/china/2023/06/29/why-china-is-so-keen-to-salvage-shipwrecks-in-the-south-china-sea>

¹⁹ <https://www.aljazeera.com/news/2023/10/24/why-does-china-claim-almost-the-entire-south-china-sea>

04 TM RESOURCES IN SENSITIVE LOCATIONS

Preliminary analysis of our geospatial data for copper, lithium and manganese assets in China found that roughly half are situated in so-called autonomous areas. The proportion is particularly high for manganese mines and refineries (81%).

These autonomous regions are areas with large populations from China's 55 recognized ethnic minority groups (about 8.5% of the national population) and include prefectures in provinces like Sichuan and Qinghai, as well as provincial-level regions like Xinjiang, Tibet, and Inner Mongolia.

These indigenous populations have little agency when it comes to major industrial projects such as TM mining and processing.

Such capital-intensive projects are often controlled by external stakeholders from the Han Chinese majority or foreign investors.

These factors heighten risks around social license to operate that we expect in turn will be further exacerbated by climate change. For example, reduced rainfall could fuel tensions over water access, flooding could exacerbate pollution from tailings pools, and increased temperatures are broadly associated with social unrest. A recently launched renewed push by Beijing to assimilate ethnic minorities is likely to bring further tensions.²⁰

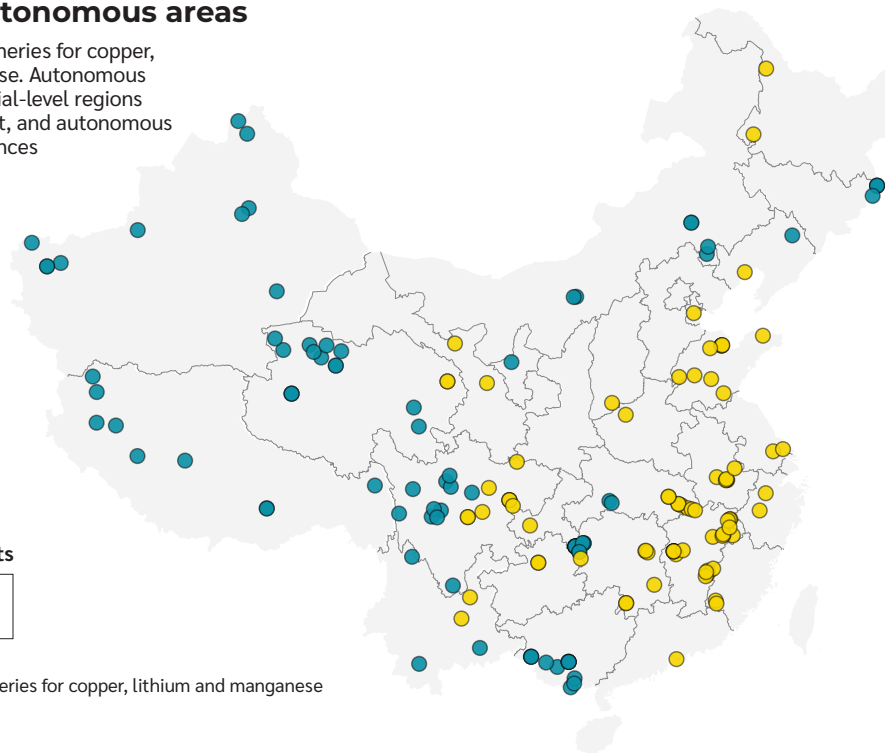
Half China's key TM assets located in autonomous areas

Shows mines and refineries for copper, lithium and manganese. Autonomous areas include provincial-level regions like Xinjiang and Tibet, and autonomous areas in regular provinces

Location of TM assets

- Regular area
- Autonomous area

Source: TMP Public.
Includes mines and refineries for copper, lithium and manganese



20 <https://www.bloomberg.com/news/articles/2023-12-28/xi-s-call-for-ethnic-unity-gets-boost-with-new-xinjiang-rules>

CONCLUSION

Long lead times for mines coupled with price routs for some TMs are disincentivizing private investment in such areas. The growing urgency of combating climate change means most countries will need to take a balanced approach and work with China in some capacity to hit emissions targets. While we appreciate that conflicting national interests pose a challenge for the relationship, a strategy overly focused on rebuilding supply chains without any Chinese involvement could backfire and delay the global effort to reach net zero.