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# The Geopolitical Stakes of Peru's Lithium and Port Ambitions

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**Abstract.** The Falchani lithium project assets in Puno, southeastern Peru, constitute the world's sixth-largest hard-rock lithium deposit. According to the NI 43-101 report updated by Lithium Americas in October 2023, the exploration reserves of this lithium mine have shown an "explosive growth" of 476% compared to the estimate in March 2019. This discovery means Peru can play a more important role in the future green energy revolution. In 2024, the completion of the Chancay Port marked Peru's transition from a "resource exporting country" to a "key node in the global supply chain". This transformation is not an isolated event: driven by the dual forces of global energy transition and supply chain restructuring, Peru's lithium resources and port infrastructure have become new battlefields for great-power games. This article systematically analyzes how Peru positions itself in the wave of the green economy from four dimensions—geological endowments, industrial ecology, geopolitical competition, and governance challenges—and the deep-seated contradictions between its "development dividends" and "sovereignty concession".

**Keywords:** lithium resources; Chancay Port; Peru.

## 1. Introduction

In late 2023, Peru's Falchani lithium project occupied a leading position, with the reserves increasing by 476 percent from the previous estimation. Meanwhile, as the global demand for electric vehicle batteries increases, Peru's lithium storage offers economic potential and geopolitical influence. Peru maintains relations with the US. In November 2024, the new deep-water Chancay port with an investment of $3.5 billion was inaugurated, strengthening trade ties between Peru and Asia. Revealed by these developments, Peru has fully used its mineral resources and logistics port to become an emerging power in the changing global pattern.

Peru is currently at a historic turning point. With abundant copper and gold resources, the nation is now shifting focus to two strategic advantages in the green economy: the extensive, undeveloped lithium reserves and a newly operational deep-water port. The discovery of crucial lithium resources in the Andes and the construction of the Chinese-backed Chancay mega port are the key signs of the country's crucial strategic measures taken for refining its role in the global supply chain. The nation puts emphasis both on critical minerals and logistics and it enters a brand-new page for its economic development. The nation is expected to be a vital link in green energy and trans-Pacific trade by using the lithium resource and the first-class port infrastructure. However, there are great challenges for Peru. Moreover, endemic governance fragility and social fissures are the possible factors that weaken the country's ambitions.

Peru's lithium resources and port ambitions are essentially a strategic gamble of "exchanging resource sovereignty for development opportunities". In the historical opportunity period of global energy transformation and supply chain reconstruction, if Peru can break through the Latin American curse of the "resource curse", through institutional innovation, industrial upgrading, and geopolitical balance, it is entirely possible to transform from a "raw material exporting country" to a "green economy hub". This article will systematically analyze how Peru positions itself in the wave of green economy from four dimensions: geological endowment, industrial ecology, geopolitical competition, and governance challenges, as well as the deep contradiction between "development dividends" and "sovereignty transfer" it faces.

## 2. Overview of the Current Situation in Peru

The Republic of Peru is located in the western part of South America. It borders Ecuador and Colombia to the north, Brazil to the east, Chile to the south, Bolivia to the southeast, and the Pacific Ocean to the west. The area is 1285216 square kilometers, ranking fourth in Latin America, with a coastline of 2254 kilometers. The capital of Peru is Lima, and the official language is Spanish. As of 2025, the population of Peru is 34.35 million. Among them, Native Americans account for 45%, Indo-European mixed-race people account for 37%, white people account for 15%, and other races account for 3%.

From its economic development perspective, Peru is a traditional agricultural and mining country, with an economy at a moderate level among Latin American countries. The gross domestic product of Peru in 2023 is 264.64 billion US dollars. The per capita gross domestic product is 6888 US dollars. As of 2021, Peru's silver reserves rank first in the world, and its copper, lead, and molybdenum reserves all rank third in the world. It is the world's second-largest producer of copper and zinc. Peru is the world's second-largest producer of copper, silver, and zinc, as well as the largest gold producer in Latin America. In 2024, Peru's total foreign trade amounted to 125.897 billion US dollars, with an export value of 74.664 billion US dollars. Specifically, Peru's mineral exports are its main export commodities, reaching $47 billion in 2024, an increase of 15.6%. Among them, copper exports amounted to $23.5 billion, gold exports amounted to $13.6 billion, silver exports amounted to $13.2 billion, zinc exports amounted to $2.3 billion, iron ore exports amounted to $1.79 billion, molybdenum exports amounted to $1.71 billion, and tin exports amounted to $901 million. From the perspective of trading partners, China and the United States are Peru's first and second largest trading partners, respectively.

From the current development of lithium mines in Peru, the export of lithium mines is still in its infancy. According to trade data from June 2025, Peru's lithium carbonate exports are relatively small and mainly exported in small batches to neighboring countries such as Argentina, Costa Rica, and Ecuador. At the same time, Peru's current lithium ore exports mainly consist of primary products, such as lithium carbonate raw materials, and have not yet formed a high value-added deep processing product export chain. In contrast, countries such as Chile and Argentina in the "lithium triangle" have dominated the global lithium market through large-scale production and exports.

## 3. The Farchani Lithium Mine: The Global Strategic Value of Lithium Resources

The Farchani lithium mine is an advanced-stage hard rock lithium deposit in the Puno region of Peru. The province of Carabaya, located in the Puno region of southeastern Peru, is situated on the Makusani Plateau in the Andes mountain range. This project is owned by the American lithium company based in Canada.

The exploration report of American lithium companies in 2023 shows that Farchani has discovered and indicated resources of 5.53 million tons of LCE, with an inferred resource of 4 million tons of LCE, totaling nearly 10 million tons of reserves - this data has propelled Peru from 10th to 7th place in the global lithium reserves ranking, surpassing the United States and Zimbabwe. More strategically significant is that the project plans to have an annual production capacity of 40000 tons of LCE, equivalent to 5% of global lithium production in 2023, directly impacting the existing supply pattern.

Meanwhile, according to the measured data, the Farchani lithium mine has high-grade characteristics. The average grade of the measured resources at the Farchani lithium mine is 2792ppm lithium, with an indicated resource of 2251ppm lithium. The overall M&I resources have an average grade of 2327ppm lithium, significantly higher than the global average grade of hard rock lithium mines (approximately 1200-1500ppm). This geological characteristic makes it more cost-competitive in the production of battery-grade lithium carbonate, especially suitable for companies such as Tesla's demand for "low impurity lithium raw materials".

As stated by Ion Jauregui, Falchani is crucial for Peru and makes the nation a critical player in the EV battery supply chain. Tesla and battery-makers may soon take Peru as a lithium source, marking a geopolitical turning point. In a world competing for key minerals, Peru has a new bargaining advantage.

## 4. Chancay Port: A Geopolitical Hub

Chancay Port is located 80 kilometers north of Lima and is Peru's first deep-water port in nearly 30 years. The first phase of the project includes four dock berths with a maximum water depth of 17.8 meters, capable of accommodating 18000 TEUs of ultra-large container ships. It can achieve a design throughput capacity of 1 million TEUs per year shortly and 1.5 million TEUs in the long term, which is equivalent to 1.5 times the total capacity of Peru's existing ports.

As the deep-water port closest to the Panama Canal on the west coast of South America, the Chancay Port can significantly reduce the transportation time of Asia American trade. After more than a month since the official opening of Chancay Port, the "Chancay-Shanghai" two-way direct route has been connected, and the one-way sea freight time between China and Peru has been shortened from 33 days to 23 days.

Peru is reshaping itself as a logistics center through the Port of Chancay. Known as a “Silk Road port”, Chancay is majority-owned (60%) by China’s COSCO Shipping Ports, with a 40% stake held by Volcan, a Peruvian mining firm partially backed by Switzerland’s Glencore. The operation rights of the port are exclusively controlled by COSCO Shipping Group.

The linkage between ports and lithium mines will reshape the supply chain geography of Latin America. On the one hand, through Qiankai Port, China's new energy vehicle export strategy can be better implemented at a lower cost. On the other hand, Qiankai Port can better transport various resources, including lithium concentrate, and achieve better product exports from Peru.

## 5. The hidden worries behind prosperity

Abundant lithium resources and Chinese-built infrastructure bring Peru new advantages. However, the country is also at the risk of huge liabilities. These assets endow Peru to negotiate better terms in trade and attract investments. However, this could make Peru’s reliance on foreign powers become deepen. The Chancay port deal is a typical example of the dilemma. Given that COSCO holds 60% equity and operational control, the key part of Peru’s infrastructure is in foreign hands. This has aroused questions in Lima and Washington. Will Peru gain the full benefits of port revenues and industrial development around Chancay, or will profits be transferred to Beijing? Could Chinese control limit U.S. or other nations’ access or investment in the port? There are also similar issues in mining: Peru’s large mines are mostly owned by multinationals. In the nascent lithium sector, American Lithium leads Falchani. Peru is ceding economic sovereignty to outsiders. It can spark nationalist sentiment and public resistance, yet Peru alone lacks the capital and technology for large-scale exploitation of resources.

On the other hand, Peru's strategic positioning between the United States and China presents a binary feature of "relying on China for the economy and relying on the United States for security". China and the United States are Peru's two largest trading partners, and as the confrontation between China and the United States continues to escalate, the possibility of the United States demanding a trade side is increasing. The first non-Latin American president of the Inter American Development Bank (IADB), American candidate Mauricio Clavell Carone, constantly smears China's investment in lithium mines in Latin America, claiming that the current development of lithium mines in Latin America should be independent of China, which may pose certain obstacles to future cooperation in lithium mines between China and Latin America. In the future, Qian Kaigang is highly likely to become a focus of geopolitical games.

From the perspective of internal social governance in Peru, there are also many hidden dangers in Peru's future development. Firstly, there is a deep-seated flaw in the economic structure, known as the 'resource curse'. Despite Peru's abundant mineral resources, the newly discovered lithium mines can further bring more economic benefits to Peru in the current green energy revolution. However, 90% of the exploration, mining, and lithium extraction technology of the Farchani project relies on foreign-funded enterprises (such as Lithium Industries in the United States and Albemarle in Canada), while local enterprises in Peru only participate in logistics services. The risk of "low-end lock-in" in the industrial chain is significant, and the actual retained earnings may not be ideal. At the same time, lithium mining development can pose a threat to the environment and resources, threatening water security, wildlife, and human survival, and causing dissatisfaction among indigenous communities. Previously, China's mining projects in Latin America have repeatedly sparked conflicts with indigenous peoples. China Railway Construction's Mirado copper mine project in Ecuador, Zijin Mining's Baihe copper mine project in Peru, and Shougang's iron mine project in Peru have all been plagued by resource conflicts, and conflicts with indigenous peoples still exist today. At present, lithium mining is facing the same dilemma. Although the mining of lithium by enterprises has been recognized by Latin American countries at the national level, it is difficult to gain recognition from indigenous communities. Conflicts between mining companies' exploration activities and communities often erupt. The indigenous people near the Atacama Desert in Chile believe that the development of lithium mines on salt flats in northern Chile has caused the evaporation of saltwater, resulting in the disappearance of unique microorganisms and bacterial strains, a serious decline in water quality, and the gradual disappearance of local flamingo populations, affecting the biodiversity of the area. Residents near the large salt flats in Jujuy Province, Argentina, also believe that lithium mining will hurt the water supply. Mining can lead to river depletion, disrupt the ancient Indigenous agricultural and pastoral customs of the local people, and have adverse consequences on the sustainable development of local salt fields and small-scale self-sufficient economic activities such as tourism, salt industry, handicrafts, etc., thus causing strong opposition from Indigenous groups.

Finally, the governance capacity of the Peruvian government is facing multiple tests. Although the 2021 lithium law has established a strategic positioning, it lacks supporting regulations. In 2021, Congress passed Law 31283, declaring lithium exploration a matter of “public necessity and national interest.” While lithium is designated a strategic resource, the legislation obliges regulators to formulate guidelines for its sustainable management, including battery recycling. Nevertheless, specific details have not yet been made public. However, as of 2024, detailed guidelines have not been released, and a full regulatory framework or critical minerals strategy remains in progress. Also, after COVID-19, the left-wing forces in Latin America have risen, economic populism has re-emerged, and the anti-globalization trend and nationalization crisis have intensified. The Peruvian National Port Authority once attempted to abolish the exclusive operating rights of Qiankai Port previously granted to Chinese companies through judicial procedures. The reason is that according to Peruvian competition law, the port authority has no authority to grant such exclusive operating rights. Simply put, its previous authorization is considered an "illegal" act. On May 30, 2024, the Peruvian Congress passed an amendment to the National Port System Law with 68 votes in favor and 24 votes against, explicitly granting APN the authority to grant exclusive operating rights to private companies. This amendment fills a legal loophole and directly addresses the core issue of judicial disputes. President Borualt signed the bill on June 5th, making it officially effective. Despite the withdrawal of the lawsuit, COSCO Shipping still stated that it will continue to evaluate the sustainability of legal protection. Although the international arbitration proceedings triggered by the dispute have been temporarily suspended, if there are fluctuations in Peru's legal environment in the future, Chinese enterprises may restart legal means to protect their rights. In the current global energy transition, Latin American resource nationalism is expanding, political games are complex, and social problems are serious. Investment in Latin America may face certain political risks.

## 6. Suggestions

Firstly, Peru needs to shift from benefiting from resource dividends to a sustainable development strategy, seeking a balance between sovereignty and efficiency. For example, we can refer to the "National Lithium Company" model in Chile and establish a state-owned holding enterprise (holding 51% of the shares) to form a "joint venture development" model with foreign investment, ensuring the right to speak in the industrial chain. At the same time, Peru needs to further improve its community benefit-sharing mechanism, which can draw on the experience of Norway's "Sovereign Wealth Fund" and inject a portion of lithium mine income into the "Andean Development Fund", specifically for education, healthcare, and ecological restoration, effectively improving the happiness of Peruvian residents' lives. At the same time, Peru can cooperate with international financial institutions to develop the "Peru Lithium Industry Sustainable Development Standards", which cover carbon footprint accounting, community employment ratios, and ecological restoration indicators, as a threshold for foreign investment access and enhance international financing attractiveness.

Secondly, Peru should actively upgrade its industries and build a complete chain of "lithium electric vehicles". Staying at the low end of the lithium raw material export industry chain for a long time will inevitably lead Peru into the middle-income trap. Peru should make good use of the location advantage of Qiankai Port, combine China's Belt and Road strategy, develop the lithium processing industry, establish lithium carbonate refineries with relevant leading enterprises in China, such as Ningde Times and Ganfeng Lithium, and use advanced technology from China to process lithium concentrate into battery grade lithium carbonate, to obtain higher profit retention in the industrial chain. At the same time, in the terminal, Latin America has a vast market for new energy vehicles. Peru can seize this opportunity to undertake the full industry chain transfer of new energy vehicles from China in the Latin American market, reduce the cost of vehicle manufacturing, and enhance its core competitiveness to gain access to the vast Latin American market.

Finally, Peru needs to avoid the trap of "choosing sides" and build a multipolar cooperation network. On the one hand, as the backyard of the United States, Latin America has a very strong influence from the United States. On the other hand, China is Peru's largest trading partner, and maintaining good trade relations with China is the core and key to Peru's sustained economic development. To better utilize its lithium resources, Peru must avoid the trap of taking sides between China and the United States. At the same time, establish a more multipolar cooperative network. For example, deepening industrial synergy with Latin America: establishing the "South American Lithium Battery Alliance" with Argentina and Brazil, unifying technical standards and environmental regulations, expanding diversified cooperation with Asia, actively attracting investment from South Korea and Japan, and forming a "diversified capital source", etc.

Overall, concerted efforts are required to bridge the gaps. To bridge these gaps, Peru must update its legal framework, attract sustainable financing, and ensure local communities benefit directly. Encouragingly, discussions on a ‘Lithium Sovereign Fund’—modeled after Norway’s—suggest a growing awareness of long-term planning beyond resource extraction.” Currently, Peru’s Central Bank and finance ministry are studying best practices for such funds. Finally, addressing these policy and capacity challenges is essential for converting mineral wealth into real leverage and development.

## References

[1] Jiang Yuyan. Opportunities and Challenges of Lithium Mining Cooperation between China and Latin America during the Energy Transition Period [J]. China Land and Resources Economy, 2023, 36 (5): 22-31.

[2] https://cs.mfa.gov.cn/zggmcg/ljmdd/nmz_657827/ml_658015/gqjj_658023/200710/t20071012_9368892.shtml

[3] https://www.volza.com/p/lithium-or-carbonate/export/export-from-peru/

[4] https://www.toutiao.com/article/7437398782997742118/?upstream_biz=doubao&source=m_redirect

[5] https://www.toutiao.com/article/7504435965268673065/?upstream_biz=doubao&source=m_redirect

[6] https://www.iea.org/policies/15809-law-31283-by-which-the-exploration-exploitation-and-industrialisation-of-lithium-and-its-derivates-are-determined-as-public-necessity-national-interest-and-strategic-resources-for-the-country

[7] https://www.reuters.com/world/china/china-widens-south-america-trade-highway-with-silk-road-mega-port-2024-01-18

[8] https://www.juniorminingnetwork.com/junior-miner-news/press-releases/1928-tsx-venture/li/156470-american-lithium-files-robust-pea-for-falchani-hard-rock-lithium-project-with-highlights-including-a-tripling-of-after-tax-npv8-to-us-5-11-billion.html#:~:text=

[9] Xu Huifei. The opportunities and challenges of energy cooperation between China and Latin America Economic perspective: 2011, (11), 2.

[10] Li Ziyi, Chen Guorui, Yin Ruizhe, and Zhan Shaojie. The current situation and countermeasures of lithium ore trade between China and Chile [J]. Chinese Market, 2024 (8)

[11] He Shuangrong. Research on the Risks of Chinese Enterprises Investing in Lithium Mines in Latin America [J]. China Energy, 2022, 44 (10): 48-55