Social stability risks of lithium battery projects

What are the risks associated with the supply chain of lithium-ion batteries?
We discuss four selected risk categories that are frequently associated with the supply chain of lithium-ion batteries, namely the risk of child labor (CL), the risk of corruption (C), the risk of occupational toxics and hazards (OTH), and the risk of poverty (P).

Are lithium-ion batteries socially sustainable?
While the environmental impacts of lithiu -ion batteries have been investigated in numerous studies, little attention has been given to the potential social impacts. Therefore, an assessment of the social sustainability hotspots of lithium-ion batter- ies is carried out.

Are environmental social and governance challenges affecting sustainable lithium extraction?
The endowment in the Lithium Triangle is significant, and the expectations for the global supply are high in terms of resources and sustainability. In this paper, we investigate the impact of environmental, social and governance (ESG) challenges to the future of sustainable lithium extraction.

What are the social impacts of battery supply chain?
Identifying the social impacts of battery supply chain must necessarily include all life cycle phases, such as the extraction and processing of raw materials, the production of intermediates, the production of battery cells, the assembly of the battery pack as final product and the disposal or recycling.

Are lithium-ion batteries social sustainability hotspots?
Therefore, an assessment of the social sustainability hotspots of lithium-ion batter- ies is carried out. The assessment is based on a spatially differentiated resource flow model of the supply chain.

Is the recycling rate of lithium batteries a challenge to sustainability?
The low recycling rate of lithium batteries poses a significant challenge to sustainability. The ESG rating system,which measures corporate practices in environmental,social,and governance areas,is crucial to stakeholders but currently inadequate in addressing the recycling issue.

We discuss four selected risk categories that are frequently associated with the supply chain of lithium-ion batteries, namely the risk of child labor (CL), the risk of corruption (C), the risk of occupational toxics and hazards (OTH), and the risk of poverty (P). For each risk category, we compare the three supply chain configurations ...

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Lithium-ion batteries (LIBs) have penetrated deeply into society, finding a wide range of applications in personal electronic devices since their discovery and development in the 1980s and 90s, and more recently in larger energy systems for traction and energy storage. This is mainly owing to the unique characteristics of LIB technology, i.e. high energy densities, high ...

Lithium-ion batteries (LIBs) are essential in the low-carbon energy transition. However, the social consequences of LIBs throughout the entire lifecycle have been insufficiently explored in the literature. To address this gap, this study conducted a comprehensive review ...

The social impacts of the Sonora Project extend beyond socio-environmental and rights-based concerns, encompassing significant labor and workforce issues. The project ...

Safety concerns in solid-state lithium batteries: from materials to devices. Yang Luo+ ab, Zhonghao Rao+ a, Xiaofei Yang * bd, Changhong Wang c, Xueliang Sun * c and Xianfeng Li * bd a School of Energy and Environmental Engineering, Hebei University of Technology, Tianjin, 300401, China b Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian ...

We argue that criticality is actively produced in socio-technological processes, involving three interrelated levels - demand, supply and price perceptions, policies linked to green extractivism, and underlying narratives around the role of commodities in development.

Data on social risks with respect to child labor, corruption, occupational toxics and hazards, and poverty are extracted from the Social Hotspots Database in openLCA. The results of the...

Consequently, lithium, a critical raw material utilized in the manufacture of Li-ion batteries, has a significant influence on the sustainability of transportation. This study implements a...

Understanding Lithium Battery Risks. Lithium batteries are favored for their high energy density, long lifespan, and efficiency. However, their inherent characteristics can also lead to hazardous situations if not handled correctly. The primary risks include fire hazards, explosions, chemical leakage, and environmental damage. 1. Fire Hazards

We argue that criticality is actively produced in socio-technological processes, involving three interrelated levels - demand, supply and price perceptions, policies linked to green ...

Lithium Battery Recycling goes beyond the mere act of waste management; it holds the key to numerous environmental and social benefits that resonate in our pursuit of a sustainable future. From conserving precious natural resources to fostering local economies, the practice of Lithium Battery Recycling offers a spectrum of advantages that are both environmentally conscious ...

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We discuss four selected risk categories that are frequently associated with the supply chain of lithium-ion batteries, namely the risk of child labor (CL), the risk of corruption ...

As the demand for batteries is continuously increasing, understanding their social implications becomes increasingly important. This chapter points out the relevance of the ...

Consequently, lithium, a critical raw material utilized in the manufacture of Li-ion batteries, has a significant influence on the sustainability of transportation. This study ...

The social impacts of the Sonora Project extend beyond socio-environmental and rights-based concerns, encompassing significant labor and workforce issues. The project presents an opportunity for substantial employment in the region, underscoring the importance of local hire policies and workforce capacity-building. Ensuring that the Sonora ...

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