



**Socio-economic impact study of the
Hellas Gold investment in the
Kassandra Mines, Halkidiki, Greece**

Summary

STUDY HIGHLIGHTS

Contribution to Economy (2024-2044)

- **€550 million per year** contribution to the country's GDP.
- **€340 million per year** contribution to the GDP of Central Macedonia of which €300 million per year is generated in the Aristotle Municipality.
- **€200 million per year** contribution to public revenues.
- For every **€1 of Hellas Gold's turnover**, the country's **GDP is boosted by €1.15**.
- **€480 million per year** boost to the country's exports representing the 55% of Greece's mineral exports and the 2.1% of total industrial exports.

Contribution to Employment (2024-2044)

- **8,600** full-time jobs.
- Every **1 direct job at Hellas Gold** supports **another 4.7 jobs** in Greek economy.
- For every **€1 million** of Hellas Gold's annual turnover, 18 full-time jobs are created in the country.

Contribution to Society & the Environment

- **€26 million** already invested in 2014 – 2024.
- **\$80 million** in community investment over a 25-year period.
- **€2.47 million in 2024** in CSR actions; 2.2 million exclusively in the Aristotle Municipality.
- **44% environmental restoration** of used land by 2023.
- **75% reduction in water consumption** (2014-2023) with a parallel increase in the use of recycled water.

Contribution of the Sector

- **€2.9 billion** contribution of the mining sector in terms of GDP (1.4% of the country's total in 2022).
- **15,800 full-time jobs** contribution to employment (53,200 jobs total impact taking into account indirect and induced effects).

SUMMARY

This study records the socio-economic impact of Hellas Gold's investment in the Cassandra Mines at full development, following the new investment agreement with the Hellenic Republic in 2021. The socio-economic impact is analyzed in two phases: from the 2012 investment launch to today, using historical data, and for the 25 years following the new investment agreement, using projections. The analysis shows that mining conducted responsibly could serve as a powerful engine for progress. By adhering to strict environmental standards, it enables the responsible extraction of domestic raw materials, fostering economic growth and social well-being. Crucially, responsible mining plays a significant role in supplying raw materials needed for a changing energy landscape, balancing resource utilization with environmental stewardship.

Significance of the mining sector

The volatile international environment highlights the importance of domestic mining in bolstering the economic resilience of both Greece and the EU. The ongoing developments in energy and technology, while essential for maintaining European economic competitiveness and adaptability, require sufficient local production of critical raw materials, needed for clean energy, digital technologies, defense, and space applications. For instance, copper, a strategic metal, is used in a wide array of applications including electrical wiring, batteries, and electric motors. Along with aluminum, copper is expected to be instrumental in achieving energy security goals and facilitating the adoption of more sustainable technologies.

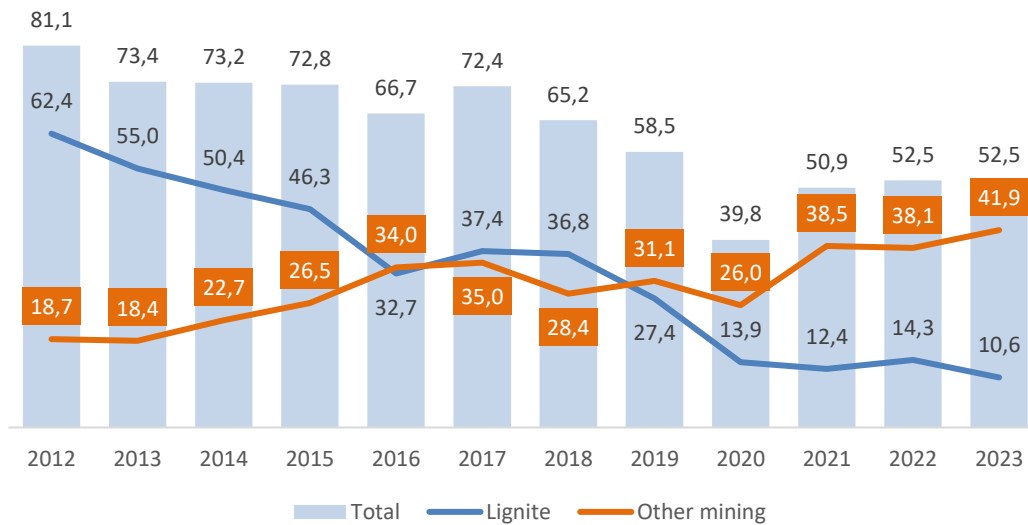
In today's environment, there are significant challenges in the supply, processing and recycling of critical raw materials in Europe. The EU is a net importer of most critical metals, with considerable dependence on single supplier countries in some cases. To address this, the EU has developed an act for Critical Raw Materials, adopting a relevant regulation to ensure a stable, secure and sustainable supply.

Greece's role in the EU strategy could prove to be important, given its favourable geological environment with broad mineral capacity. This provides a comparative advantage to the Greek economy, while creating opportunities towards Europe's desired autonomy. Greece is already actively mining 5+1 critical raw materials (bauxite, nickel, cobalt, magnesite, silicon and copper in the near future) and conducting geological exploration of 9 others (arsenic, gallium, light rare earths, heavy rare earths, scandium, platinum group metals, tungsten, germanium, graphite), positioning it as a potentially significant contributor to the EU's raw material strategy to the broader adoption of sustainable technologies.

Mining is an important pillar of the Greek economy. With the exception of lignite, which is declining due to the closure of lignite-fired power plants, the production of other mining products has grown strongly over the last decade, approaching 41.9 million tonnes in 2023, up from 18.4 million tonnes in 2013 (Figure 1).

The Mining and Quarrying industry's contribution to GDP in Greece exceeds €2.9 billion (1.4% of the country's total GDP in 2022). In terms of employment, the industry directly provides about 15,800 full-time jobs, with its total contribution to employment - taking into account indirect and induced effects - approaching 53,200 jobs. Notably, the industry plays a crucial role in retaining human capital and attracting young talent to Mining and Quarrying areas.

Figure 1: Production of mining products in Greece (in million tonnes)



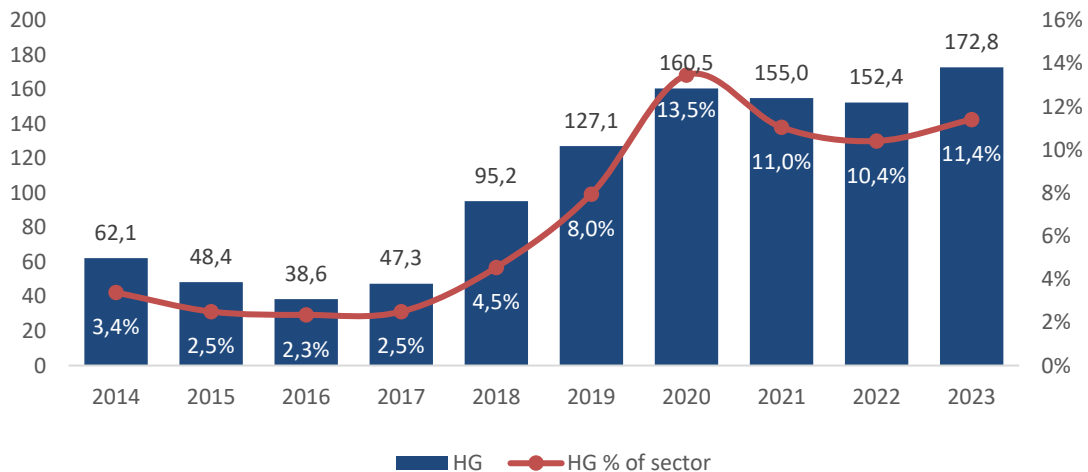
Sources: National Plan for Energy and Climate, Government Gazette B4893. SME, Annual Reports. Ministry of Environment and Energy, Mining and Quarrying Activity, Annual Report 2023 (Data 2019-2023).

Hellas Gold's investment in the Kassandra Mines

By implementing globally recognized practices and adhering to international standards, Hellas Gold is continuing the mining activity in northeastern Halkidiki, a legacy that spans 25 centuries. Hellas Gold's new investment agreement has set the Kassandra Mines on an enhanced growth trajectory, invigorating the local economy and bolstering Greece's prospects in the critical raw materials sector, which is essential for Europe's domestic energy demands. The Olympias (operational) and Skouries (under construction) mines have the potential to establish Greece as a leading copper and gold producer in Europe.

Since acquiring the mining rights and facilities, Hellas Gold has undertaken significant modernization efforts, upgrading existing mines and commissioning new facilities. These developments have been executed in strict compliance with international operational and sustainability standards, prioritizing responsible resource extraction.

Figure 2: Total turnover of Hellas Gold (€ million)



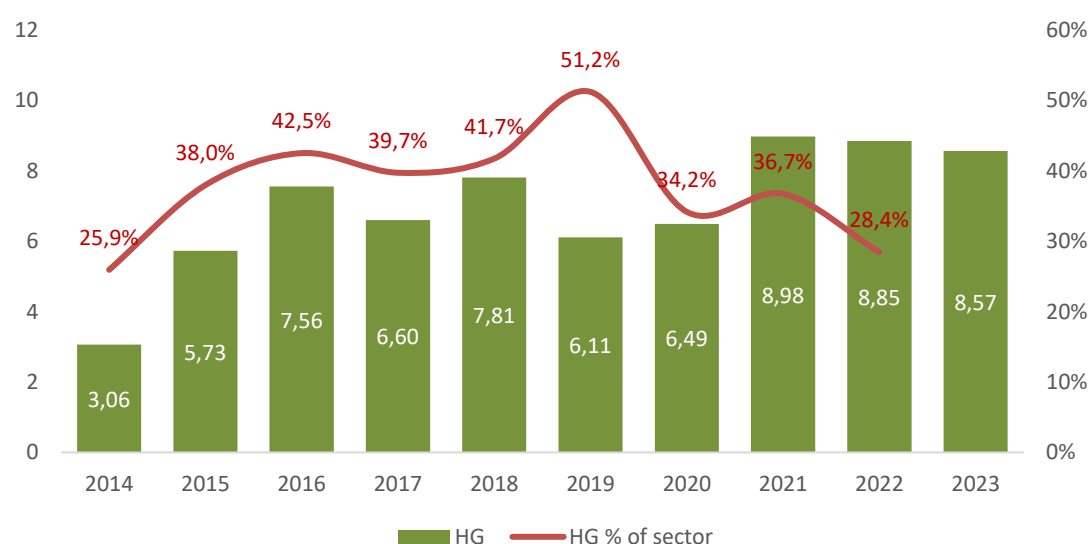
Sources: Hellas Gold, SME, IOBE estimates.

Following the reopening of the Olympias mine in 2017, Hellas Gold's turnover increased significantly from €39 million in 2016 to €173 million in 2023 (Figure 2). Throughout this period, the company maintained a stable workforce of approximately 1,600-1,700 direct and indirect employees, with an increased average salary compared to national average, despite pressures in the economy. Significant capital expenditures were made, including €47.7 million for fixed equipment (2017-2023) and over €52 million for exploration (2014-2023). Looking ahead, the company's new investment plan outlines investments of more than €1.9 billion over the next 25 years, signaling long-term confidence in the project's potential.

Sustainable development indicators and practices

Operating in line with international standards, Hellas Gold performs well on several sustainability indicators. Expenditure on mine rehabilitation and environmental protection is close to €9 million per year in 2021-2023 (Figure 3), while the company operates a pioneering environmental monitoring system.

Figure 3: Mine rehabilitation and environmental protection expenditure (€ million)



Source: Hellas Gold, SME

By 2023, 44% of the land used by Hellas Gold, primarily inherited from previous owners, is either undergoing or having completed comprehensive environmental rehabilitation. This commitment to land restoration aligns with broader industry trends, as evidenced by the 2022 data showing that 50% of land in use across the mining sector was subject to reclamation efforts (42% completed and 8% in progress). At the same time, Hellas Gold has achieved a 75% reduction in water consumption over the past decade, despite the fact that the company's primary ore processing method, flotation, inherently requires substantial water usage for the production of ore concentrates.

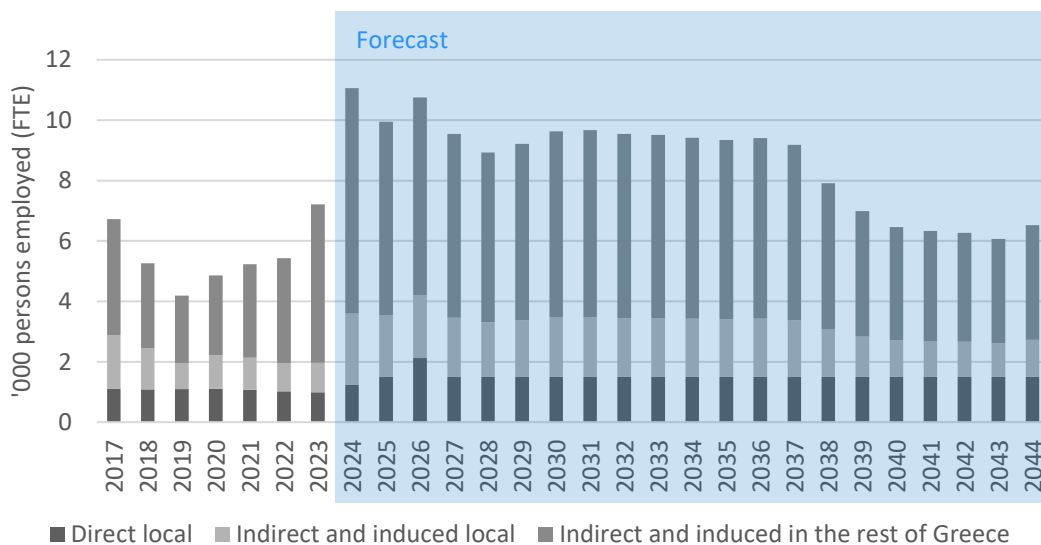
The performance of Hellas Gold is also notable in terms of employee training and advancement, instilling in the company an engaged safety-first culture. In particular, Hellas Gold provided 19% more training hours per employee in 2022 compared to the Greek industry average. Notably, health and safety training hours significantly exceeded the sector norm, with 7.44 hours per employee versus the industry's 4.04 hours in 2022, further increasing to 8.95 hours in 2023. Overall, Hellas Gold accounted for 27.3% of the industry's total hours of employee health and safety training in 2022.

The company's commitment extends beyond its workforce to the broader community. Between 2014 and 2024, Hellas Gold has allocated more than €26 million in social investments for local development. Looking ahead, the company's new investment plan outlines a substantial commitment of US\$80 million over 25 years in social infrastructure, healthcare, education and other local needs.

Benefits of the investment to the economy and society

Hellas Gold's activity has generated, and is expected to continue providing, substantial economic benefits, both nationally and locally, particularly in the region of Central Macedonia and the Aristotle Municipality. Between 2017 and 2023, the company's activities are estimated to have contributed an average of €190 million annually to Greece's GDP. Of this total, €83 million was generated within Central Macedonia, with €55 million benefiting the Aristotle Municipality. In terms of employment, the total impact of Hellas Gold activities is estimated at 5,600 jobs nationwide, remaining stable between 2017 and 2023. Of these, 3,000 jobs were created in Central Macedonia, with 2,200 jobs generated locally in Aristotle Municipality. Notably, Hellas Gold's operations accounted for 6.5% of the total Mining & Quarrying sector's contribution to Greece's GDP and 10.5% of the sector's employment footprint nationwide during this period.

Figure 4: Employment effects in the Aristotle Municipality



Source: IOBE analysis - FTE: Annual full-time equivalent jobs

Regarding the projected impact of Hellas Gold's activities over the next two decades, the company's total contribution to the Greece's GDP generation is estimated to average €550 million annually. Of this sum, €300 million per year is expected to be generated locally in the Aristotle Municipality, with an additional €40 million in the rest of the region of Central Macedonia.

In terms of employment, Hellas Gold's operations are anticipated to support an average of 8,600 jobs at national level over the next two decades. This includes 3,200 jobs locally in the Aristotle Municipality and 1,100 jobs in other parts of Central Macedonia. As a result, each direct job at Hellas Gold will support on average 4.7 additional jobs overall in the economy.

The company's activities are also projected to have a significant impact on foreign trade. Assuming all of Hellas Gold's production is exported, it is expected to boost the country's

exports by €480 million. This figure represents approximately 1% of Greece's total goods exports for 2023, highlighting the company's potential contribution to the nation's trade balance.