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Security Nexus Perspective

ORE AND AUTONOMY:

INDIA'S CRITICAL MINERALS AND US-INDIA DEFENSE COOPERATION

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In March 2026, Under Secretary of Defense for Policy Elbridge Colby outlined Washington's approach to the U.S.-India defense partnership at the Ananta Centre in New Delhi. The framework was direct: the United States seeks partnerships with vigorous, self-assured states, not dependencies. India's role in maintaining a favorable balance of power in Asia was described as indispensable, but that role depended on India becoming what the framework called a waxing power: industrially sovereign, militarily capable, and strategically confident. The standard was clear enough. What it left mostly unstated was the material foundation on which such confidence must rest.

India cannot build the indigenous defense industrial base Washington hopes to partner with if it remains dependent on foreign processing of the minerals beneath modern military and industrial power. Lithium for batteries, rare earths for magnets, cobalt for storage systems, gallium and germanium for semiconductors: these are not peripheral commodities but enabling materials for the platforms, sensors, and systems that define contemporary defense capability. Walk through any semiconductor facility in India and imported gallium still shadows the process. Enter a battery assembly plant and the cathode materials arrived from elsewhere. Examine defense electronics and the rare earth magnets came from foreign processors. India's industrial ambitions rest on a substrate it does not yet control. The vulnerability is not theoretical. It sits inside the supply chains of the very industries both Washington and Delhi say must expand.

That is why India's National Critical Mineral Mission, approved in early 2025, matters beyond mining policy. The mission attempts everything at once - exploration, extraction, processing, recycling, overseas acquisition - because Delhi has grasped what strategic discussion often postpones: ore in the ground is not autonomy. A state may speak fluently of sovereignty and still practice dependency if the material basis of industrial power is processed elsewhere. The question, then, is not whether India understands the strategic value of critical minerals, but whether it can convert mission language into sovereign throughput before Washington discovers that a partnership built around autonomy still rests on dependent foundations.

The Pattern of Dependence

China understood earlier than most that leverage in critical minerals lies less in extraction than in processing. While Western governments debated labor costs, environmental burdens, and the efficiencies of offshoring, Beijing built separation facilities, refining capacity, and the patient industrial depth required to dominate the unglamorous middle of the chain. When export controls on gallium and germanium were announced in July 2023, the shock came not from novelty but from recognition. Markets understood at once that the leverage was structural, accumulated over decades through choices about where processing would occur and who would bear its costs.

Indonesia's more recent experience offers a different but equally useful lesson. Jakarta banned nickel ore exports in 2020 to force domestic processing and pull more value onshore. Smelters were built. Investment arrived. Yet sovereignty over extraction did not automatically produce sovereignty over the wider chain. Technology, expertise, financing, and market access often remained with foreign partners. Jakarta sought autonomy and achieved something closer to managed partnership. That distinction matters for India. Deposits may attract headlines, but autonomy begins only when processing, expertise, and industrial absorption cease to sit elsewhere. The broader lesson is simple: dependence becomes dangerous not when resources are scarce, but when supply chains grow so uniform that disruption leaves little room to maneuver.

The Odisha Question

Drive south along Odisha's coast and the strategic map begins to acquire a human face. Fishing villages lie between the Bay of Bengal and lagoons rich in monazite sand. The sand holds thorium for India's nuclear program and rare earths for magnets and electronics. From Delhi, such geography can look like sovereignty made visible: mineral wealth stretched along a vulnerable coastline, waiting to be drawn into the national project. On the ground, it looks different. The coastal ecology that holds the minerals also sustains the communities that live there. When mining intensifies, shorelines shift, fish breeding grounds are disturbed, and backwater hydrology changes. Costs that vanish in strategic presentations do not vanish locally. Power has a way of appearing settled on a map and oddly provisional at the edge of a lagoon.

The mission therefore arrives not on empty ground but in regions already shaped by extraction, memory, and distrust. Odisha has lived with large-scale resource development before: iron ore in the north, bauxite in tribal regions, coal across the mineral belt. Communities and state-level political actors have learned what national urgency can mean when it arrives attached to resource development. They know how environmental review can be compressed, how local objections can be

recast as procedural delay, and how benefits may travel outward while ecological and social burdens remain behind. The language has changed: resilience, clean energy, supply-chain security; but the underlying tension has not. India is asking mineral-bearing communities to accept a faster, more strategic cycle of extraction. They will ask, reasonably, whether this time the gains will be shared, the risks managed, and the promises kept.

This is where the partnership framework becomes administrative rather than declaratory. Washington has made clear that India must build an indigenous defense industry if the partnership is to deepen into meaningful co-production. But indigenous industry requires indigenous materials processing, and materials processing requires political arrangements accepted as legitimate rather than imposed from above. If India cannot build those arrangements, the industrial sovereignty invoked in defense dialogue will remain constrained by the same dependencies it is meant to overcome.

The Federal Dimension and the Execution Problem

The political challenge is sharpened by India's federal structure. By moving critical minerals into a more centralized regime in which the Union government controls auctions, Delhi has signaled that it views this domain as too strategic to be left to fragmented state-level approaches. On one level, that is understandable. Supply chains do not respect federal boundaries, national security planning does not wait comfortably on many separate political calendars, and strategic materials invite central coordination almost by definition. But centralization is not politically neutral. States that host mineral deposits bring histories of resource conflict, accumulated suspicion, and hard practical questions about environmental management, compensation, consultation, and benefit-sharing. Centralization may accelerate auctions. It does not dissolve the political memory of those expected to host the extraction, the waste, and the risk. Memoranda, like maps, are often most confident where the ground is least inclined to cooperate.

Nor is India's problem one of strategic recognition. It is one of conversion. The country has often been more persuasive at announcing industrial ambition than at carrying it through the slower disciplines of permitting, processing, infrastructure, and scale. Critical minerals compress that familiar weakness into a more consequential frame. Exploration without refining, auction without processing, extraction without industrial absorption: each leaves dependency rearranged rather than reduced. That is why the mission should be judged not by declarations of intent but by whether material actually moves through Indian-controlled stages of the chain. India's semiconductor plans still rely on imported materials. Battery manufacturing still depends on cathode inputs from foreign processors. Defense electronics still require rare earth magnets refined elsewhere. The gap between aspiration and execution is therefore not incidental. It sits at the center of the problem.

For Washington, this is neither an abstract concern nor a commentary on India's internal affairs for its own sake. It is a practical question of whether the defense partnership can rest on stable, predictable, and legitimate industrial capacity on both sides. The October 2025 Framework for the U.S.-India Major Defense Partnership speaks of leveraging defense industrial cooperation to enhance readiness and jointly develop capabilities. That ambition assumes more than assembly lines and memoranda. It assumes that India can process, refine, and move critical inputs through a dependable

domestic chain. If the mission succeeds, Washington can deepen defense cooperation toward genuine co-production and co-development. If it stalls in federal contestation, environmental review, or local resistance, Washington will confront a harder truth: it may be partnering with a state that speaks of sovereignty while still dependent in the materials that sustain it.

The Democratic Governance Question

Two conceptions of resilience now confront one another in India's mineral regions. Delhi's version is measured in tons refined, stockpiles built, and exposure reduced. For coastal fishing communities in Odisha, or forest-dwelling communities in mineral-bearing districts, resilience means something more immediate: stable livelihoods, intact ecologies, and the ability to endure state ambition without displacement. Both conceptions arise from genuine vulnerability. The question is whether India's institutions can hold them in the same frame long enough to produce durable political support rather than temporary administrative compliance.

India's timeline makes that question more acute. The defense cooperation framework both countries are building assumes that India will acquire greater sovereign industrial capacity within the decade. That assumption will not be tested in strategy papers but in the older places where abstract policy becomes extraction. Surveyors arrive. Lease maps are drawn. Compensation is negotiated or imposed. Land once understood as forest, coast, or farmland is recoded as strategic asset. At that moment, a democracy reveals the quality of its industrial state. It shows whether it can build capacity without treating consent, ecology, and federal negotiation as nuisances to be brushed aside, and whether strategic urgency can be translated into legitimacy rather than merely into speed.

What Lies Beneath

What lies beneath will help decide whether India becomes the kind of partner Washington says it wants or remains a state fluent in the language of strategic autonomy while still dependent in the materials that sustain it. The challenge is not only technical. India has the financial commitment, the strategic rationale, and much of the policy architecture already in motion. What remains unsettled is whether its political institutions can carry extraction and processing forward in ways that build support rather than reproduce the conflicts and delays that have accompanied earlier large-scale development efforts.

The map of India's mineral wealth is being redrawn. The question is whether those who live on that map will help draw it - or find that decisions have been made without their meaningful participation. If India succeeds in building mineral sovereignty through legitimate political arrangements, both countries gain the partnership the framework envisions. If extraction politics reproduces the patterns that have complicated previous infrastructure development, both face continued dependencies that constrain strategic options.

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