

# The U.S.-Australia Strategic Innovation Alliance

## Resource Management in Australia Factsheet

### Overview

Resource management in Australia during 2025 is defined by a complex mix of strong export performance, technological innovation, and mounting sustainability challenges. While Australia remains a global leader in resource exports — particularly in iron ore, LNG, and critical minerals — the sector is navigating a period of transition marked by declining commodity prices, evolving global demand, and the imperative to integrate circular economy principles and Indigenous knowledge into mainstream practice.

### Economic Performance and Export Trends

Australia's resource and energy commodity exports reached \$415 billion in 2023–24 but are forecast to decline to \$387 billion in 2024–25, reflecting lower global prices and subdued world economic growth. This downward trend is expected to continue, with export earnings projected to steady at \$343 billion by the end of the decade. Despite these declines in value, export volumes for most resource commodities are expected to pick up modestly over the outlook period, supported by improved world economic growth and the global energy transition.<sup>1</sup>

Iron ore, LNG, and gold remain the top export earners, while Australia's critical minerals sector — essential for global clean energy supply chains — continues to attract significant investment. The country's export volumes are near record levels, even as earnings ease due to price normalization. In 2024, the pipeline of resource and energy projects remained robust, with 455 major projects under development, up from 421 in 2023, indicating continued investor confidence in Australia's resource sector.<sup>2</sup>

### Investment, Capital Expenditure, and Exploration

Australia's resources and energy industries invested \$13.0 billion in the December quarter of 2024, a figure unchanged from the previous quarter but down 2.7 percent year-on-year. Investment in plant and equipment rose by 1.9 percent, while spending on buildings and

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<sup>1</sup> Department of Industry, Science and Resources, Resources and Energy Quarterly, March 2025, 4–12, 14–15, 31.

<sup>2</sup> Mining Magazine, "Positive outlook for resources in 2025: King," January 5, 2025.

structures fell by 0.7 percent. Since 2017, spending on plant and machinery has accounted for a steadily rising share of total investment, reflecting the sector's focus on productivity and automation.<sup>3</sup>

Exploration expenditure in 2024 totaled \$5.3 billion, with petroleum exploration growing by over 30 percent both onshore and offshore. However, mineral exploration declined by 7 percent, particularly for lithium, nickel, and copper, as miners responded to lower prices. Notably, uranium exploration increased by 53 percent, and iron ore exploration rose by nearly 10 percent, reflecting shifting priorities and market opportunities.<sup>4</sup>

## Technological Innovation and Digital Transformation

Australian resource management is increasingly shaped by digital and space-enabled technologies. IoT sensors, remote sensing satellites, and AI-driven analytics are now standard tools for monitoring land, water, and mineral resources. For example, Fleet Space Technologies' expanded satellite network supports real-time mineral exploration, while Neumann Space's electric propulsion systems are being used for deep-space prospecting and environmental monitoring. These innovations are helping to optimize resource extraction, reduce environmental impact, and support compliance with ESG standards.<sup>5</sup>

## Sustainability, Circular Economy, and Indigenous Engagement

Sustainability is now central to resource management. Mining and energy companies are investing in land rehabilitation, water recycling, and waste reduction, while government policy is encouraging the transition to a circular economy. This includes incentives for recycling, waste-to-energy projects, and the development of new markets for recovered materials. Australia's resource sector is also playing a leading role in the shift toward net-zero emissions, with investments in renewable energy, electrification, and green hydrogen production accelerating.

Indigenous engagement is increasingly recognized as vital. National and state strategies include provisions for Indigenous partnership, benefit-sharing, and co-management of land and water resources. The integration of Indigenous knowledge is being highlighted at major events, such as the 2025 International Astronautical Congress in Sydney, which focuses on

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<sup>3</sup> Department of Industry, Science and Resources, Resources and Energy Quarterly, March 2025, 10–12.

<sup>4</sup> Department of Industry, Science and Resources, Resources and Energy Quarterly, March 2025, 10–12.

<sup>5</sup> South Australian Space Industry Centre, "South Australian space innovations launch into 2025," January 28, 2025.

“Sustainable Space: Resilient Earth.”<sup>6</sup>

## Labor and Workforce

The resource sector faces ongoing workforce shortages, with 75 percent of businesses reporting difficulties in 2024. Both high- and low-skilled labor are in short supply, driving greater investment in automation, digital upskilling, and productivity-enhancing technologies.<sup>7</sup>

## Challenges and Outlook

Australia’s resource management sector continues to face challenges from global price volatility, supply chain disruptions, and rising international competition — especially in coal and LNG markets from countries such as Russia, Canada, Indonesia, and the United States. The transition to net zero is expected to constrain fossil fuel use, and Australia may need to adapt to increased competition and changing trade patterns. However, the sector’s resilience is supported by a strong project pipeline, ongoing investment in technology and infrastructure, and a growing commitment to sustainability and Indigenous partnership.

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<sup>6</sup> Australian Space Agency, “IAC 2025 | Australian Space Agency,” May 14, 2025.

<sup>7</sup> Ai Group, “Australian Industry Outlook for 2025,” January 28, 2025.