

Exploration Insights

CES 2024 Summary Report





Targets

Battery metals

About Metals & Mining Research

Our Metals and Mining solution provides a comprehensive source of global exploration budgets, reserves replacement analysis and in-depth asset level metrics for mining properties, projects, companies and mines worldwide. From worldwide exploration, development, production and mine-cost analysis, our unbiased research provides insightful perspectives to act with conviction.

Project lead

Eillen Grace Dela Cruz

Senior Research Specialist

Contributors

COMMODITY INSIGHTS

Kevin Murphy
Paul Manalo
Marlon Joaquin
Cesar Pastrana
Cha Angkico
Kathreen Piquero
Tony Lenoir

Research Director
Research Analyst
Research Specialist
Research Specialist
Associate Research Analyst
Associate Research Analyst
Senior Research Analyst

Editor

Adam Rihner

Lead Editor

Designer

Chris Allen Villanueva

Senior Designer

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Exploration snapshot 2024

S&P Global Market Intelligence’s Corporate Exploration Strategies (CES) study estimates a 3% decrease in the global nonferrous exploration budget to \$12.5 billion in 2024, down from \$12.9 billion in 2023. This marks the second consecutive year of decline, with the junior sector continuing to struggle to access funds, causing its allocations to decrease again. The majors, bolstered by their internal revenue flows, remained stable.

Gold budgets fell sharply despite record prices, while critical mineral exploration held firm. Australia experienced the largest decline as its junior sector languished. By contrast, US exploration increased in 2024, driven by stronger copper and lithium allocations. The sector is continuing its shift away from generative grassroots programs, which dropped to a record-low share of budgets. The number of active explorers slightly decreased to 2,210 in 2024 from 2,238 in 2023.

As the end of 2024 approaches, no immediate relief to financing conditions is apparent, indicating that 2025 budgets will likely follow a similar track as 2024.



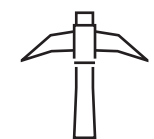
\$12.48 B
Global exploration budget
↓ 3.3% YOY



3,000+
Public and private
company coverage



Gold, copper,
lithium
Top explored targets



22%
Grassroots share at
record low



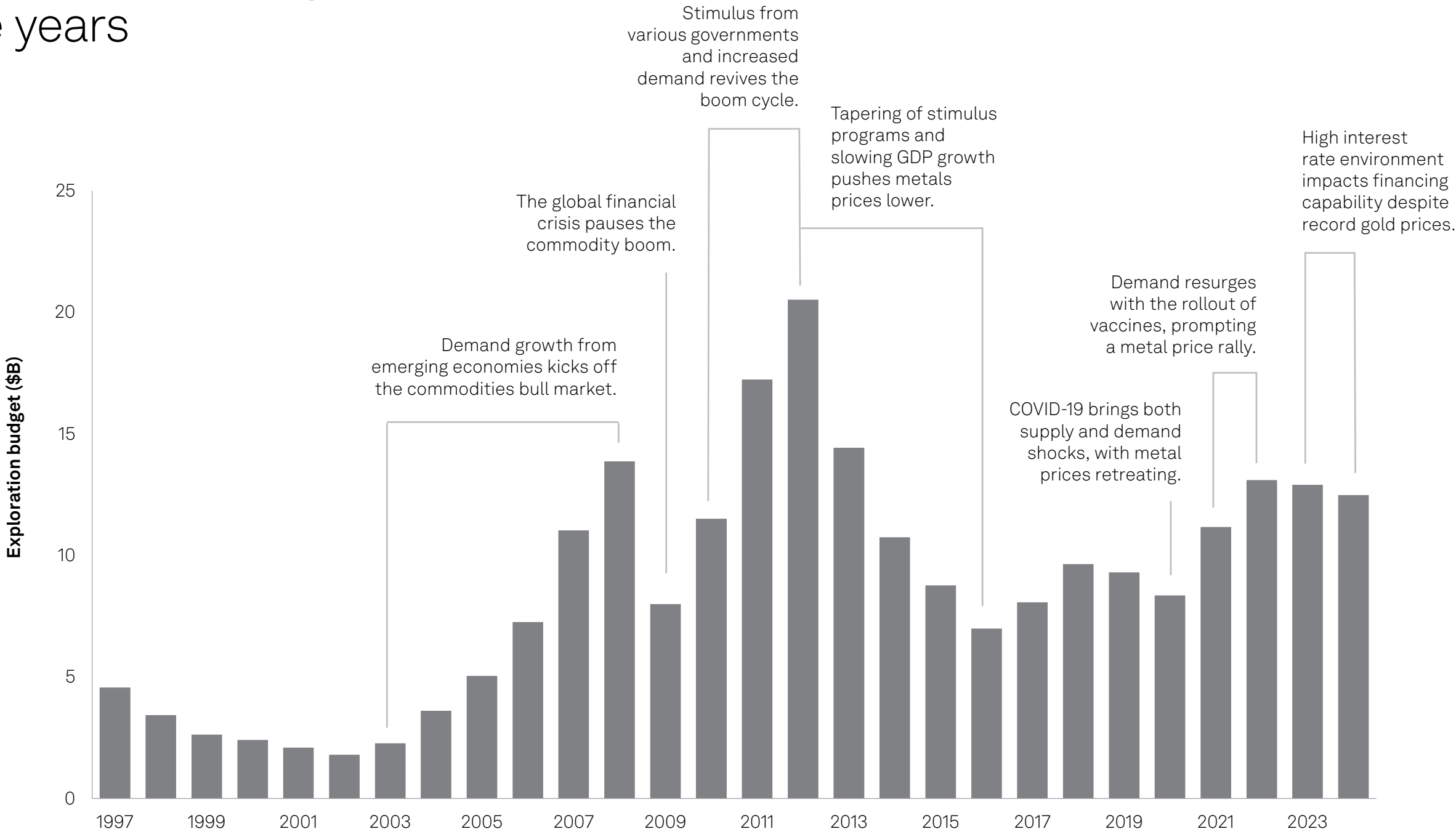
Canada
Most explored
country

Exploration through the years



Targets

Battery metals



As of Oct. 25, 2024.
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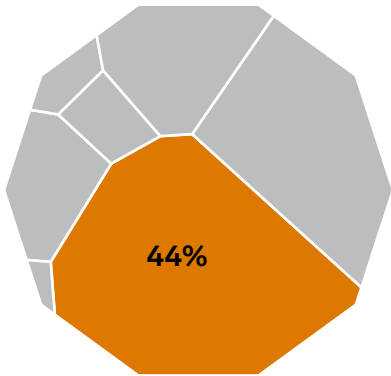


Gold budgets decline despite record-high price

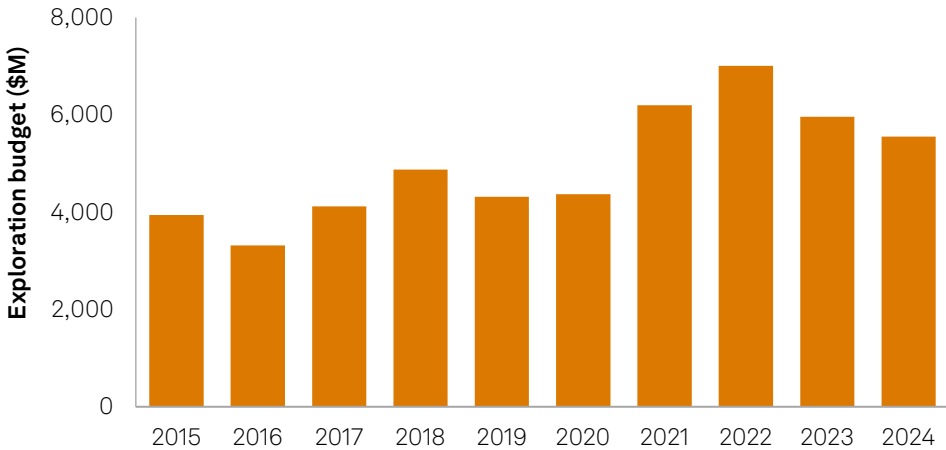
In 2024, the gold market had historic price performance, surpassing \$2,500 per ounce in the third quarter and topping \$2,700 later in the year. However, exploration budgets for the precious metal declined 7% in 2024, with more than 80% of the decrease coming from the junior companies. The junior sector’s budget fell 21% to \$1.8 billion following two consecutive years of reduced financings. In contrast, the major sector collectively allocated over \$3 billion to gold, the third-highest amount on record.

Canada continues to attract the most gold exploration despite its 2024 total of \$1.3 billion being 16% lower year over year. This drop was primarily due to the junior sector, which cut \$125 million from gold exploration budgets. The number of companies with gold budgets fell to 1,235 from 1,342 the previous year.

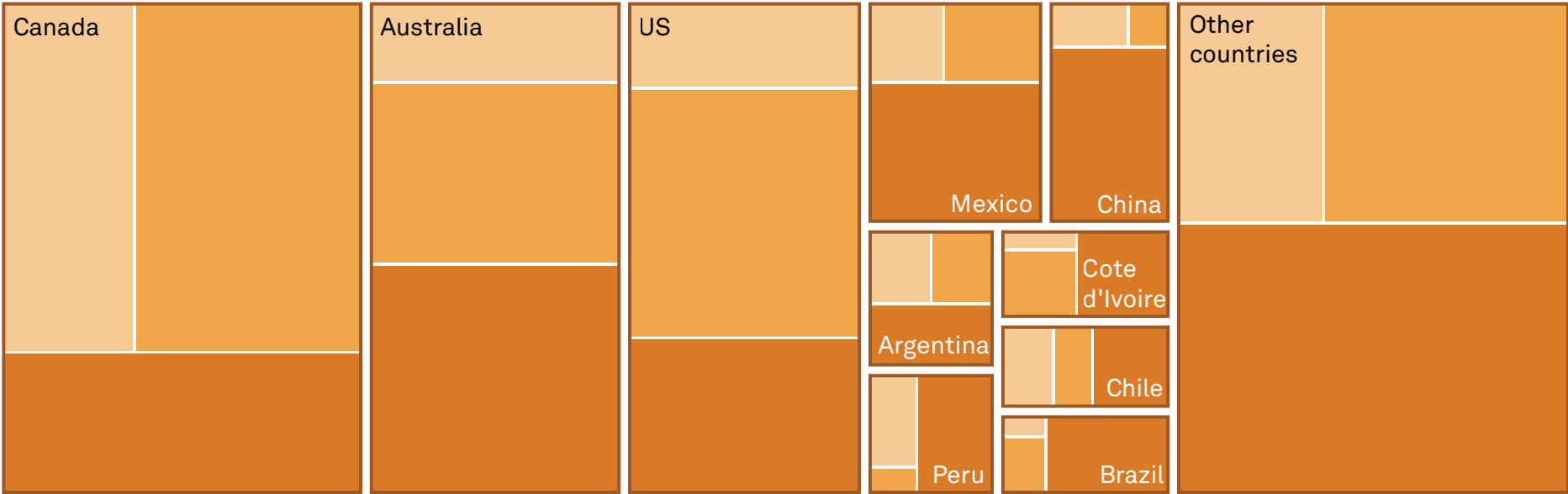
Despite rising prices in several commodities this year, including record highs for gold, funding levels have not matched this growth. Funding for gold projects in the upcoming quarters would be crucial to see whether capital markets can reverse the downward trend. Sustained high prices could enhance the financing landscape for junior and intermediate companies and lead to larger budgets for their projects. Historically, exploration lags market performance, as explorers base their strategies on projected returns, which could indicate a turnaround for gold exploration in 2025.



Gold
\$ 5.55 B
↓ 7% YOY



Total gold exploration budgets per country, 2024 (\$M)



Country	Total
Canada	1,296.3
Australia	913.2
US	844.9
Mexico	291.5
China	204.1
Argentina	135.8
Peru	120.0
Cote d'Ivoire	118.0
Chile	110.1
Brazil	107.1
Other countries	1,410.3

As of Oct. 25, 2024.
Source: S&P Global Market Intelligence.
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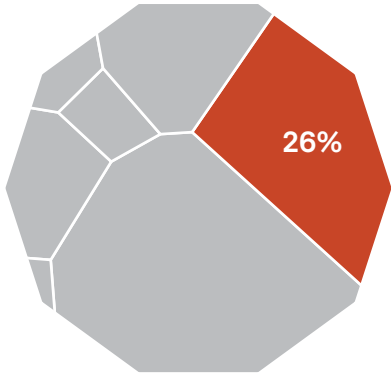


Copper remains resilient despite slowdown in global exploration

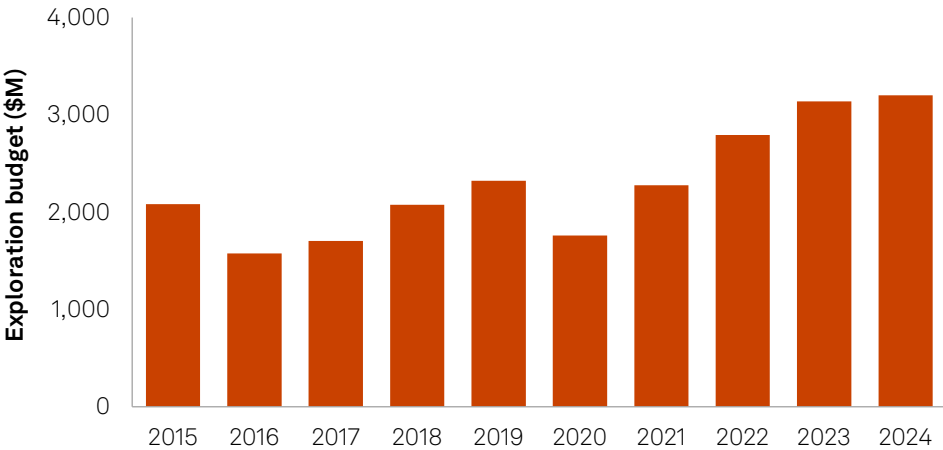
Copper exploration budgets had a modest increase this year, up 2% to \$3.2 billion — the highest total since 2013. Copper budgets have grown each year since 2016, with the exception of a dip in 2020 due to the effects of the pandemic. In the span of eight years, budgets have nearly doubled, fueled by increased exploration in nearly all regions, led by Latin America, the US and Canada. Both juniors and majors have boosted their exploration spending in 2024, up 6% and 2%, respectively.

Minesite copper exploration dominated 2024, increasing 12% and accounting for 39% of all copper budgets — the highest in our record. Grassroots copper exploration was down 9% and now only accounts for one-quarter of global copper exploration — a far cry from its 40% share in 2015. The increasing focus on older and known deposits has caused the scarcity of recent discoveries, with no reversal in sight.

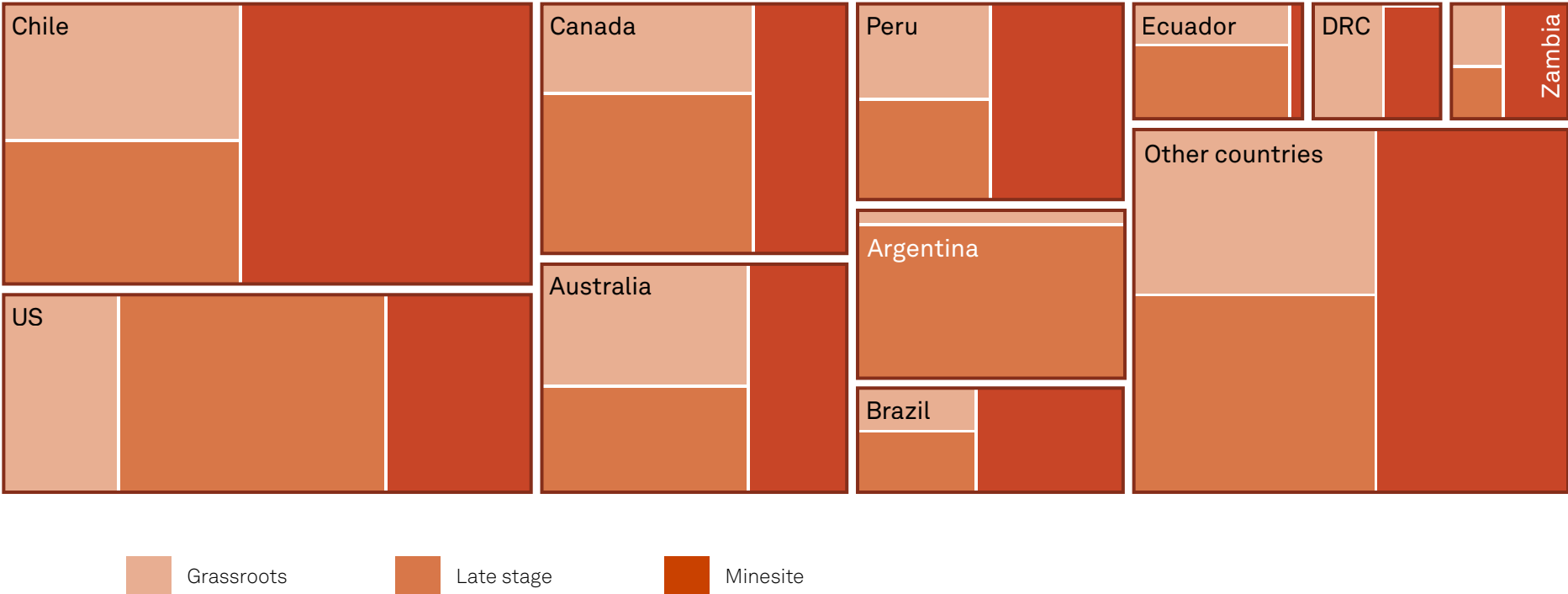
The green energy transition has boosted demand for the red metal, which is a vital component for solar panels, wind turbines, electric grid infrastructure and electric vehicles. While copper supply is estimated to be in surplus in the near term, a deficit is expected in the next decade.



Copper
\$ 3.20 B
↑ 2% YOY



Total copper exploration budgets per country, 2024 (\$M)



Country	Total
Chile	637.4
US	455.6
Canada	335.9
Australia	305.9
Peru	233.3
Argentina	200.2
Brazil	130.0
Ecuador	91.5
DRC	71.5
Zambia	65.5
Other countries	674.2

As of Oct. 25, 2024.
DRC = Democratic Republic of Congo.
Source: S&P Global Market Intelligence.
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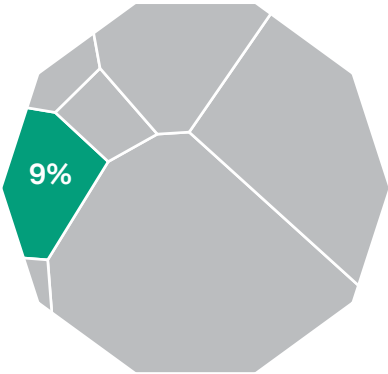


Lithium exploration sustains growth, cushions declines

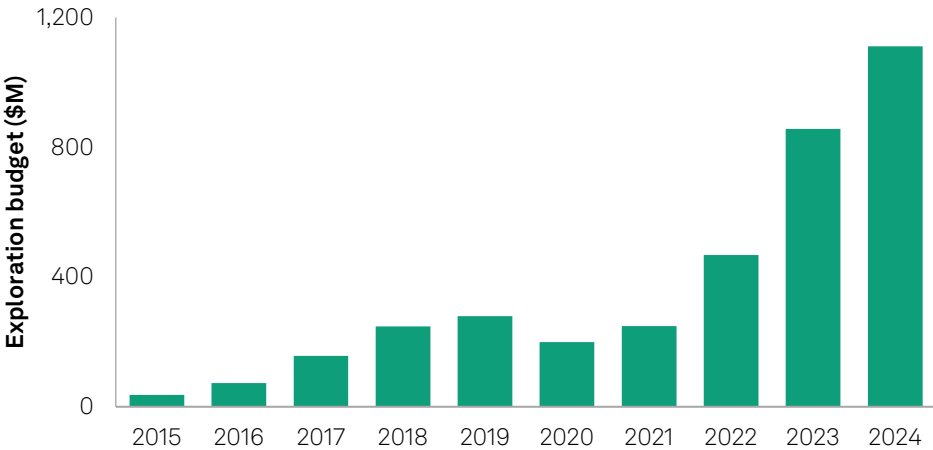
Lithium boosts battery performance and longevity, making it a crucial component in everything from smartphones to electric vehicles. Demand growth in these sectors has solidified lithium’s position as the third most explored commodity in 2024, maintaining this rank for the second year in a row. While budgets for other major commodities like gold and nickel have declined, lithium exploration remains robust, increasing 30% in 2024. This marks the first time lithium exploration budgets have exceeded the \$1 billion mark and the largest lithium budget since our coverage for the metal began in 2010.

Currently, lithium accounts for 9% of global exploration budgets, a significant rise from a decade ago when it wasn’t even in the top 10 most explored targets. Over 10 years, lithium exploration budgets have surged to nearly 30 times their 2015 levels. With electrification driving demand for key metals, companies are advancing assets to boost production. Explorers focus on advanced, late-stage projects, with Canada and Australia leading as exploration hubs, while the US climbed to third place.

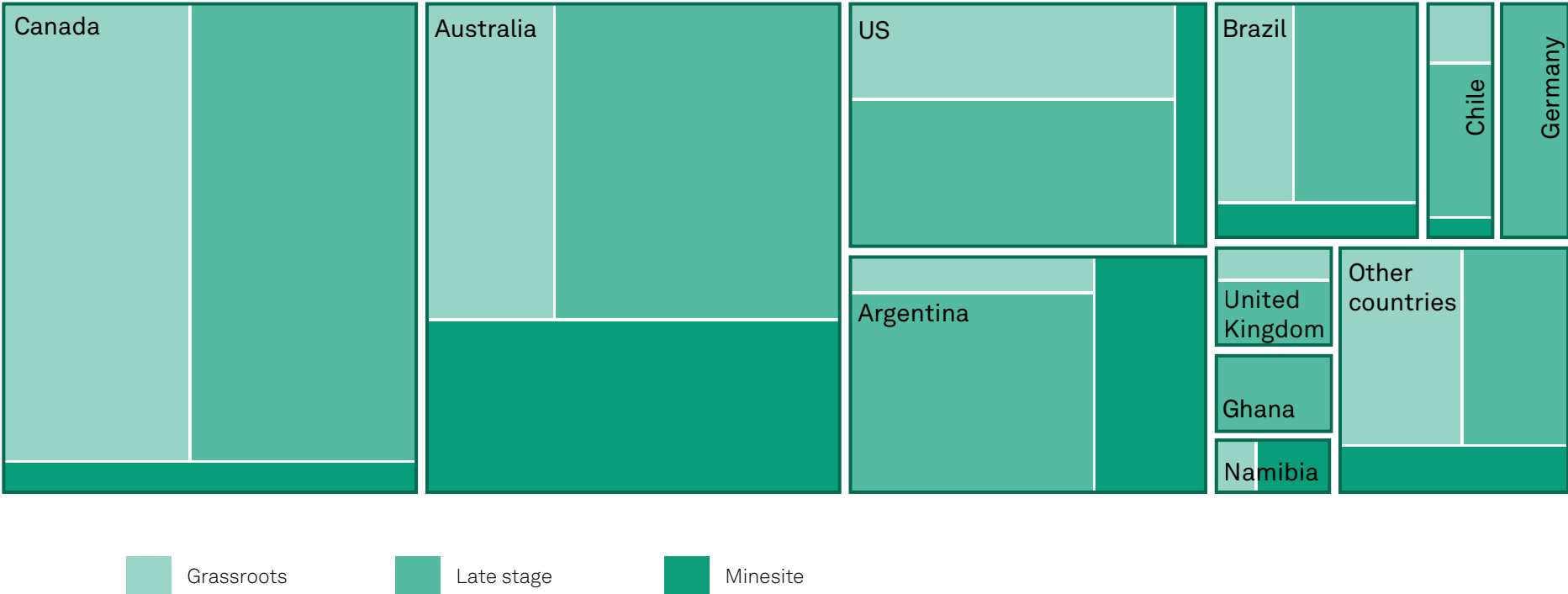
Despite 2024 being a record year for lithium, recent data shows a decline in drilling and financing for the metal, with funds raised by junior and intermediate companies in 2024 at nearly half of 2023’s year-to-date total. Additionally, a demand slowdown has led to oversupply, pulling lithium prices to multiyear lows. Given lithium exploration’s reliance on junior sector funding and forecasted oversupply, these factors may lead to a slowdown in lithium exploration in the near term.



Lithium
\$ 1.11 B
↑ 30% YOY



Total lithium exploration budgets per country, 2024 (\$M)



Country	Total
Canada	299.2
Australia	298.5
US	131.0
Argentina	127.0
Brazil	72.8
Chile	26.3
Germany	25.9
United Kingdom	18.8
Ghana	15.0
Namibia	10.9
Other countries	85.9

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Targets

Battery metals

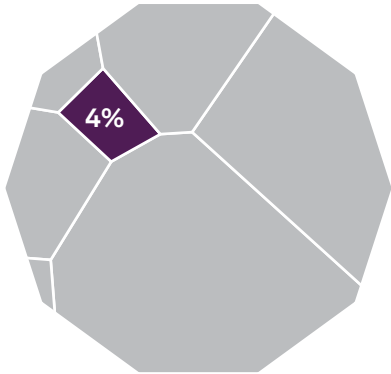


Weak market fundamentals halt nickel exploration’s upward trajectory

Nickel is used across various industries, most significantly in stainless steel production, which accounts for about two-thirds of global demand. It is also crucial in battery manufacturing for EVs, enhancing energy density and performance. With the expected growth in EV demand, the battery sector is anticipated to be the primary driver of demand increases in the coming years. However, in 2024, weak market fundamentals led to a decrease in nickel exploration spending. Exploration budgets for nickel saw the second-largest decline after gold, stalling their upward trend since 2020.

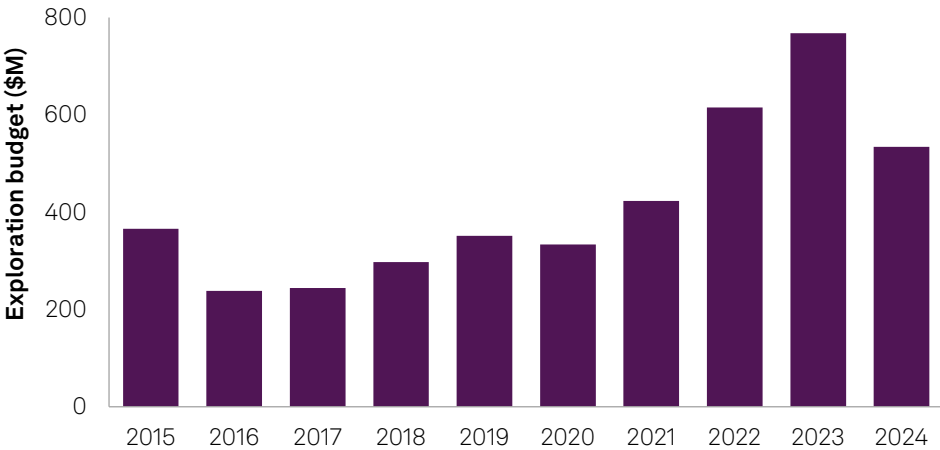
Since 2017, nickel exploration has focused on near-mine assets. In 2024, late-stage exploration budgets were in a close second to minesite allocations, which faced significant cuts mainly from Vale and Glencore in Canada. With Canada seeing the largest budget decrease, Australia became the top nickel exploration hub, despite some declines. The US emerged as the third most explored country for nickel, surpassing Russia, Tanzania and Brazil, due to increased budgets from junior companies.

Recent forecasts predict nickel prices will hover between \$16,000 and \$17,000 per metric ton in the medium term due to market oversupply from expected growth in Indonesian and Chinese production. Additionally, financing data for nickel is bleak, with 2024 year-to-date totals at just two-fifths of 2023 levels. These unsupportive factors may hinder nickel exploration recovery in the near term.

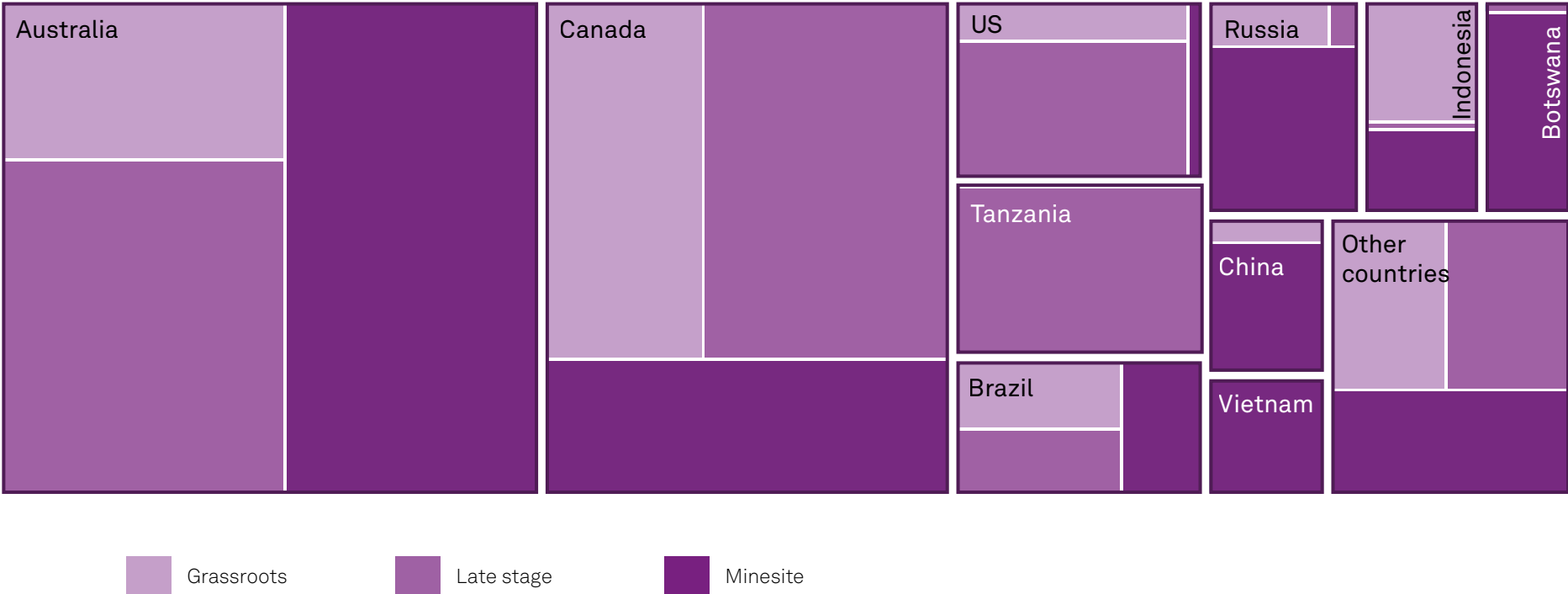


Nickel
\$ 534 M

↓ 30% YOY



Total nickel exploration budgets per country, 2024 (\$M)



Country	Total
Australia	184.1
Canada	139.3
US	31.5
Tanzania	30.3
Brazil	24.3
Russia	23.0
Indonesia	17.7
Botswana	13.4
China	13.2
Vietnam	10.0
Other countries	47.2

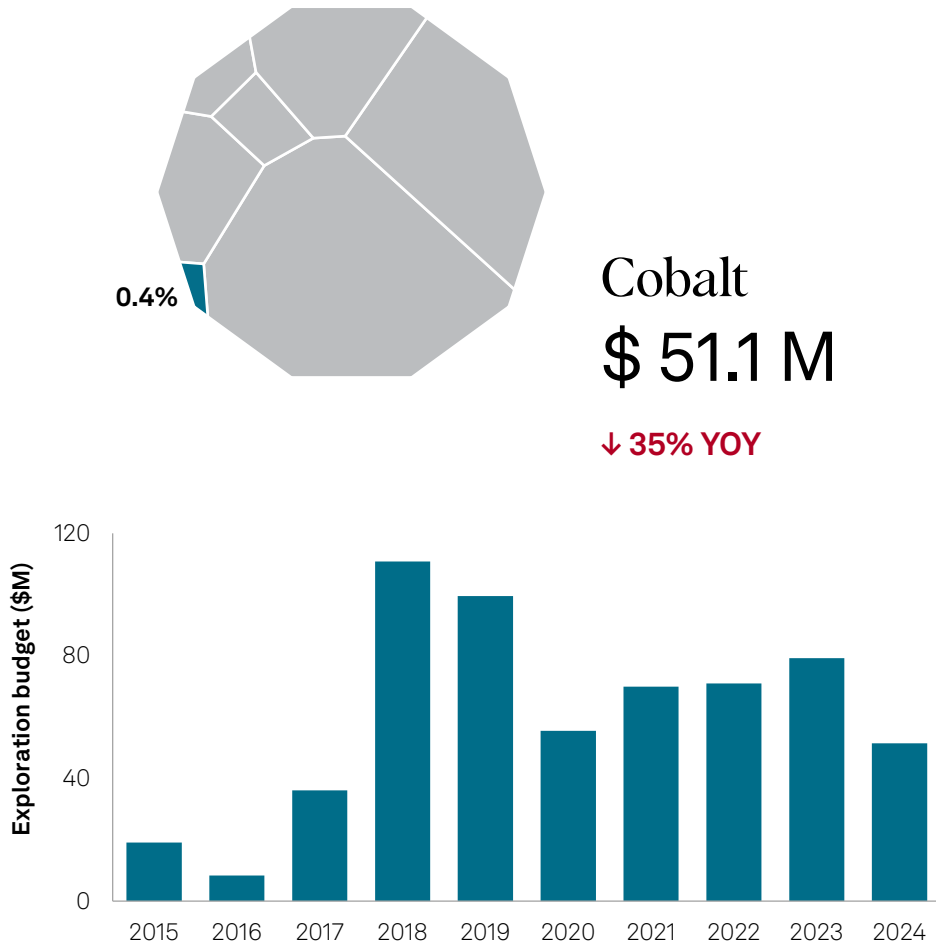
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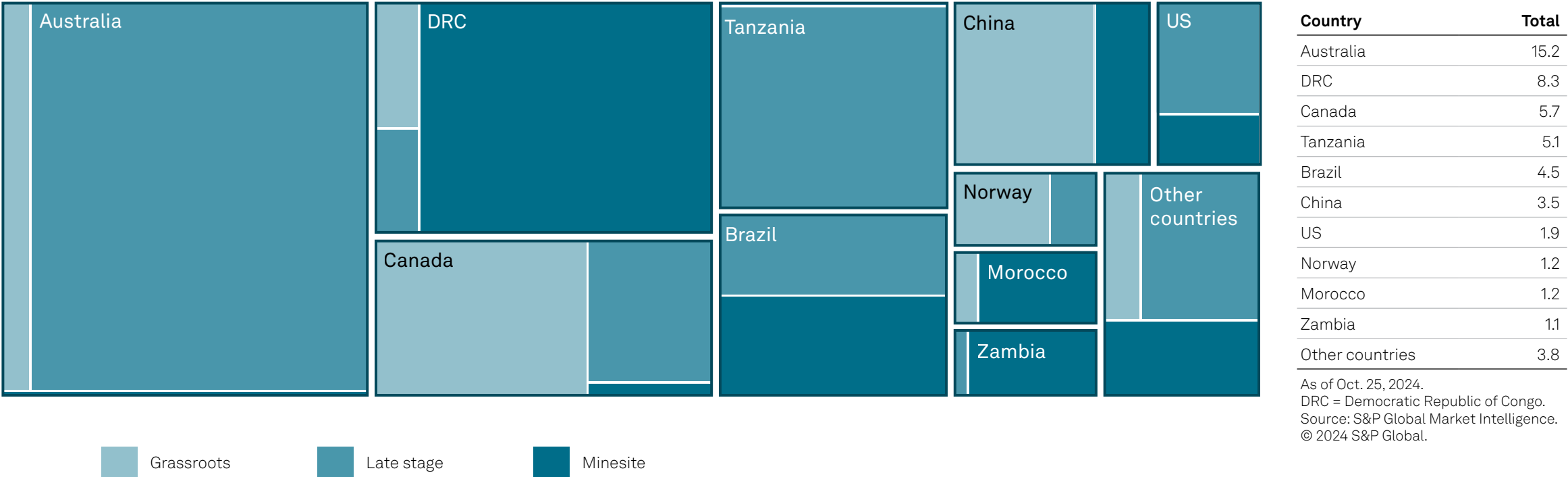
Recovery in cobalt exploration since 2020 halts

Cobalt is essential in some battery technology, but it faces hurdles including affordability, abundance and ethical mining concerns. Cobalt prices hit an all-time high in early 2022, leading some battery and electric vehicle manufacturers to switch to lower- or cobalt-free battery technologies. This caused a steep drop in the cobalt price, which it has failed to recover from given expected surpluses over the next several years.

Consequently, exploration budgets decreased 35% in 2024, reaching the lowest level since 2020. Although Australia has been the top country for cobalt exploration since 2022, miners have cut budgets significantly, especially in the junior sector and late-stage assets. The Democratic Republic of Congo and Canada maintained their second and third positions, despite experiencing declines.



Total cobalt exploration budgets per country, 2024 (\$M)



Targets

Battery metals

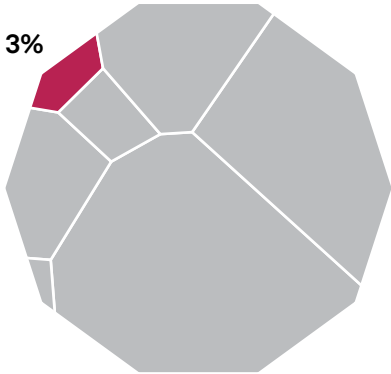


Long-term commitment to increase nuclear capacity lifted uranium budgets

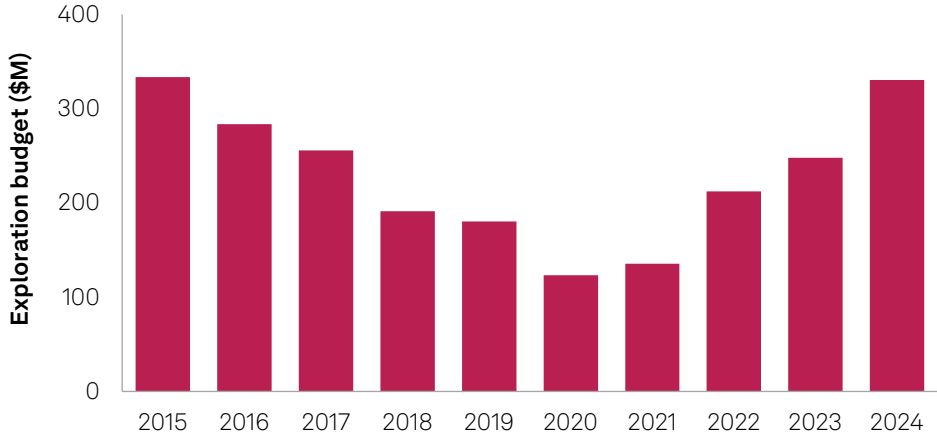
Uranium is gaining traction among commodities, fueled by a recent push to integrate nuclear energy into the global energy mix. This resulted in a 33% year-over-year increase in exploration budgets to \$330.6 million — the highest total since 2016. The most significant rise was in Canada, where project allocations reached nearly \$200 million, a level last achieved in 2012. In Canada, 52 companies are now investing in uranium projects — up from 33 last year — with six of these companies allocating over \$10 million each. All other regions experienced increases in their exploration budgets as well, except for the US and the Pacific region.

Unlike other commodities covered in CES, uranium budgets increased across all stages, with late-stage projects receiving the highest allocation of \$155 million, indicating a concerted effort to advance projects toward production. Grassroots work also saw a notable rise, surpassing \$100 million for the first time in eight years. Minesite work received the lowest budget at \$51.9 million, despite nearly doubling 2023’s allocation.

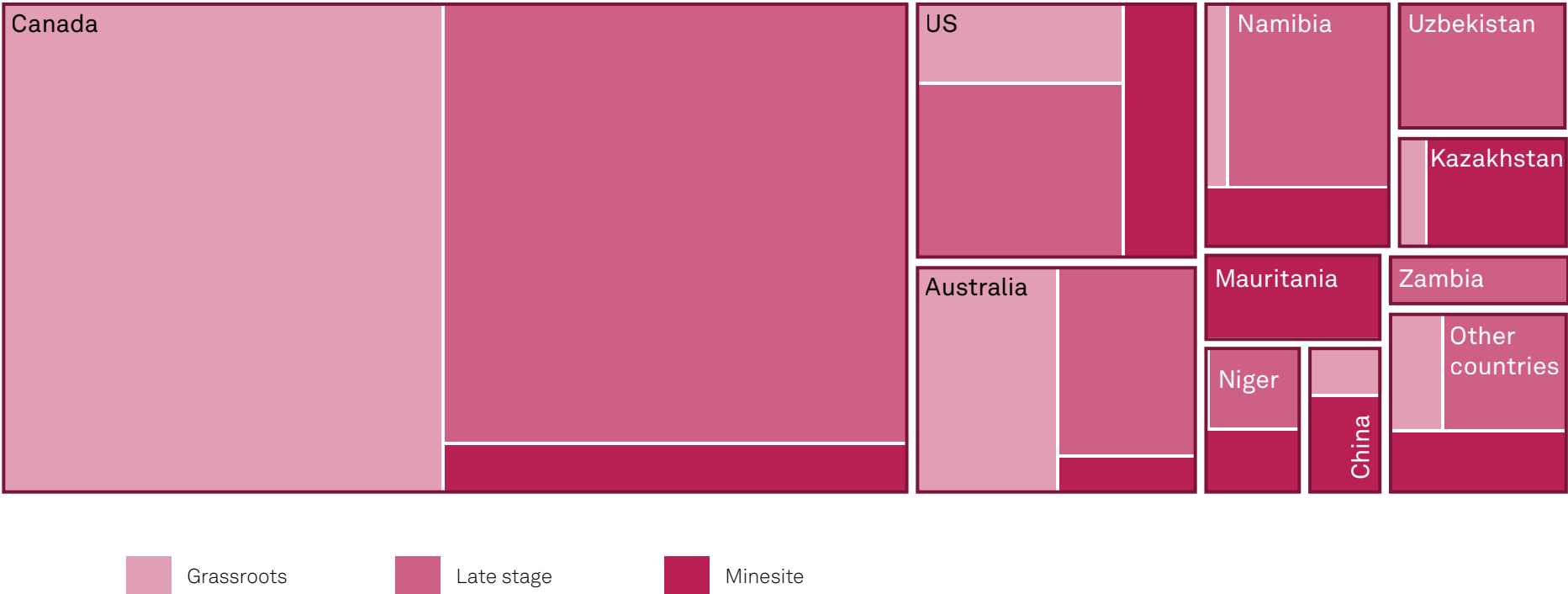
The United Nations Climate Change Conference (COP28) called for a threefold increase in nuclear energy capacity by 2050 to achieve global net-zero greenhouse gas emissions. Uranium prices exceeded \$100/lb at the beginning of 2024, marking the highest level since 2007. As a dispatchable source of baseload power, nuclear has the potential to effectively mitigate the intermittency challenges associated with renewable sources while not contributing to greenhouse gas emissions. Exploration interest in uranium should continue to ramp up over the near term given renewables growth and current decarbonization efforts.



Uranium
\$ 331 M
↑ 33% YOY



Total uranium exploration budgets per country, 2024 (\$M)



Country	Total
Canada	192.0
US	32.0
Australia	28.5
Namibia	20.7
Uzbekistan	10.0
Kazakhstan	8.8
Mauritania	7.2
Niger	6.8
China	5.2
Zambia	4.6
Other countries	14.8

As of Oct. 25, 2024.
Source: S&P Global Market Intelligence.
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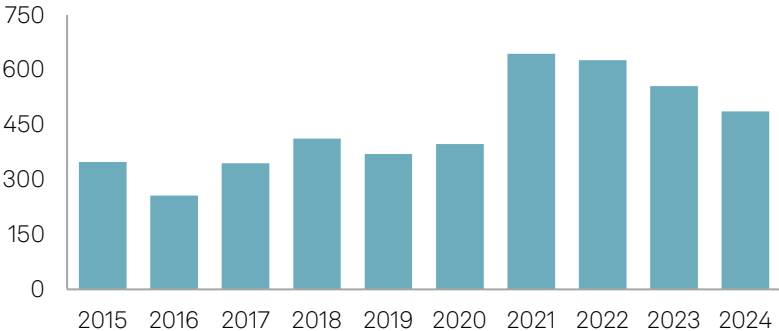
Targets

Battery metals

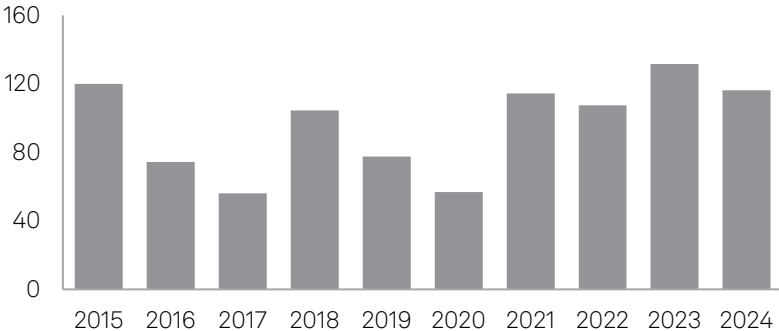


Exploration budgets (\$M)

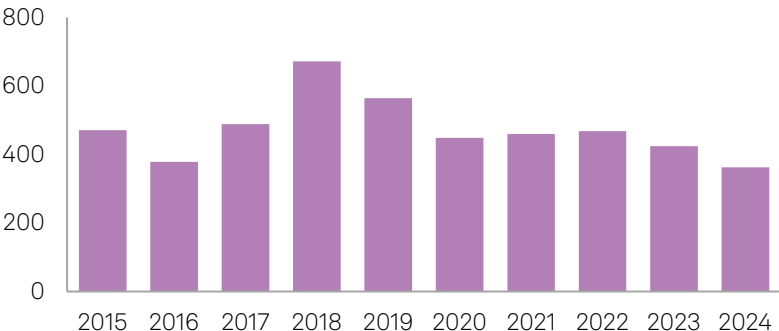
Silver



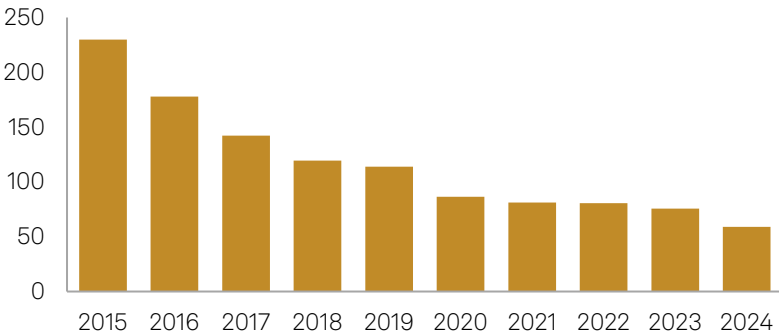
PGM



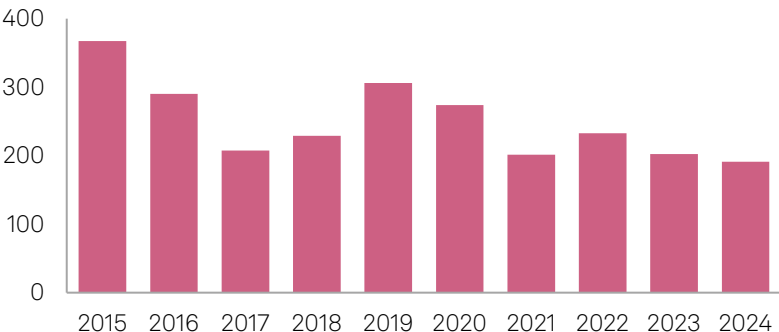
Zinc-lead



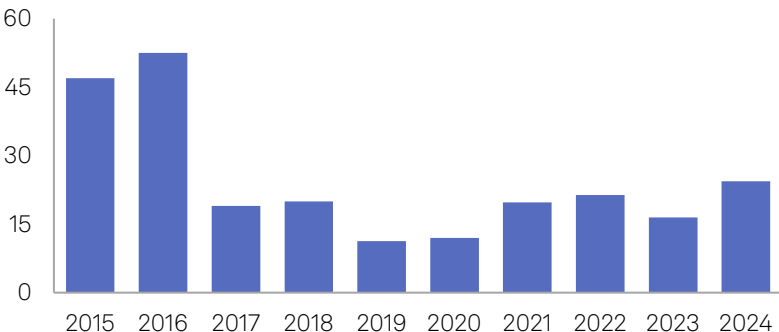
Potash/
phosphates



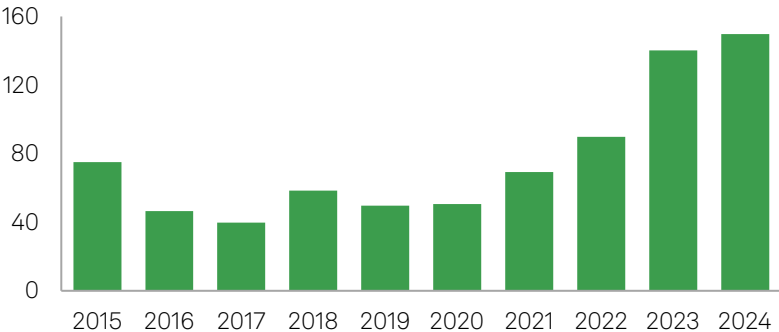
Diamonds



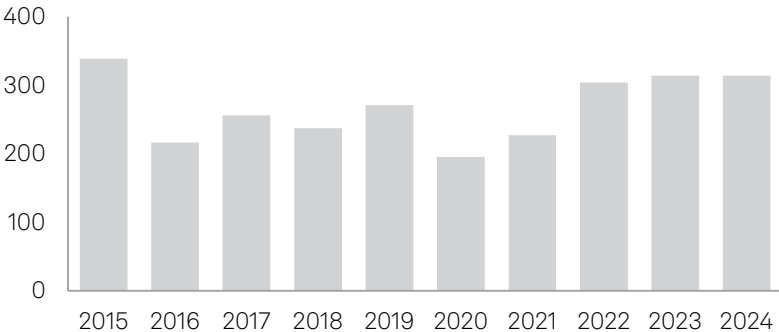
Molybdenum



Lanthanides/
REE



Other*



As of Oct. 25, 2024.
REE = rare earth elements.
* Includes tin, tungsten, vanadium, niobium, chromite, titanium, mineral sands, graphite, manganese and other targets.
Source: S&P Global Market Intelligence.
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Battery metals



Grassroots share hits another historic low

Grassroots exploration fell to a record-low share of the global exploration budget in 2024, and this followed a previous low in 2023. This multiyear trend highlights a decreasing focus on generative projects as explorers opt to allocate more resources to late-stage and minesite assets. Although this shift is partly a natural progression as assets mature over time, the declining investment climate has compelled explorers to concentrate on extending resources at known deposits. While this approach may be less rewarding, it is generally perceived as less risky than venturing into uncharted territories.

The shift has significantly impacted the rate of new discoveries. With the pressing demands of decarbonization and electrification on the horizon, the identification of new deposits is crucial to meet the rising global demand for nonferrous materials. Failure to invest in grassroots exploration specifically for battery and critical minerals could hinder future supply chains and limit the industry’s ability to adapt to evolving market needs.

Click on each symbol to view corresponding exploration budget per stage



Exploration budget per stage, 2024



Junior explorers struggle as majors’ exploration grows modestly

The junior sector’s exploration budget decreased for the second consecutive year in 2024, primarily due to challenges in securing funds. The juniors’ budget — accounting for 41% of the overall exploration budgets — fell 7% to \$5.08 billion, more than offsetting the majors’ modest 0.7% budget increase to \$6.09 billion. Allocations from intermediate companies declined for the third consecutive year, down to a seven-year low of \$942 million. Budgets from government and other companies was up 16% to \$373 million.

Among junior explorers, Ivanhoe Electric Inc. led the group with \$144 million in total allocations, with a huge chunk earmarked for its copper-gold project in Arizona. For the majors, Barrick Gold Corporation posted the largest budget at \$423 million allocated to both gold and copper. Since 2023, Barrick has been expanding its copper allocations for its projects and mines in Chile, Pakistan and Zambia. Hunan Gold Corporation Ltd., with a \$79 million exploration budget primarily focused on gold, stands out among intermediate and government/other explorers.

Overall, the majority of exploration budgets for most company types were allocated to gold, followed by copper. The majors allocated half of their total budget to gold, an increase from a 45% share in 2015. In contrast, the juniors’ budget share for gold decreased to a record low of 36% in 2024, after falling 20% year-over-year. The intermediates’ budget share for gold exploration increased to 66% from 56% in 2015. Copper remained to be the government/others group’s preferred commodity at 41% share, up from 31% in 2015.

Budget per company type, 2024 (\$B)

Click on each bar to show share of budget and top 5 explorers



Majors: **6.1**

Juniors: **5.1**

Intermediate: **0.9**

Government/other: **0.4**

As of Oct. 25, 2024.
¹ Includes platinum group metals (PGM), uranium, potash, phosphates, cobalt, molybdenum, rare earth elements (REE)/lanthanides and other targets.
² Includes silver, REE/lanthanides, zinc-lead, PGM, potash/phosphates, cobalt, molybdenum, diamonds and other targets.
³ Includes nickel, PGM, diamonds, molybdenum, potash/phosphates, cobalt, uranium, REE/lanthanides and other targets.
⁴ Includes uranium, REE/lanthanides, cobalt, silver, PGM, molybdenum, potash/phosphate, diamonds and other targets.
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Targets

Battery metals



Latin America remains strong, Canada and Australia declines

With the ongoing decline in the capital market for exploration, cash flow has become a persistent challenge — particularly for junior explorers that depend heavily on the marketplace for funding. Consequently, exploration activities in regions with significant junior presence, such as Canada and Australia, have continued to decline. In contrast, Latin America continues to attract the largest share of the global exploration budget, a trend that has persisted since the inception of our CES study. Despite a decrease in exploration budgets in 2024, the region remains a global powerhouse, bolstered by a larger allocation of resources from major companies compared to juniors.

In contrast, the US and the “rest of world” regions had modest increases. In the US, a notable rise in copper allocations has positively impacted the region’s year-over-year budget. Notably, Ivanhoe Electric Inc. played a crucial role in elevating the copper budget, effectively offsetting declines in other commodities. Increases in the rest of world region were more broad-based across a variety of commodities.

Both Africa and the Pacific region have broken a three-year trend of increasing exploration budgets, reporting decreases of 1% and 12%, respectively. The primary factor contributing to this decline has been the downturn in gold allocations, mirroring the global trend of reduced investment in the yellow metal. This shift underscores the challenges facing these regions, as they navigate the broader market dynamics that have led to a reevaluation of priorities in exploration funding.

Exploration budgets by region, 2024 (\$B)



Click on each bubble to show corresponding breakdown by region



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