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THE MINERALS-DEFENCE NEXUS IN THE UAE'S STRATEGY

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In recent years, the United Arab Emirates (UAE) has been investing in the mining sector for three main reasons: to diversify its economy beyond oil and gas, to cope with the energy transition towards renewables, and to keep pace with the digital transformation. Not by chance, the *Abu Dhabi Economic Vision 2030* identifies metals as the third most important driver of the post-hydrocarbon diversification. Emirati investments are focused on Africa (e.g., Guinea; Zambia; Angola; Democratic Republic of Congo (DRC); Kenya) and, to a lesser extent, Latin America (e.g., Brazil; Peru) and Southern Asia (Pakistan).

However, there's a fourth reason driving UAE's interest in the mining sector: the strengthening of its national defence industry, also to comply with the Emirati armed forces' needs (Ardemagni, 2024). Differently from the other states of the Gulf Cooperation Council (GCC), a minerals-defence nexus can clearly be identified in the Emirati strategy. This is mainly due to the presence of a developing export-oriented national defence industry in the UAE, and to the fact that the Emirati federation is especially investing in dual-use minerals and metals, which can be used both for civilian and military purposes (e.g. copper; iron ore; tantalum; tungsten).

In this framework, the UAE is stepping up mining cooperation with the United States of America (USA), both abroad and at home, paving the way for a strengthened - though not exclusive - UAE-USA partnership on critical minerals, consequently benefitting the Emirati defence goals.

THE UAE'S MINING-DEFENCE NEXUS: THREE DIMENSIONS

In the Emirati perspective, investing in the mining sector has three defence-related dimensions. The first is to support the growth of its national defence industry: the UAE is a weapon exporter. Currently, the Emirati state-owned defence conglomerate (EDGE) produces 216 defence products (WAM, 2025a) as of 2025, ranging from armoured vehicles to electronic warfare systems. In 2024, over 20% of EDGE's annual revenues came from export (WAM, 2025b), from Africa to Latin America's markets but also in the GCC, while the conglomerate supplies 80% of its total production to the Emirati armed forces (Rahman, 2025).

The second defence-related dimension regards advanced technologies and artificial intelligence (AI) also applied to the defence sector. According to the UAE's National Defence Strategy, the inclusion of AI technology in the military domain represents a national defence priority, and the EDGE conglomerate expects its products will be mostly AI-driven by 2027 (its defence products related to the autonomous sector are 70 in 2024) (IISS, 2024). In such a framework, minerals and metals are decisive for the development of defence-related

technology (comprising semiconductors and chips), also playing a crucial role in enabling AI's functioning processes through renewable energy. More broadly, the UAE is heavily investing in AI and intends to become an exporter of advanced technologies (Ardemagni et al, 2025). Key to this effort is Shaykh Tahnoon Al Nahyan, the brother and national security advisor of the Emirati President Mohammed bin Zayed, and deputy ruler of Abu Dhabi, who is also a businessman. He chairs the main Emirati AI company, called G42, the new MGX company (2024) established to design and manufacture chips, and the UAE's mining company, International Resources Holding (2022). The agreement reached between G42 and the American company Nvidia in May 2025 to allow the export of 500.000 chips each year to the UAE until 2027 (Freyfeld et Al Sayegh, 2025) highlights the extent of the "Make it in the Emirates" (MediaOffice, 2025) technological goals, applying to defence-related goals and subsequently requiring mineral objectives to be fulfilled.

The third defence-related dimension of the UAE's mining strategy regards the implementation of the national climate change strategy of the armed forces. Launched in 2023 during the COP28, this plan aims to reduce the armed forces' carbon emissions thanks to five pillars: sustainable acquisition and green equipment; sustainable infrastructure and energy; waste management; culture communication and participation; climate adaptation. In this path, minerals and metals hold a pivotal role in ensuring the energy transition. As part of the process, the Emirati defence ministry is partnering with the state-owned company Masdar to develop solar plants in Abu Dhabi to produce renewable energy for the defence sector. Furthermore, the UAE Ministry of Defence, in partnership with the district cooling company Tabreed, and with Emerge (a joint venture between Masdar and the French EDF Group), announced in May 2025 the accomplishment of a new project aimed at integrating solar energy in two district cooling plants that serve the defence ministry's facilities in Abu Dhabi (Masdar, 2025).

THE UAE-USA RISING PARTNERSHIP ON MINERALS, WITH AN EYE TO DEFENCE

As part of this effort, the UAE-USA partnership on critical minerals has been accelerating, further highlighting the mineral-defence nexus in the Emirati strategy.

The Emirates Global Aluminium (EGA) and the Tawazun Council for Defence Enablement (the governmental entity dealing with the UAE's defence capabilities and procurement) signed in May 2025 a Memorandum of Understanding (MoU) with RTX, an American aerospace firm, to explore the production of gallium in the UAE (Defence Industry Europe, 2025). Gallium is a metal key to the manufacturing of semiconductors and defence products like advanced radars, which can be found in bauxite ore: the EGA's Al Taweelah alumina refinery, at the Khalifa Industrial Zone in Abu Dhabi (KIZAD), already processes bauxite into alumina.

This deal could place the UAE as the world's second-biggest gallium producer, after China (Pasquali, 2025). Since the USA is largely dependent on gallium import, this cooperation agreement would serve two win-win purposes, as it would reduce the USA's dependence on China for this critical mineral while supporting the Emirati technological and defence goals.

This is not the only mining partnership the UAE and the USA have recently kicked off. In January 2025, the Abu Dhabi sovereign wealth fund ADQ and the USA company Orion Resource Partners established an Abu Dhabi-based joint venture (1.2 billion dollars of worth) to invest in minerals and metals in Africa, Asia and Latin America. The scope is securing long-term agreements for copper and iron ore, to enhance the supply chain in the UAE and globally (ADQ, 2025). Regarding critical minerals' exports, the UAE can rely in fact on a worldwide network of commercial ports and logistic hubs, run by the two national giants of infrastructure and logistics: the companies DP World of Dubai and Abu Dhabi Ports Group (Ardemagni, 2023).

In Washington's perspective, this infrastructure can be extremely useful to support the resilience of the mineral supply chain, and to carve out sources and routes alternative to China. In the *USA-UAE Joint Leaders' Statement*, released by the two countries after the Emirati President Mohammed bin Zayed's visit to President Joe Biden at the White House in September 2024, the USA praised the Emirati "leadership" in global strategic investments in "ports, mines and logistics hubs" (US Mission UAE, 2024). The leaders discussed "ongoing efforts to cooperate on strategic investments in hard infrastructure and critical minerals-supply chains in Africa and emerging markets", to diversify sourcing. On that occasion, the

USA designated the UAE as a Major Defence Partner, a status previously assigned only to India, allowing for “unprecedented cooperation”.

THE MINERALS-DEFENCE NEXUS AND THE USA-CHINA RIVALRY: WHERE DOES THE EMIRATI NATIONAL INTEREST STAND?

The defence factor is relevant in the Emirati mining strategy, and its role is likely to rise as its defence industry grows. In the minerals sector, the UAE has been seeking to maximise its gains leveraging so far on the global rivalry between the USA and China. This has been pushing Abu Dhabi to increasingly choose cooperation on critical minerals with the USA over China, as already occurs in the advanced technology and AI field, partnering in some cases in projects explicitly being defence-related (e.g., the EGA-Tawazun Council-RTX deal on gallium).

In the Emirati partnership-making on minerals, the UAE works to strike a balance between the USA, its special ally, and China, its strategic partner, also handling the Emirati competition with Beijing in the mining field and especially in Africa. In such a framework, the mineral-defence nexus makes the Emirati ‘balancing act’ even more delicate since taking a side on mining (i.e. Washington or Beijing) means for the UAE to make its mineral supply chain interdependent to the USA’s or China’s, bearing implications for its national security and the defence domain.

The UAE’s quest for building national autonomy on critical minerals cannot be decoupled from foreign policy considerations. As in the fields of advanced technology, AI, and defence, the UAE is increasingly looking at the USA to pursue its most ambitious goals. In this context, the mineral-defence nexus is likely to play a significant role in the Emirati broader strategic reflection.

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