



Technical Paper: Model FTA Provisions for Critical Minerals

Companion to the Final Recommendations Report *February 2026*

Executive Summary

This technical paper translates the "activation and targeted modernisation" framework into specific model FTA provisions for critical minerals supply chain integration between Australia and Southeast Asia. It draws on comparative analysis of international precedents — particularly the US-Japan Critical Minerals Agreement (2023), EU-Chile Advanced Framework Agreement (2023), CPTPP, and USMCA — alongside stakeholder consultation evidence and the existing Australia-Southeast Asia FTA architecture.

The paper is organised around the three-tier recommendation structure:

- **Tier 1** provisions require no new negotiation — they operationalise existing cooperation chapters through specific work programs and institutional activation.
- **Tier 2** provisions address institutional and administrative improvements achievable through administrative action, side arrangements, or ministerial decisions.
- **Tier 3** provisions present model treaty language for new FTA chapters or side agreements, with rationale paragraphs grounding each provision in consultation evidence and international precedent.

The model provisions form a flexible menu: parties select provisions appropriate to their bilateral relationship, institutional capacity, and political context. This modular architecture — consistent with the Paris-style approach recommended in the Final Recommendations Report — enables variable geometry across agreements while maintaining coherence through shared principles and objectives. Flexibility has limits: meaningful supply chain integration requires that each bilateral arrangement adopt, at minimum, the Tier 1 activation measures (Section 2), the standards mutual recognition framework (Section 3.2), and either the critical minerals chapter (Section 4.1) or a sector-specific side arrangement — without this baseline, the architecture lacks the institutional connective tissue to move minerals, services, and capital across borders more efficiently than the status quo.

Each provision is accompanied by: (a) the rationale for its inclusion, grounded in stakeholder evidence; (b) the international precedent it draws on; and (c) guidance on adaptation for specific Australia-Southeast Asia agreements.

1. Introduction and Analytical Approach

Purpose

This paper fulfils the Phase 4 deliverable requirement: "Deliver technical paper on model provisions and flexible options for critical mineral supply chains." It serves as a companion to the Final Recommendations Report, providing the detailed technical architecture for each recommendation.

Methodology

The model provisions draw on three analytical streams:

Comparative FTA analysis: Systematic examination of critical minerals provisions in recent international agreements – the US-Japan Critical Minerals Agreement (March 2023), EU-Chile Advanced Framework Agreement (December 2023), CPTPP (2018), USMCA (2020), Australia-Singapore Green Economy Agreement (2022), and AANZFTA Second Protocol (2025). This analysis identified nine functional "clause families" common to emerging critical minerals trade architecture.^[1]

Stakeholder consultation evidence: Findings from the mixed-methods consultation process (described in the Final Recommendations Report, Section 1) inform the rationale accompanying each model provision, grounding provisions in practical stakeholder needs rather than abstract treaty design.

Existing FTA baseline: Analysis of the seven agreements governing Australia-Southeast Asia trade (AANZFTA, RCEP, CPTPP, IA-CEPA, SAFTA, MAFTA, TAFTA) establishes what already exists, where gaps persist, and how new provisions build on existing architecture rather than duplicate it.

The Three-Tier Structure

The provisions are organised to reflect the three-tier framework's distinct implementation pathways:

Tier 1 – Activation: Specific work programs and agenda items that operationalise cooperation chapters already in force. Their "model" character lies in the specificity of proposed actions, not in new treaty text.

Tier 2 – Institutional and administrative: Provisions implementable through side arrangements, memoranda of understanding, joint committee decisions, or administrative action. Some require ministerial approval but not formal FTA amendment.

Tier 3 – New FTA provisions: Model treaty language – specific articles and clauses – for incorporation into new or upgraded FTAs, adaptable across different agreement contexts (multilateral AANZFTA, bilateral IA-CEPA, standalone side agreement).

2. Tier 1: Activating Existing FTA Architecture

2.1 Economic Cooperation Chapter Activation

Current state: Existing agreements already contain economic cooperation chapters with mandates broad enough to encompass critical minerals. IA-CEPA Chapter 15 establishes cooperation on human capital development and skills exchange. RCEP Chapter 15 provides frameworks for economic and technical cooperation among parties. AANZFTA Chapter 12 on economic cooperation, together with the new Chapter 13 on Trade and Sustainable Development (added by the 2025 Second Protocol), create cooperation mechanisms for green economy and circular economy.^[2]

The gap: None of these chapters has been operationalised for critical minerals. Stakeholder consultations confirm that Australian engagement has focused on market access negotiations rather than implementation of existing commitments.^[3]

Model action plan:

For IA-CEPA Joint Committee:

- Add critical minerals supply chain integration as a standing agenda item
- Establish a Critical Minerals Working Group under the Economic Cooperation Committee
- Develop a three-year work program with specific deliverables: supply chain mapping exercise (Year 1); standards gap analysis (Year 1-2); pilot mutual recognition arrangement for ESG

certification (Year 2–3)

- Expand the Katalis program's focus on METS sector cooperation and joint processing technology development
- Increase skills exchange visa utilisation (currently up to 200 Indonesian skills training visas annually) with targeted mining and processing sector allocation

For AANZFTA:

- Propose a Critical Minerals Cooperation Pilot under the TSD chapter's green and blue economy cooperation provisions (Chapter 13, Article 2)
- Activate circular economy in manufacturing cooperation (Chapter 13, Article 2) for battery materials and recycling
- Utilise the AANZFTA upgrade's full cumulation provisions for minerals processed across multiple ASEAN countries
- Request AANZFTA Committee consideration of METS services coverage in the next services schedule review

For RCEP:

- Propose critical minerals trade facilitation as a focus area for RCEP economic and technical cooperation
- Utilise RCEP's electronic commerce chapter provisions for digital certification of minerals origin
- Engage RCEP's joint committee on supply chain resilience provisions relevant to critical minerals

Implementation guidance: Activating these cooperation chapters requires more than adding agenda items — it demands dedicated coordination personnel, defined work programs, and institutional entry points. The IA-CEPA General Review, with submissions due March 2026, provides the immediate decision gate: DFAT should recommend to the Minister that critical minerals supply chain integration be added to the Joint Committee agenda within six months, using the General Review as the institutional vehicle.^[4] The Year 1 supply chain mapping exercise should cover current trade flows, processing capacity gaps, standards alignment requirements, product-volume matching, and financing pipeline availability — producing the evidence base that gives partner ministries a reason to invest in the process. IA-CEPA's \$40 million Katalis program provides existing funding, while the *Invested* strategy's government-to-government partnerships program (Recommendation 37) offers a framework for institutional capacity building in Southeast Asian resources sectors.^[5] An official from a Southeast Asian partner government described existing bilateral ministerial meetings as having the architecture but lacking cross-ministry participation and topic breadth.^[6] The solution is not new institutions but populating existing ones with sector-specific agenda items and multi-portfolio participation — consistent with the *Invested* strategy's recommendation to increase "whole-of-government trade and industry policy... engagement capability" in Southeast Asian missions (Recommendation 19).^[7]

Negotiation vehicle and timeline: Each agreement has a distinct activation pathway. IA-CEPA proceeds through the General Review (submissions due March 2026), with a recommendation to the Joint Committee by September 2026 and a Critical Minerals Working Group established by December 2026. AANZFTA proceeds through its Committee, proposing a Critical Minerals Cooperation Pilot under the TSD chapter at the next meeting (2026). RCEP proceeds through its Joint Committee's economic and technical cooperation agenda. All three vehicles require ministerial direction rather than new negotiation mandates.

Verification: The Year 1 supply chain mapping exercise serves as the first measurable output — its completion by end-2027 confirms that activation has moved beyond agenda items to substantive deliverables. The Critical Minerals Working Group under IA-CEPA reports to the Joint Committee annually on work program delivery against the three-year schedule (supply chain mapping, standards gap analysis, pilot MRA). AANZFTA TSD chapter activation is verified by the AANZFTA Committee's formal adoption of critical minerals as a cooperation pilot area, with annual progress reporting through the TSD Committee.

Priority status: *Essential*. Tier 1 activation is the precondition for all subsequent tiers – without operational institutional mechanisms, Tier 2 and Tier 3 provisions lack the governance infrastructure to function. This is the lowest-cost, highest-return element of the entire framework.

Resourcing: The primary cost is personnel, not new funding. DFAT requires 2-3 dedicated FTE across the relevant bilateral desks to coordinate agenda items, prepare working group submissions, and track implementation. IA-CEPA's Katalis program and DISR's A\$40 million International Partnerships in Critical Minerals Program provide existing funding for substantive work (supply chain mapping, standards gap analysis).^[8] The IA-CEPA General Review and AANZFTA TSD chapter activation are zero-cost institutional entry points requiring political direction, not new budgetary allocation.

Country differentiation: The five partners differ substantially in institutional readiness. *Indonesia* is most ready: IA-CEPA provides the deepest institutional architecture (Joint Committee, Economic Cooperation Committee, Katalis program), and KADIN's explicit advocacy for Australian critical minerals partnership provides an industry counterpart.^[9] *Philippines* is next, with strong bilateral engagement infrastructure and the Chamber of Mines' TSM adoption demonstrating capacity for standards-related cooperation. *Vietnam* offers high-level political commitment – the 2024 Comprehensive Strategic Partnership explicitly invited Australian cooperation in "advanced and modern technology to optimise the exploitation and deep processing of key minerals" – but institutional mechanisms for operationalising this through AANZFTA's cooperation chapter remain underdeveloped.^[10] *Malaysia* and *Thailand* present the most limited immediate pathways: MAFTA and TAFTA joint committees have narrower agendas and less developed secretariat support, and neither country has articulated industry-level demand for critical minerals cooperation through these FTA mechanisms. For Malaysia, the Lynas relationship provides a commercial anchor, but FTA activation should proceed through AANZFTA's broader platform rather than the more limited MAFTA architecture. For Thailand, the EV/battery supply chain focus means TAFTA activation should target battery materials and automotive standards rather than upstream minerals cooperation.

2.2 FTA Utilisation Improvement Programme

The problem: Low FTA utilisation undermines existing preferences. Only 17% of Australian businesses make significant use of FTA provisions; 28% are unaware agreements exist.^[11] For critical minerals and METS sectors, this gap is acutely consequential: margins on battery-grade mineral processing are thin enough that the difference between paying and not paying applicable tariffs – or between using and not using preferential origin provisions – determines whether an Australia-ASEAN supply chain is commercially viable against vertically integrated Chinese competitors. Every percentage point of unnecessary cost erodes the competitiveness case for diversified sourcing.

Model programme:

Business awareness:

- Develop sector-specific FTA utilisation guides for critical minerals, METS, and minerals processing – written in business-accessible language
- Create digital navigation tools enabling businesses to identify optimal agreement pathways for specific transactions (accounting for overlapping agreement coverage)
- Integrate FTA utilisation training into Austrade's existing Southeast Asia business facilitation services
- Work with bilateral business councils (AIBC, APBC) to include FTA utilisation in business matching and trade mission programmes

Compliance cost reduction:

- Prioritise extension of CPTPP-style self-certification of origin to AANZFTA and bilateral agreements, eliminating the cost of third-party certification

- Develop digital certificates of origin with embedded traceability data compatible with EU Battery Regulation requirements
- Create a "quick reference" matrix showing which agreement provides optimal treatment for common critical minerals transactions

Utilisation benchmarking:

- Establish annual reporting on FTA utilisation rates for critical minerals trade, disaggregated by agreement and sector
- Set aspirational targets for utilisation improvement — the cross-sectoral 17% rate provides the starting benchmark, with the D1.1 baseline survey establishing the critical minerals-specific rate against which progress should be measured

Priority status: *Essential.* FTA utilisation determines whether existing tariff preferences translate into commercial outcomes. For critical minerals — where margins on battery-grade processing are thin enough that tariff savings determine supply chain viability — utilisation improvement is a competitiveness measure, not merely a trade facilitation convenience.

Negotiation vehicle and timeline: The utilisation programme operates primarily through Austrade's existing business facilitation services, requiring ministerial direction rather than new institutional mechanisms. Sector-specific FTA utilisation guides for critical minerals and METS should be commissioned by mid-2026 and published by end-2026. Self-certification of origin extension requires administrative action under each agreement's joint committee — CPTPP already provides the model, and AANZFTA's 2025 upgrade creates the institutional platform. Australia should propose self-certification extension at the next AANZFTA Committee meeting (2026), targeting operational self-certification for critical minerals by 2028. Estimated resourcing: A\$2-3 million annually for sector-specific guides, digital navigation tools, and training integration, deliverable through Austrade's existing budget.

Verification: Annual FTA utilisation reporting for critical minerals trade — disaggregated by agreement, partner country, and product category — serves as the primary verification mechanism. The baseline utilisation rate (currently 17% for Australian businesses overall) should be measured specifically for critical minerals transactions by end-2027, with an aspirational target of substantial improvement to be calibrated against that sector-specific baseline. Austrade reports utilisation data annually to the business advisory mechanism (Section 3.1), which tables it at Joint Committee meetings.

Country differentiation: Utilisation barriers differ by agreement complexity and partner country customs infrastructure. For *Indonesia* under IA-CEPA, two-thirds of tariff lines are affected by non-tariff measures, with 110 mineral tariff lines subject to three or more overlapping NTMs — utilisation guides must navigate this NTM overlay, not merely identify preferential rates.^[12] For *Thailand* and *Malaysia*, utilisation is complicated by the availability of multiple overlapping agreements (TAFTA/MAFTA, AANZFTA, RCEP, and CPTPP for Malaysia), making the "quick reference" matrix identifying optimal agreement pathways for specific transactions particularly valuable. For *Vietnam*, CPTPP provides the highest-standard baseline but Vietnam's Annex 2-C carve-outs permitting export duties on certain raw minerals mean that AANZFTA or RCEP may offer better treatment for specific critical minerals transactions.

2.3 Bilateral Institutional Mechanism Activation

Current state: Bilateral institutional mechanisms between Australia and each Southeast Asian partner — joint committee meetings, ministerial consultations, economic dialogues — operate with narrow agendas and limited sectoral participation. A trade policy practitioner from Southeast Asia described existing bilateral ministerial meetings as a "chicken and egg" problem: ministries invest in preparation only once they see the value of the forum.^[6:1]

Model activation strategy:

Indonesia (IA-CEPA framework):

- Expand IA-CEPA Joint Committee agenda to include critical minerals as a dedicated workstream
- Pursue a joint Australia-Indonesia Critical Minerals Ministerial Statement at the next Annual Leaders' Meeting, building on the July 2023 Western Australia-KADIN Plan of Action
- Use the Katalis program's remaining budget cycle to commission joint supply chain analysis
- Build on the July 2023 Western Australia-KADIN Plan of Action on critical minerals and EV battery supply chains^[13]

Philippines (AANZFTA + bilateral):

- Propose critical minerals as a standing item for the Philippines-Australia Trade Investment Dialogue
- Leverage the Philippines' TSM adoption to develop a pilot standards mutual recognition arrangement
- Support Philippine mining delegation participation at major Australian industry events (IMARC, Austmine)

Malaysia (MAFTA + AANZFTA):

- Engage through the Lynas relationship as a demonstration case for Australian-Malaysian minerals processing partnership
- Propose rare earth supply chain cooperation as an agenda item for MAFTA Joint Committee
- Build on the FMM-Australian Industry Group MoU (renewed 2025) for industry-to-industry engagement

Vietnam (AANZFTA + bilateral):

- Leverage the 2024 Comprehensive Strategic Partnership to propose critical minerals cooperation, building on Vietnam's explicit invitation for Australian "investment and cooperation in advanced and modern technology to optimise the exploitation and deep processing of key minerals"
- Focus on rare earth extraction and processing cooperation in Lai Chau and Yen Bai provinces, where significant deposits remain underdeveloped
- Develop skills exchange programs through TAFE partnerships, formalised under AANZFTA's economic cooperation chapter
- Note: Vietnam maintains CPTPP Annex 2-C carve-outs permitting export duties on certain raw minerals — engagement should address these progressively rather than treating CPTPP disciplines as a complete baseline

Thailand (TAFTA + AANZFTA):

- Focus on EV battery supply chain integration — connecting Australian mineral inputs (lithium hydroxide, nickel sulphate, rare earth concentrates) to Thailand's 700+ Tier 1 automotive suppliers and expanding battery manufacturing capacity
- Propose battery materials standards alignment through TAFTA Joint Committee, with particular attention to HS code classifications for battery-grade materials
- Build on existing commercial momentum: Australian companies are already investing in Thai processing, including Alpha Fine Chemicals' planned nickel sulphate plant at Rayong targeting 40,000 tonnes annual production of nickel sulphate crystals for the lithium-ion battery market^[14]
- Leverage Thailand's Board of Investment incentives for EV-related manufacturing to formalise supply chain linkages through TAFTA institutional mechanisms

Negotiation vehicle and timeline: Each bilateral mechanism operates through its own institutional channel. *Indonesia:* IA-CEPA Joint Committee and the March 2026 General Review submission — critical minerals working group established by end-2026, Ministerial Statement pursued at the 2027 Annual Leaders' Meeting. *Philippines:* Trade Investment Dialogue — critical minerals added as a

standing agenda item by mid-2026, pilot TSM mutual recognition arrangement initiated by end-2027. *Malaysia*: MAFTA Joint Committee and AANZFTA platform – rare earth cooperation agenda item proposed by end-2026 through the FMM-Australian Industry Group MoU. *Vietnam*: bilateral engagement under the Comprehensive Strategic Partnership – critical minerals cooperation proposal submitted to Vietnamese Ministry of Industry and Trade by end-2026, TAFE skills partnership formalised under AANZFTA by mid-2027. *Thailand*: TAFTA Joint Committee – battery materials standards alignment proposed by end-2026, Board of Investment engagement initiated through Austrade’s Thailand office.

Verification: Each bilateral activation track is verified by specific institutional outputs: for Indonesia, the establishment of a Critical Minerals Working Group under IA-CEPA and the signing of a Ministerial Statement; for the Philippines, formal adoption of critical minerals as a standing Trade Investment Dialogue agenda item; for Malaysia, a documented agenda item on rare earth cooperation at MAFTA Joint Committee; for Vietnam, a signed MoU on critical minerals cooperation under the Comprehensive Strategic Partnership; for Thailand, a formal proposal to the TAFTA Joint Committee on battery materials standards. These outputs are tracked through the domestic Critical Minerals Trade Strategy Group (Section 3.5) and reported in its annual Critical Minerals Trade Report to Parliament.

Priority status: *Essential*. Bilateral mechanism activation translates the multilateral cooperation chapter activation (Section 2.1) into country-specific implementation. Without bilateral institutional engagement, multilateral provisions remain abstract.

Comparative receptivity: Indonesia and the Philippines are the most receptive partners for immediate bilateral activation, based on demonstrated industry advocacy and institutional counterpart readiness. Indonesia’s KADIN has explicitly called for deeper critical minerals cooperation and the Western Australia-KADIN Plan of Action (July 2023) provides a functioning bilateral model.^[13:1] The Philippines’ Chamber of Mines has adopted TSM and publicly characterised Australian partnership as a “perfect match” for complementary resources.^[15] Vietnam offers high-level political receptivity but limited industry-level institutional counterpart for FTA-specific engagement – the VCCI’s engagement with Australia has focused on skills development rather than trade agreement utilisation.^[16] Thailand presents the most significant engagement gap: no Thai industry association or business leader has publicly articulated specific views on Australian critical minerals partnership during 2023–2025, despite Thailand’s acute need for battery material inputs – engagement should target the Federation of Thai Industries’ Auto Parts Club and the Board of Investment directly.^[17] Malaysia’s bilateral activation should proceed through the FMM-Australian Industry Group MoU (renewed 2025) and the Lynas relationship, using these commercial anchors to build institutional engagement that MAFTA’s limited joint committee structure has not generated organically.

3. Tier 2: Institutional and Administrative Enhancements

3.1 Standing Critical Minerals Business Advisory Mechanism

Rationale: Stakeholder consultations identified the absence of a permanent business-government advisory mechanism as the most critical institutional gap. Current engagement was characterised as “transactional” – individual missions rather than ongoing dialogue – leaving no structured link between agreement text and economic outcome.^[18]

The most directly relevant precedent is the 2016 Indonesia-Australia Business Partnership Group’s *Two Neighbours, Partners in Prosperity* report – the only cross-border industry consensus submission between Indonesian and Australian peak bodies (ACCI, AIBC, IABC, KADIN, Ai Group, APINDO). Stakeholder consultations identified this as an unreplicated model that should be revived and adapted for critical minerals.^[19] The sector is particularly suited to a standing advisory mechanism because supply chain decisions – mine-to-processor offtake agreements, joint venture

structures, ESG certification pathways — require multi-year commercial commitments that episodic government engagement cannot support.

A feasibility caveat is warranted: not all Southeast Asian partners share Australia's tradition of formalised business-government advisory mechanisms. Indonesia's KADIN model provides a strong institutional counterpart, but smaller partner countries may lack equivalent peak-body infrastructure or government appetite for structured external input. The mechanism should therefore be piloted bilaterally with Indonesia (where the 2016 IABPG precedent demonstrates feasibility) and the Philippines (where the Chamber of Mines provides an established industry voice), before extending to partners where institutional readiness is less developed.^[19:1]

Model Terms of Reference:

Name: Australia-[Partner Country] Critical Minerals Business Advisory Council

Mandate: Advise the Joint Committee [or equivalent bilateral mechanism] on practical implementation of FTA provisions relevant to critical minerals supply chain integration, identify barriers and opportunities, and recommend priority actions.

Composition:

- 8–12 members from each country, appointed jointly by trade ministers
- Private sector: mining companies, METS providers, processing firms, financial institutions
- Academic and civil society: critical minerals researchers, standards bodies, Indigenous representatives
- Government observers: trade, resources, environment, and finance portfolio officials

Functions:

- Biannual meetings (rotating between partner countries) with intersessional working groups
- Annual report to the Joint Committee identifying: (a) FTA provisions underutilised by business; (b) behind-the-border barriers encountered in practice; (c) priority actions for the coming year
- Input into services schedule reviews, standards negotiations, and cooperation program design
- Facilitation of business-to-business partnerships across supply chains

Resourcing:

- Secretariat: 2–3 FTE per country, housed within existing trade promotion agencies (Austrade and equivalent), with a named coordination officer responsible for between-meeting implementation tracking
- Meeting costs shared between parties
- Working group activities resourced through Austrade and partner country trade promotion agencies
- Public reporting: annual reports published online; government response within 90 days identifying which recommendations will be actioned, which require further analysis, and which are not accepted — creating a public accountability loop
- Feedback loops: quarterly working-level consultations between secretariat staff and sector associations (Austmine, KADIN, Philippine Chamber of Mines) to surface emerging barriers between biannual council meetings

Priority status: *Important but secondary.* The business advisory mechanism is a governance enabler — it improves FTA implementation quality across all other provisions but does not itself create market access or reduce compliance costs. Its value is highest once Tier 1 activation has created the institutional agenda items and Tier 3 provisions have created the substantive commitments that the council monitors. Pilot with Indonesia first (where the 2016 IABPG precedent and KADIN institutional capacity demonstrate feasibility), then the Philippines (where the Chamber of Mines provides an established industry voice), before extending to other partners.

Negotiation vehicle and timeline: The advisory council is established by joint committee decision under the relevant FTA — no treaty amendment required. For Indonesia, DFAT proposes establishment through the IA-CEPA Joint Committee following the General Review, targeting Terms of Reference agreed by mid-2028 and the first council meeting by end-2028. For the Philippines, the council is proposed through the bilateral Trade Investment Dialogue or AANZFTA Committee, targeting establishment by end-2028. Extension to Vietnam, Malaysia, and Thailand follows successful bilateral piloting — targeted for 2030–2031. Resourcing (2–3 FTE per country, meeting costs, working group activities, and travel support for industry representatives) is modest — estimated at A\$1.5–2.5 million annually per bilateral council — and can be housed within existing trade promotion agencies (Austrade, Indonesia Trade Promotion Centre/ITPC, Philippine Trade and Investment Center).

Verification: The council's Terms of Reference (above) build in accountability: annual reports to the Joint Committee are published online, with a 90-day government response identifying which recommendations are actioned, which require further analysis, and which are not accepted. The council's effectiveness is assessed at the five-year comprehensive review (Section 5.4) against three metrics: (a) number of FTA utilisation barriers identified and resolved; (b) proportion of recommendations actioned by government; (c) business satisfaction with the mechanism as assessed through AustCham ASEAN's annual business survey.

3.2 Standards Mutual Recognition Arrangements

Rationale: Standards harmonisation emerged from consultations as the most consistently emphasised modernisation priority. An industry participant reported compliance costs that make products 25–30% more expensive than competitors operating below equivalent standards — a disadvantage that only harmonisation or mutual recognition can address.^[20]

Mutual recognition does not require complete standards alignment. It requires agreement that each party's standards, while differing in methodology, achieve functionally comparable results on the dimensions that matter for supply chain compliance: environmental impact assessment rigour, labour rights protection, community consultation adequacy, and product quality certification. For critical minerals, this is not abstract — it is the precondition for commercially viable joint supply chains. A lithium hydroxide producer in Western Australia selling to a cathode manufacturer in Indonesia currently faces duplicative environmental compliance, separate ESG certification, and non-aligned product specifications across jurisdictions. Each layer adds cost that undermines the case for regional processing over direct export to China. Government-to-government organic equivalence arrangements demonstrate the mutual recognition pathway in practice.^[21]

This ambition exceeds what any ASEAN partner has agreed to in an existing FTA for the mining sector. The Philippines' TSM adoption provides a bilateral foundation with one partner, but Indonesia, Vietnam, Malaysia, and Thailand have not adopted equivalent mining sustainability frameworks, and their standards bodies may lack the technical capacity for the equivalency mapping envisaged here. Continued standards fragmentation will, however, increasingly exclude Australia-ASEAN supply chains from EU and US market access as those jurisdictions tighten due diligence requirements. The component-based approach below makes progress achievable even where full mutual recognition is premature.

Model MRA Framework:

Priority Area 1 — Environmental Impact Assessment Component Equivalences:

- Full mutual recognition of EIAs is a long-term objective; near-term work should focus on establishing component equivalences — identifying specific assessment elements (biodiversity impact, water quality, community consultation processes) where each party's methodology produces assessments that satisfy the same substantive benchmarks, defined by reference to OECD Due Diligence Guidance criteria and EU Battery Regulation due diligence requirements
- Establish a joint technical committee to map EIA requirement equivalences across these components, producing an equivalency matrix that enables streamlined supplementary assessments rather than duplicative full assessments

- Where component equivalence is established, recognise that completed assessment elements under Australian law (EPBC Act) satisfy partner country requirements for the equivalent component, and vice versa – reducing but not eliminating host-country assessment requirements
- Develop shared minimum standards for components where full equivalence does not yet exist
- Precedent: EU-Chile AFA joint commitment to EIA principles and public participation in environmental decision-making^[22]

Priority Area 2 – ESG and Sustainability Certification:

- Build on the Philippines' TSM adoption as a pilot for mutual recognition of mining sustainability certification
- Develop an Australia-ASEAN ESG certification framework, building on the Australian Agricultural Sustainability Framework model (\$9 million government funding across two stages, 2020–2026, with NFF custodianship)^[23]
- Align with EU Battery Regulation due diligence requirements to ensure that mutually recognised certifications satisfy third-market regulatory requirements
- Precedent: US-Japan CMA Articles 4–5 requiring "high levels of environmental protection" and ILO-aligned labour rights^[24]

Priority Area 3 – Technical Standards for Battery-Grade Materials:

- Harmonise specifications for battery-grade lithium hydroxide, nickel sulphate, and rare earth products
- Develop shared testing and certification protocols recognised across ASEAN and Australian markets
- Create digital certification infrastructure compatible with EU battery passport requirements

Priority Area 4 – Professional Qualifications:

- Expand beyond the eight professions currently covered by ASEAN MRAs (engineering, nursing, architecture, surveying, medicine, dentistry, accountancy, and tourism)^[25]
- Prioritise mining engineers, environmental assessors, geological scientists, and processing plant operators
- Build on IA-CEPA skills exchange provisions and TAFE partnerships

Priority status: *Essential.* Standards mutual recognition is the most consistently emphasised modernisation priority identified in stakeholder consultations. Without it, compliance cost asymmetries of 25–30% render joint supply chains commercially unviable against competitors operating below equivalent standards. It is also the precondition for Tier 3 green rules of origin (Section 4.3) and ESG standards integration (Section 4.4) – both of which depend on the equivalency mapping and mutual recognition infrastructure developed here.

Negotiation vehicle and timeline: MRAs are negotiated as side arrangements under existing FTAs, not as treaty amendments – they require ministerial approval but not parliamentary ratification. The institutional vehicle differs by partner: for Indonesia, the IA-CEPA Economic Cooperation Committee; for the Philippines, a bilateral arrangement anchored to AANZFTA's TSD chapter; for Vietnam and Malaysia, CPTPP's environment chapter (Article 20.15) provides the high-standard baseline that can be supplemented by bilateral technical cooperation. The joint technical committees for EIA component equivalency mapping draw on existing institutional expertise – DCCEEW for Australian EIA standards, and equivalent agencies in partner countries (Indonesia's AMDAL system, Philippines' EIS system under DENR). Timeline: joint technical committee established with the Philippines by end-2027 (building on existing TSM alignment), with the first component equivalency mapping completed by end-2028. Indonesia's EIA component mapping initiated by mid-2028, targeting first component equivalences by end-2029. Battery-grade materials technical standards (Priority Area 3) with Thailand initiated by end-2027, targeting harmonised specifications by end-2029.

Verification: Each MRA includes a built-in review cycle. The joint technical committees publish equivalency matrices showing which assessment components are mutually recognised, updated annually. The compliance cost impact is measured against the documented 25–30% ESG compliance cost premium baseline — the target is a measurable reduction of at least 10 percentage points within three years of each MRA entering into force. Third-party compliance is verified by mutual audit arrangements: each party's standards body conducts periodic verification of the other party's certification processes, with audit results reported to the Joint Committee.

Country differentiation: Partner readiness for mutual recognition varies sharply. The *Philippines* is the most advanced: its adoption of TSM (all 19 COMP member-companies with operating mines implementing the framework) provides a bilateral foundation for ESG certification mutual recognition that does not exist with any other partner.^[26] "Equivalent outcomes" in this context means that Australian and Philippine sustainability assessments, while using different methodologies (TSM protocols for Australia and Philippines versus non-aligned national frameworks elsewhere), produce certification results that satisfy the same substantive benchmarks — specifically, the OECD Due Diligence Guidance requirements that underpin EU Battery Regulation compliance from 2027. *Indonesia* presents the greatest challenge: its environmental assessment framework (AMDAL) differs substantially from Australian EPBC Act requirements in methodology, public participation requirements, and enforcement consistency across provinces. The component-based approach — establishing equivalence for specific assessment elements (water quality, biodiversity impact) rather than whole-of-framework recognition — is designed precisely for this context. *Vietnam* and *Malaysia*, as CPTPP parties, have accepted higher environmental and labour standards than non-CPTPP partners, providing a stronger baseline for equivalency work. *Thailand* lacks equivalent mining sustainability frameworks, making full mutual recognition premature — initial engagement should focus on the narrower task of battery-grade materials technical standards (Priority Area 3), where Thai automotive industry standards bodies have relevant expertise.

Resourcing: The Australian Agricultural Sustainability Framework (A\$9 million government funding with NFF custodianship) provides a cost benchmark for a comparable cross-jurisdictional standards framework. EIA component equivalency mapping would require a dedicated technical secretariat of 4–6 specialists for approximately 18 months per bilateral partner, estimated at A\$1.5–2 million per partner. These costs are modest relative to the compliance savings: if mutual recognition reduces the documented 25–30% ESG compliance cost premium by even half, the return to industry substantially exceeds the government investment.

3.3 Trade Facilitation Digitisation

Rationale: Administrative barriers — customs documentation, certification requirements, permitting delays — emerged from both the Evidence Review and stakeholder consultations as significant sources of trade friction. A workshop participant identified the absence of clear communication protocols and decision timelines within FTA frameworks as a costly implementation failure: companies invest in extended negotiations and receive no definitive answer — a "slow maybe" that is extremely expensive in practice.^[27]

Model Digital Trade Facilitation Provisions:

Self-certification of origin:

- Extend CPTPP's Declaration of Origin model to all Australia-Southeast Asia FTAs
- Enable approved exporters to self-certify compliance with rules of origin without third-party verification
- Reduce the cost identified by the Australian Dairy Industry Council as a significant administrative burden^[28]
- Self-certification addresses a compounding problem specific to critical minerals: battery-grade materials often cross multiple borders during processing (ore from Australia, intermediate processing in Indonesia, final refining in Malaysia), and each border crossing under current

rules requires separate third-party origin certification — a cost and delay multiplier that vertically integrated Chinese supply chains do not bear

Electronic certification:

- Develop digital certificates of origin for critical minerals with embedded data fields for: mineral type and grade; processing history (origin-conferring transformations); carbon footprint data; ESG certification status; supply chain traceability identifiers
- Align with ASEAN Single Window initiatives for customs interoperability
- Pilot distributed ledger technology for tamper-proof cross-border verification

Streamlined decision processes:

- Establish maximum response timelines for investment approvals, export permits, and import licensing related to critical minerals (following the EU-Chile model of transparent licensing procedures). Permitting delays determine whether processing investment goes to ASEAN or to competing jurisdictions where regulatory timelines are predictable, including Chinese-backed industrial parks offering turnkey approvals
- Create digital tracking systems enabling applicants to monitor approval status
- Implement automatic escalation provisions: where no response is received within the prescribed timeline, the application is escalated to a senior designated official for determination within 15 business days. This avoids the sovereignty concerns raised by deemed-approval mechanisms while ensuring that administrative inaction does not function as an indefinite de facto refusal

Priority status: Self-certification of origin is *essential* — it directly reduces the compounding cost of multi-border origin certification that disadvantages Australia-ASEAN supply chains against vertically integrated Chinese competitors. Electronic certification and digital tracking are *important but secondary* — they improve efficiency but are not preconditions for supply chain viability.

Negotiation vehicle and timeline: Self-certification extension requires joint committee decisions under AANZFTA and each bilateral agreement — CPTPP already provides the model. Australia proposes self-certification extension through the AANZFTA Committee as part of the 2025 upgrade implementation, targeting agreement by end-2027 and operational self-certification for critical minerals by mid-2028. Electronic certification development aligns with the ASEAN Single Window initiative. The pilot distributed ledger technology for cross-border verification draws on the Everledger-Australian Federal Government blockchain platform for critical minerals digital certification, which is already operational for Australian producers — extending to Indonesia's INSW (targeting Sulawesi nickel processing hubs) by end-2029.^[29]

Verification: Self-certification adoption is verified by tracking the proportion of critical minerals shipments using self-certification versus third-party origin certification — the target is 80% self-certification coverage for critical minerals transactions under AANZFTA within two years of operational launch. Electronic certification uptake is measured through the ASEAN Single Window platform's transaction data. The streamlined decision process provisions (maximum response timelines) are verified through the digital tracking systems that the provisions themselves mandate — permitting delays exceeding the prescribed timelines are reported to the Joint Committee through the automatic escalation mechanism.

Country differentiation: Customs modernisation capacity varies significantly. *Malaysia* and *Singapore* (as CPTPP parties) already operate self-certification regimes and have advanced customs digitisation — extending electronic certification to these partners is technically straightforward. *Indonesia's* customs system has undergone significant modernisation through the Indonesia National Single Window (INSW), but implementation remains uneven across ports and commodity categories; pilot programmes should target Sulawesi's nickel processing hubs where customs volumes are highest. *Philippines* and *Vietnam* have less developed digital customs infrastructure — the digital certification provisions should include capacity-building components resourced through AANZFTA's Implementation Support Programme. *Thailand's* customs system is

relatively advanced for automotive trade but has not been adapted for battery-grade mineral classifications — the HS code classification work proposed in Section 2.3 is a prerequisite for effective digital certification.

Resourcing: Self-certification extension is low-cost (administrative action through joint committee decisions). Electronic certification infrastructure — digital certificates of origin with embedded traceability data — requires investment in software development and systems integration with partner country customs platforms. The Australian Government's investment in the Everledger blockchain platform demonstrates feasibility, but scaling to cover all five partner countries would require estimated investment of A\$5–10 million over three years, drawing on AANZFTA Implementation Support Programme funding and bilateral economic cooperation programmes.

3.4 Circular Economy Regulatory Alignment

Rationale: Battery end-of-life management represents an emerging frontier that existing FTA architecture does not address. The Basel Convention's "waste-versus-product" classification creates a regulatory barrier to cross-border flows of materials with recycling value, and stakeholder consultations identified inconsistencies in current regulatory approaches as hindering the growth of the nascent battery recycling industry.^[30]

Model Provisions:

Basel Convention bilateral understandings:

- Negotiate agreed classifications for end-of-life batteries, solar panels, and critical mineral-bearing electronic waste — distinguishing materials destined for recycling and resource recovery from hazardous waste destined for disposal
- Establish pre-approved pathways for cross-border movement of materials to accredited recycling facilities
- Create shared facility accreditation standards that satisfy both parties' environmental protection requirements
- Feasibility caveat: Basel Convention reclassification is technically achievable through bilateral understandings but politically sensitive in Southeast Asia, where concerns about becoming a "dumping ground" for developed-country waste are deeply held. Indonesia and the Philippines have both turned back waste shipments in high-profile incidents. The critical minerals framing — positioning end-of-life batteries as a valuable secondary resource for cobalt, lithium, and nickel recovery, not as waste — is essential for political feasibility. Pilot arrangements should begin with the highest-value, lowest-controversy material streams (spent EV batteries containing recoverable lithium and cobalt) before extending to more heterogeneous waste categories

Extended Producer Responsibility harmonisation:

- Develop compatible EPR frameworks for batteries and solar panels across Australia and Southeast Asian partners
- Enable cross-border fulfilment of EPR obligations — so that an Australian manufacturer's EPR responsibility can be fulfilled through an accredited Southeast Asian recycling facility (and vice versa)
- Align with EU Battery Regulation recycled content targets (16% cobalt, 6% lithium, 6% nickel from 2031)^[31]
- This provision is ambitious: no Southeast Asian country currently operates a battery-specific EPR scheme, and Australia's own product stewardship framework for batteries is voluntary. It therefore anticipates regulatory developments that are probable but not yet enacted. Embedding cross-border EPR in the FTA architecture now is warranted because the EU Battery Regulation's recycled content mandates will create demand for recovered critical minerals that joint Australia-ASEAN recycling infrastructure can capture — but only if cross-border regulatory pathways are established before the 2031 compliance deadline

Regional battery passport interoperability.

- Develop technical standards for battery passport data that are interoperable across Australia, ASEAN, and the EU
- Enable tracking of materials through multiple processing stages and across borders
- Create the data infrastructure for green rules of origin (Section 4.3)

Priority status: *Important but secondary.* Circular economy provisions anticipate regulatory developments that are probable but not yet enacted in most partner countries. Their strategic value is positioning joint supply chains to capture EU Battery Regulation recycled content mandates from 2031, but they are not preconditions for immediate supply chain integration. The Basel Convention bilateral understandings are the exception – without them, cross-border flows of end-of-life battery materials for recycling remain legally uncertain.

Negotiation vehicle and timeline: Basel Convention bilateral understandings are negotiated government-to-government through environment ministries (DCCEEW and partner country equivalents), not through FTA joint committees – though FTA economic cooperation chapters provide the mandate. Australia initiates Basel Convention bilateral discussions with Thailand (highest priority given its large EV fleet) and Indonesia by 2028, targeting agreed classifications for spent EV batteries by 2030 – well before the EU Battery Regulation's 2031 recycled content deadlines. EPR framework cooperation operates through regulatory dialogues between environment agencies, with initial bilateral dialogues by 2029. Battery passport interoperability is coordinated through AANZFTA's TSD chapter (Chapter 13, Article 2, circular economy in manufacturing cooperation), with technical standards development initiated by 2028 to ensure alignment with EU battery passport requirements before they become binding.

Verification: Basel Convention bilateral understandings are verified by the existence of signed bilateral instruments with agreed material classifications and pre-approved pathways for cross-border movement. The number and volume of cross-border material flows through pre-approved pathways is tracked annually by the AANZFTA TSD Committee. Facility accreditation under shared standards is verified through mutual audit arrangements between environment agencies.

Country differentiation: *Thailand* is the most immediate partner for circular economy cooperation: its large and growing EV fleet (66,000+ BEV registrations in 2024) will generate the region's largest end-of-life battery volumes within the decade, creating both a recycling resource stream and a regulatory imperative.^[32] *Indonesia* presents political sensitivity around Basel Convention reclassification, given high-profile incidents of waste shipment returns, but the critical minerals framing – positioning spent EV batteries as a valuable secondary resource rather than waste – may be more feasible with Indonesia than with partners where the battery recycling industry is less developed. *Philippines, Vietnam, and Malaysia* currently lack battery-specific recycling infrastructure, making circular economy provisions aspirational for these partners in the near term.

3.5 Domestic Enabling Architecture for FTA Implementation

Rationale: Tier 3 provisions – critical minerals chapters, services commitments, green rules of origin, investment facilitation – require domestic institutional capacity to implement effectively. Critical minerals trade sits at the intersection of trade policy (DFAT), resources policy (DISR), environmental regulation (DCCEEW), and investment policy (Treasury/EFA), and stakeholders consistently identified the absence of coordination across these portfolios as a systemic impediment.^[33] A METS company seeking to provide environmental consulting services in Indonesia under liberalised Mode 3 access, for example, needs aligned positions from trade negotiators (on services schedule commitments), environmental regulators (on EIA mutual recognition), and investment agencies (on foreign equity rules) – yet no mechanism currently ensures these positions are coherent.

Model Mechanism:

Australian Government.

- Establish a Critical Minerals Trade Strategy Group at senior officials level
- Membership: DFAT, DISR, DCCEE, Treasury, Export Finance Australia, relevant state government agencies
- Meeting frequency: quarterly, with intersessional working groups on specific issues
- Mandate: develop and maintain a unified Australian position on critical minerals trade and investment; coordinate FTA implementation across portfolios; manage the interface between trade, environmental, and industry development objectives – specifically ensuring that the standards mutual recognition (Section 3.2), investment facilitation (Section 4.5), and ESG safeguard (Section 4.4) provisions operate coherently rather than at cross-purposes
- Reporting: annual Critical Minerals Trade Report to Parliament covering FTA implementation outcomes, utilisation data, and progress on the three-tier framework

Bilateral coordination: DFAT should propose, through each bilateral joint committee, that partner countries establish equivalent cross-departmental coordination mechanisms for critical minerals trade. Joint coordination between Australian and partner country officials should be formalised as a standing agenda item in existing institutional mechanisms (joint committees, economic cooperation committees) under Section 4.1.

Priority status: *Essential.* Cross-portfolio coordination is a precondition for coherent FTA implementation – without it, trade negotiators, environmental regulators, and investment agencies produce conflicting positions that undermine the integrity of commitments made through each provision in this paper. The domestic coordination gap is a systemic impediment, not a marginal efficiency problem.

Negotiation vehicle and timeline: The Critical Minerals Trade Strategy Group is established by ministerial direction – no legislative or treaty action required. DFAT proposes establishment to the Minister by mid-2026, with the first meeting convened by end-2026. The Group’s mandate covers coordination of all FTA implementation activities described in this paper. The first annual Critical Minerals Trade Report to Parliament is tabled by mid-2027, establishing the baseline data against which subsequent progress is measured.

Verification: The annual Critical Minerals Trade Report to Parliament serves as the primary accountability mechanism, covering: FTA implementation progress against the three-tier framework timeline (Section 5.2); utilisation data for critical minerals trade by agreement and partner country; status of standards mutual recognition negotiations; investment facilitation outcomes; and identified cross-portfolio coordination failures requiring remediation. The Report is a public document subject to parliamentary scrutiny.

Resourcing: The Critical Minerals Trade Strategy Group operates within existing public service capacity – it requires senior officials’ time and secretariat support (1-2 FTE), not new funding. The annual Critical Minerals Trade Report to Parliament requires data collection and analysis capacity that can be embedded within DFAT’s existing trade statistics and reporting functions, supplemented by the utilisation data generated through the business advisory mechanism (Section 3.1).

3.6 Track 1.5 Critical Minerals Dialogue

Stakeholders across government, industry, and academia independently identified the absence of a standing informal dialogue as a structural gap in Australia’s critical minerals engagement with Southeast Asia.^[34] University-based and think-tank convening was specifically recommended, providing a space more substantive than trade missions but less formal than ministerial meetings – enabling the candid, Chatham House Rule exchange that official settings constrain.

The model should be a biannual Track 1.5 dialogue, co-hosted by Australian and Southeast Asian research institutions, building on the precedent of existing Track 1.5 critical minerals dialogues involving Australia, the United States, Japan, and South Korea.^[35] Government participation should be at senior officials level, with industry and civil society representation ensuring that implementation realities inform policy discussions. The dialogue serves four functions: validating

implementation progress against the roadmap in Section 5, identifying emerging barriers before they become entrenched, testing proposed provisions with practitioners before formal negotiation, and maintaining relationship continuity between official meetings. Estimated resourcing is A\$300,000–500,000 per biannual meeting cycle, covering travel, venue, research preparation, and participant support for Southeast Asian government officials and researchers, drawn from FTA economic cooperation provisions or dedicated research council funding.

Negotiation vehicle and timeline: The Track 1.5 dialogue is established through a partnership between an Australian research institution (e.g., UNSW, ANU, or a policy institute) and a Southeast Asian counterpart, funded through FTA economic cooperation provisions or dedicated research council funding. DFAT commissions a scoping study for the dialogue by end-2026, with the first biannual meeting convened by mid-2027 — timed to coincide with the initial outputs of Tier 1 activation (supply chain mapping, standards gap analysis) to ensure substantive agenda content from the outset.

Verification: The dialogue produces a published communique after each meeting identifying: (a) implementation progress validated by participants; (b) emerging barriers requiring government attention; (c) provisions under development where practitioner input has been sought. The communique is provided to each bilateral Joint Committee and to the domestic Critical Minerals Trade Strategy Group (Section 3.5) for formal consideration. Participation metrics — number and seniority of government officials, breadth of industry and civil society representation, geographic coverage of Southeast Asian partners — are tracked across meetings.

Priority status: *Important but secondary.* The Track 1.5 dialogue is a governance quality measure — it improves the candour, evidence base, and political sustainability of FTA implementation but does not itself create market access or reduce compliance costs. Its value is highest when Tier 1 activation has created substantive agenda items for the dialogue to assess and when Tier 3 negotiations are underway.

4. Tier 3: Targeted New FTA Provisions

This section presents model treaty language for provisions requiring formal negotiation, using placeholder numbering (Article X, X+1, etc.) for adaptation to each agreement's article sequencing. Each provision is accompanied by rationale, international precedent, and adaptation guidance. The nine provisions address gaps across the critical minerals supply chain: market access and resource security (4.1), services and processing (4.2–4.3), standards and governance (4.4–4.6), and broader participation (4.7–4.9). Parties would typically adopt the critical minerals chapter (4.1) as the anchor and select companion provisions appropriate to their bilateral context. Throughout this section, "Parties" refers to the contracting parties to any given bilateral agreement. For multilateral AANZFTA provisions, adaptation guidance should substitute "Members" or "Member States" as appropriate to AANZFTA treaty text.

4.1 Critical Minerals Chapter

Precedent: The US-Japan Critical Minerals Agreement (March 2023) provides the most directly relevant model — a compact, focused agreement covering definitions, market access commitments, ESG safeguards, and institutional mechanisms. The EU-Chile Advanced Framework Agreement's Energy and Raw Materials chapter offers a more comprehensive model with binding dispute settlement.^[36]

Model Article X: Objectives

The objectives of this chapter are to:

- (a) facilitate trade and investment in critical minerals between the Parties, in a manner that supports joint value chain development and mutual economic benefit;
- (b) promote the diversification and resilience of critical minerals supply chains;

(c) support high levels of environmental protection and labour rights in critical minerals extraction, processing, and trade;

(d) encourage cooperation on standards, technology transfer, and capacity building in critical minerals processing;

(e) establish institutional mechanisms for ongoing dialogue and implementation review.

Model Article X+1: Definitions

"Critical minerals" means those minerals listed in Annex [X], as updated by the Joint Committee. The initial list shall include, at minimum: lithium, nickel, cobalt, rare earth elements, manganese, graphite, vanadium, and such other minerals as the Parties may agree.

"Listed Critical Minerals" means those minerals listed in Annex [X], as may be amended by the Joint Committee pursuant to the biennial review provision.

Drafting note: Following the US-Japan CMA model, the mineral list should be housed in an updatable annex amendable by joint committee decision, future-proofing the agreement as battery chemistries and technology requirements evolve.^[37] The initial list should be the intersection of each Party's national critical minerals list, ensuring that all listed minerals are recognised as critical by both Parties. Minerals appearing on one Party's list but not the other's may be included in a supplementary annex subject to narrower obligations (transparency and cooperation but not export duty disciplines), recognising that criticality assessments reflect different industrial structures and development priorities.

Model Article X+2: Export Duty Discipline

1. Each Party shall maintain its current practice not to impose export duties, taxes, or charges on exports of Listed Critical Minerals to the territory of another Party.
2. For greater certainty, paragraph 1 does not require a Party to modify any measure in effect on the date of entry into force of this Agreement.
3. Paragraph 1 shall not preclude a temporary surcharge not exceeding 5% ad valorem for a period not longer than 180 days, strictly to address a Critical Supply Emergency as determined under Article X+3(4).
4. Each Party shall promptly notify the other Party of any measure adopted under paragraph 3 and shall enter into consultations on the measure within 30 days of its adoption.

Precedent: Adapted from Article 3.2–3.3 of the US-Japan Critical Minerals Agreement.^[38]

Adaptation note: The "maintain current practice" formulation (paragraph 1) combined with the grandfathering clause (paragraph 2) addresses a critical political reality: Indonesia's nickel ore export ban predates this Agreement and would be explicitly preserved. This makes the provision politically achievable for Indonesia while preventing future escalation. For countries that currently maintain export duties on specific minerals (e.g., Vietnam under CPTPP Annex 2-C), a supplementary annex listing existing duties and binding phase-down schedules — following the CPTPP tariff elimination schedule model — may be more appropriate than the standstill approach alone. A sceptic might object that WTO jurisprudence on export duties remains weak: GATT Article XI disciplines apply unevenly, the WTO panel in *Indonesia — Nickel Ore* (DS592) addressed export prohibitions but not the downstream processing mandates that are Indonesia's core industrial strategy, and enforcement depends on compliance incentives the WTO currently lacks. This is precisely why the bilateral FTA framing is preferable — it replaces an uncertain multilateral enforcement pathway with a negotiated standstill backed by bilateral institutional mechanisms and the commercial incentive of continued preferential market access.

Country-specific adaptation: The export duty discipline provision requires fundamentally different framing for each partner. *Indonesia:* the grandfathering clause is designed for Indonesia

specifically — successive administrations (Jokowi through Prabowo) maintain “hilirisasi” (downstreaming) policies as a core industrial strategy, and any provision perceived as constraining this approach will be rejected. The provision is achievable because it does not require reversal of the 2020 nickel ore export ban but does prevent future escalation to processed products.^[39] *Philippines*: the provision is straightforward — the Philippines does not maintain export duties on nickel or chromite and has explicitly opposed export bans through industry bodies (PNIA characterised them as “ill-timed”).^[40] *Vietnam*: CPTPP Annex 2-C carve-outs on certain mineral exports reflect Vietnam’s similar resource nationalism instincts, though at a less advanced stage than Indonesia’s — a phased approach with binding reduction schedules is more appropriate than a standstill. *Malaysia*: the 2024 export moratorium on raw rare earths signals movement toward Indonesia-style downstream mandates — the provision should be introduced before this trajectory hardens. *Thailand*: as a net mineral importer for its EV/battery manufacturing, Thailand has no interest in export restrictions on critical minerals and would accept this provision readily.

Model Article X+3: Non-Market Practices and Supply Security

1. The Parties shall confer at least annually to share information on production, processing capacity, stockpile levels, and price developments for Listed Critical Minerals.
2. Each Party shall maintain transparency in the administration of any measures affecting the export or import of Listed Critical Minerals, including licensing, permitting, and allocation procedures. Each Party shall publish and maintain an online register of all measures, updated quarterly, including: (a) licensing and permitting requirements and processing timeframes; (b) allocation procedures and quota administration; (c) any changes to export duties, royalties, or processing requirements.
3. The Parties shall cooperate to address non-market policies and practices that distort trade in critical minerals. For the purposes of this Article, “non-market policies and practices” includes: (a) state-directed pricing or production quotas that artificially suppress market prices; (b) subsidies that create overcapacity in processing or refining; (c) forced technology transfer as a condition of market access or investment approval; (d) strategic withholding of supply for coercive purposes; and (e) opaque government procurement preferences that discriminate against foreign-origin minerals. For greater certainty, this paragraph does not create an obligation for a Party to take action against entities of a non-Party or to impose measures affecting its commercial relationships with non-Parties.^[41]
4. In the event of a supply disruption affecting Listed Critical Minerals, the Parties shall consult within 10 days to assess the disruption and coordinate response measures.

Precedent: Article 3.4 of the US-Japan CMA mandates conferring on “best practices regarding review of investments by foreign entities for national security.” The IPEF Supply Chain Agreement (signed November 2023) includes an early warning system for supply disruptions, providing a multilateral model for disruption response, focusing on critical minerals information-sharing and coordinated shortage response.^[42] CPTPP Chapter 17 provides the most relevant existing precedent that Southeast Asian partners have actually accepted: its state-owned enterprise disciplines require SOEs to act on commercial considerations when buying or selling, and prohibit discrimination against other members’ firms — disciplines that indirectly address several of the non-market practices enumerated in paragraph 3.^[43] Vietnam and Malaysia have accepted these SOE disciplines under CPTPP, providing a partial foundation for the more specific critical minerals application proposed here. The February 2026 trilateral statement by the EU, Japan, and the US on advancing “critical minerals supply chain resilience” signals growing international momentum toward coordinated non-market practices disciplines, including “coordinated trade policies and mechanisms” to address market distortions.^[44]

Feasibility caveat: The non-market practices provision goes further than anything Southeast Asian partners have agreed to in existing FTAs with Australia. ASEAN members have consistently resisted provisions that could be read as targeting specific third-party trading relationships — particularly with China, the dominant buyer of Indonesian nickel, Vietnamese rare earths, and Philippine chromite. The “for greater certainty” clause in paragraph 3 (no obligation to act against non-Parties) is essential for political feasibility, but even with this safeguard, Indonesia and Vietnam

may resist an enumerated definition of non-market practices. The provision is nonetheless worth proposing because the non-market practices it describes – price suppression through subsidised overcapacity, strategic supply withholding, forced technology transfer – are precisely what undermine critical minerals supply chain resilience. Framing matters: “market integrity” and “fair pricing” are objectives that Indonesia and Vietnam share as producers vulnerable to the same price suppression dynamics that disadvantage Australian miners. “Non-market economy” language, by contrast, triggers political resistance by implying a judgement about a trading partner’s economic system rather than about specific distortive practices.

Country-specific receptivity: *Philippines* is the most receptive to non-market practices provisions – it has experienced direct consequences of price suppression in its nickel sector and has lower political sensitivity about Chinese economic relationships than Indonesia or Vietnam. *Vietnam* and *Malaysia*, as CPTPP parties, have accepted state-owned enterprise disciplines (CPTPP Chapter 17) that provide a partial precedent, but extending these to the critical minerals context would require careful framing. *Indonesia* is the most resistant – the 2020 nickel ore export ban attracted almost US\$14 billion in smelter investment, with 75% or more from Chinese sources, and Chinese companies now control approximately 90% of investment in Indonesian nickel smelting. Any provision perceived as jeopardising this dominant capital inflow will face opposition from both government and KADIN.^[45] The strategic case – that dependence on a single source of processing capital creates its own vulnerability – should be made through the annual conferring mechanism (paragraph 1) before proposing the more specific disciplines in paragraph 3.

Model Article X+4: ESG Safeguards

1. (a) Each Party shall not waive or derogate from its environmental laws to encourage trade or investment in Listed Critical Minerals.

(b) Each Party shall endeavour to continue to improve its laws, regulations, and policies relating to environmental protection in the extraction, processing, and trade of Listed Critical Minerals, consistent with each Party’s commitments under international environmental agreements.

(c) The Parties recognise the following as relevant international benchmarks for the purposes of this Article: the Towards Sustainable Mining (TSM) framework, the Initiative for Responsible Mining Assurance (IRMA) standard, and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Drafting note: The three sub-paragraphs carry deliberately different legal weight. Paragraph 1(a) is a hard non-derogation obligation (“shall not”) – the floor preventing races to the bottom. Paragraph 1(b) is a best-efforts aspiration (“shall endeavour to”), recognising that partners are at different development stages. Paragraph 1(c) is declaratory – listing recognised benchmarks without obligating adoption, ensuring the provision remains current as standards frameworks evolve.

2. Each Party recognises the importance of labour rights in critical minerals supply chains and shall adopt and maintain laws and practices consistent with the ILO Declaration on Fundamental Principles and Rights at Work.
3. Each Party shall take measures to prohibit the importation of critical minerals produced using forced labour or child labour, consistent with its domestic legal frameworks and international obligations under the ILO Declaration on Fundamental Principles and Rights at Work.
4. Each Party shall require that authorisations for exploration and production of Listed Critical Minerals be preceded by environmental impact assessments conducted with public participation.
5. The Parties shall cooperate on responsible sourcing standards, including alignment with OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Precedent: Articles 4–5 of the US-Japan CMA (“Facilitating Sustainable and Equitable Supply Chains”). The EU-Chile AFA extends further, requiring EIA standards comparable to the EU’s and alignment with EU Battery Regulation due diligence requirements.^[46]

Rationale: Stakeholder consultations identified ESG standards as both a competitive advantage for Australia and a source of compliance cost asymmetry.^[47] ESG safeguards serve a dual function for critical minerals: they protect against reputational and regulatory risk that could disqualify joint supply chains from EU and US market access, and they create the differentiation justifying price premiums over lower-cost, lower-governance Chinese-processed alternatives. The provisions establish a floor preventing races to the bottom while recognising different development contexts – consistent with the Paris-style flexibility approach.

Feasibility caveat: The forced labour import prohibition (paragraph 3) and the EIA requirement (paragraph 4) exceed what most Southeast Asian partners have accepted in existing trade agreements. Indonesia’s artisanal and small-scale mining sector – significant for tin and gold, and growing for nickel laterite – operates in regulatory environments where forced labour prohibition enforcement is uneven. The Philippines’ IPRA framework supports paragraph 4 but other partners lack equivalent EIA public participation requirements. These provisions are nonetheless essential because without them, joint supply chains risk failing EU Battery Regulation due diligence requirements from 2027, rendering the entire FTA architecture commercially less valuable. The graduated legal weight – “shall not” for non-derogation, “shall endeavour” for improvement – provides the flexibility for partners at different implementation stages to engage honestly.

Priority status for Chapter 4.1 overall: *Essential.* The critical minerals chapter – or, where a full chapter is not achievable, a sector-specific side arrangement covering at minimum export discipline, ESG safeguards, and institutional mechanisms – is the anchor provision for the entire Tier 3 framework. Without this structural element, the remaining Tier 3 provisions (services, ROO, investment facilitation) lack the sector-specific context that connects them to critical minerals supply chain outcomes.

Negotiation vehicle and timeline: The critical minerals chapter can be pursued through three routes, with indicative timelines for each. (1) *IA-CEPA amendment:* the most developed institutional pathway – the General Review (submissions March 2026) establishes the mandate; negotiation of a critical minerals protocol begins in 2028 following Tier 1 activation and Tier 2 standards work; agreement is realistic by 2030–2031 given the institutional foundation. (2) *AANZFTA annex:* proposed through the AANZFTA Committee by 2028, but AANZFTA’s consensus-based ASEAN membership makes this slower – realistic conclusion by 2032–2033 with a shallower set of commitments. (3) *Standalone bilateral instrument:* following the US-Japan CMA model, a compact, focused agreement negotiable within 12–18 months once political commitment exists – this route is most appropriate for Indonesia (initiated 2028, concluded 2029) and Vietnam (initiated 2029, concluded 2030), where bilateral relationship depth warrants sector-specific treatment but resource nationalism complexity makes comprehensive FTA amendment politically challenging.

Verification: The critical minerals chapter includes its own institutional mechanisms: annual conferring on production, processing, and stockpile data (Article X+3); the export duty transparency register updated quarterly (Article X+2 and X+3); and ESG safeguard non-derogation obligations subject to state-to-state dispute settlement. Compliance with the export duty standstill is verified through the Joint Committee’s review of each party’s tariff schedules and measures register. Supply disruption response (Article X+3, paragraph 4) is verified by whether consultations commence within the prescribed 10-day timeline. The five-year comprehensive review (Section 5.4) provides the overarching assessment mechanism.

4.2 METS Services Commitments

The gap: Services incidental to mining remain entirely uncommitted under AANZFTA – a striking gap for a sector worth A\$17 billion in global exports in 2020, with 51% of total value destined for Southeast Asia, where over 100 Australian METS companies are active in Indonesia alone. Indonesia’s services restrictions are particularly severe, with foreign equity caps and restrictive licensing affecting engineering, construction, and technical consulting.^[48]

Model Services Schedule Additions:

For AANZFTA negative list services schedules:

Sector: Mining Support Services (CPC 883)

- Market access: No limitations for Modes 1 (cross-border supply) and 2 (consumption abroad)
- National treatment: No limitations for Modes 1 and 2
- Mode 3 (commercial presence): Foreign equity shall not be restricted below 67%; Parties shall endeavour to liberalise to 100% over a period not exceeding five years
- Mode 4 (temporary presence of natural persons): Specific commitments for intra-corporate transferees, business visitors, and independent professionals in mining engineering, geological consulting, environmental assessment, and processing technology

Sector: Engineering Services (CPC 8672)

- Commit to removing nationality and residency requirements for engineering professionals engaged in critical minerals projects
- Recognise Australian engineering qualifications for the purpose of project-specific licensing

Sector: Environmental Consulting Services (CPC 9409)

- Full market access and national treatment for environmental impact assessment and monitoring services related to critical minerals projects

Adaptation note: The schedule format above follows the GATS/positive-list approach used in most legacy ASEAN FTAs. For AANZFTA, which transitioned to a negative-list approach under the 2025 upgrade, the equivalent commitments would be expressed as reservations rather than positive commitments, and adaptation guidance should be sought from the AANZFTA Rules of Origin and Services Sub-Committees.

Rationale: The METS sector represents Australia's most significant contribution to the critical minerals supply chain integration this paper proposes. Without Australian mining services — drilling, geological consulting, environmental assessment, processing technology — Southeast Asian partners lack the technical capacity to develop processing facilities to the standards that EU and US market access requirements demand. Austmine CEO Christine Gibbs Stewart notes that "62% of METS export to SE Asia and given our reputation and experience, miners there look to Australia for solutions."^[49] Liberalising METS services access is not a general trade facilitation objective — it is the mechanism through which processing capacity expands from mine sites in Australia and Southeast Asia to the midstream refining and manufacturing stages where value is captured and where Chinese dominance is most acute.

Adaptation note: The 100% foreign equity target for Mode 3 is ambitious given Indonesia's Negative Investment List (DNI) restrictions, which cap foreign equity in mining support services at 67%. A more immediately achievable outcome would be to bind the existing 67% ceiling against future reduction — preventing the regulatory backsliding that has affected investor confidence — while establishing a review mechanism for progressive liberalisation. The 100% target may be achievable with the Philippines and Vietnam, where restrictions are less severe, but should be treated as an aspirational benchmark for Indonesia rather than a precondition for agreement. ASEAN equity caps reflect deep-seated political bargains about foreign ownership of strategic sectors, and model treaty language alone will not override domestic investment law. The value of embedding these commitments in an FTA is threefold: they create a binding ceiling against further restriction, establish a scheduled trajectory for liberalisation that domestic reformers can invoke, and provide a dispute settlement pathway if commitments are reversed — converting a unilateral policy choice into a negotiated obligation with institutional accountability.

Priority status: *Essential.* METS services access is the mechanism through which processing capacity expands — without it, Southeast Asian partners lack the technical capacity to develop

processing facilities to the standards that EU and US market access requires. This is the critical enabler for midstream processing investment, not a general trade facilitation objective.

Negotiation vehicle and timeline: Services schedule additions are negotiated through each agreement's services committee or joint committee. For AANZFTA, the 2025 upgrade's transition to negative-list services schedules creates the institutional moment — Australia proposes METS inclusion in the next services schedule review (targeted 2028–2029), with binding commitments on Modes 1, 2, and 4 achievable by 2030. For IA-CEPA, services commitments are updated through the agreement's review mechanism — the General Review establishes the mandate, with METS-specific services negotiations commencing by 2028. Indonesia's Mode 3 equity cap (67% ceiling) is bound against future reduction as an immediate deliverable, with progressive liberalisation reviewed every three years. The Philippines' Mode 3 commitments are negotiated bilaterally, targeting 100% foreign equity for mining support services by 2030. The key institutional barrier is not FTA architecture but partner country domestic regulation: Indonesia's RPTKA system creates a de facto barrier to Mode 4 temporary movement of mining professionals that FTA commitments alone cannot override — parallel engagement with Indonesia's Ministry of Manpower on RPTKA exemptions for critical minerals professionals is required alongside FTA negotiation.^[50]

Verification: METS services liberalisation is verified through three metrics: (a) the number of METS companies operating in each partner country under FTA-preferential conditions, tracked through Austmine's annual membership survey; (b) Mode 4 visa utilisation rates for mining professionals, tracked through each agreement's services committee; (c) foreign equity levels in mining support services in partner countries, verified against FTA schedule commitments through the Joint Committee's annual review. Indonesia's OECD Services Trade Restrictiveness Index rankings for construction and engineering services provide the external benchmark against which progress is measured.

Country differentiation on services barriers: *Vietnam* and *Malaysia* are the priority partners for ambitious METS services commitments (targeting 2029–2030), as both are CPTPP parties that have already accepted higher services disciplines than non-CPTPP partners — providing a stronger baseline for Mode 3 liberalisation. *Philippines* is the next priority (targeting 2030), with easing foreign ownership requirements creating a reform trajectory, though the 60-40 constitutional rule on foreign ownership creates a ceiling that FTA commitments cannot exceed without domestic constitutional reform. *Indonesia* presents the deepest structural barriers — OECD Services Trade Restrictiveness Index rankings of 2nd most restrictive globally for construction services, 7th most restrictive for engineering services — making it the most consequential partner for METS liberalisation but the most challenging to achieve.^[51] For Indonesia, binding the existing 67% foreign equity ceiling against future reduction is the achievable near-term target (2028–2029), with progressive liberalisation negotiated over a longer timeframe (2031–2035). *Thailand's* services restrictions are less severe for manufacturing-related services but its lack of upstream mining activity means METS demand is concentrated in battery manufacturing technology rather than traditional mining services — Mode 4 commitments for battery technology specialists are the priority.

4.3 Green Rules of Origin

Rationale: Conventional rules of origin focus on substantial transformation and regional value content — necessary but insufficient for a green economy transition. Green rules of origin additionally recognise environmental performance in determining originating status, creating market incentives for sustainable production methods.^[52]

Model Provision:

Article X: Rules of Origin for Listed Critical Minerals

1. For the purposes of this Agreement, a Listed Critical Mineral shall be originating where: (a) it is wholly obtained in the territory of a Party; or (b) it has undergone substantial transformation in the territory of a Party, including refining, smelting, or chemical processing that changes the

tariff classification at the six-digit HS level; or (c) it meets a regional value content threshold of not less than 40%, calculated using the build-down method.

2. Full cumulation shall apply among the Parties — materials originating in any Party may be counted as originating content in the territory of any other Party where further processing occurs.
3. [Green bonus provision]: Where a producer demonstrates compliance with an internationally recognised sustainability certification scheme as mutually designated by the Parties under Article [standards cooperation article], the regional value content threshold in paragraph 1(c) shall be reduced by 10 percentage points.
4. [Green bonus implementation]: (a) Qualifying certification schemes for the purposes of paragraph 3 shall include those mutually designated by the Parties under the mutual recognition framework established in Section 3.2, including the Initiative for Responsible Mining Assurance (IRMA), Towards Sustainable Mining (TSM), and equivalent schemes recognised under that framework. (b) A producer claiming the reduced threshold under paragraph 3 shall document certification status in the Certificate of Origin accompanying the shipment. Certification claims are subject to post-clearance verification audit under the Agreement's origin verification procedures, consistent with CPTPP Article 3.27 (Verification) and AANZFTA Rule 14 (Verification of Origin). (c) The reduced threshold under paragraph 3 shall be available from the date of entry into force of the mutual recognition framework established under Section 3.2, or from the date of entry into force of this Article, whichever is later. (d) The reduced regional value content threshold under paragraph 3 shall apply under both the build-down and build-up methods of RVC calculation.
5. The Parties shall review the operation of paragraph 3, including the appropriateness of the 10 percentage point reduction and the scope of qualifying certification schemes, no later than three years after the green bonus becomes operational under paragraph 4(c), or no later than seven years after entry into force of this Article, whichever is earlier. The review shall consider utilisation data, commercial impact, and whether the certification threshold is achievable across the range of production methods employed by producers in the Parties' territories.

Interpretive note on paragraph 3: The green bonus provision is novel treaty language without direct precedent in existing FTAs. The principle of conditioning trade treatment on environmental performance is, however, an active direction in international trade policy — the EU's CBAM, GASSA emissions-intensity benchmarks, EU Battery Regulation carbon footprint declarations (mandatory from 2027), and IRA clean vehicle sourcing requirements all establish the regulatory architecture for carbon-differentiated trade treatment. This provision adapts that logic to preferential origin rules. The calibration of the 10 percentage point reduction is an initial proposal subject to the three-year review in paragraph 5 and to validation through the business advisory mechanism before finalisation.

Precedent: The EU-Chile AFA's updated ROO provide for full bilateral cumulation and simplified, flexible origin rules recognising global value chains. AANZFTA's 2025 upgrade already establishes full cumulation among participating parties — the first ASEAN FTA to operationalise this.^[53] The green bonus provision (paragraph 3) has no direct FTA precedent, but the principle of linking trade preferences to carbon intensity is an active policy direction. The EU-US negotiations on a Global Arrangement on Sustainable Steel and Aluminium (GASSA) propose emissions-intensity benchmarks differentiating market access by production carbon footprint.^[54] The EU's Carbon Border Adjustment Mechanism (CBAM) imposes a levy on imports calibrated to their carbon intensity, establishing the regulatory infrastructure for carbon-differentiated trade treatment. The green bonus ROO adapts this emerging logic to preferential origin rules rather than border tariffs — a novel but directionally consistent application of principles that major trading blocs are actively developing. No existing FTA has implemented an emissions-based ROO preference, and this novelty should be acknowledged honestly: the provision is untested in treaty practice. But the direction of travel is clear. CBAM, GASSA, the EU Battery Regulation's carbon footprint declarations, and the IRA's clean vehicle sourcing requirements all condition market access on environmental performance. An FTA that embeds this logic in its origin rules positions Australia-ASEAN supply chains ahead of the regulatory curve rather than behind it.

Adaptation note: The green bonus provision's commercial logic is grounded in third-market regulatory realities. Under the US Inflation Reduction Act, critical minerals sourced from countries with which the US has a free trade agreement qualify for clean vehicle tax credits — Australia qualifies; Indonesia does not. Joint supply chains under this Agreement could create IRA compliance pathways that neither partner achieves alone: Australian-origin minerals processed in Indonesia under the Agreement's full cumulation provisions, meeting the green bonus ESG certification threshold, would establish a documented supply chain narrative for IRA sourcing requirements. Similarly, the EU Battery Regulation's mandatory carbon footprint declarations and maximum lifecycle carbon thresholds create a market access gate that higher-carbon Indonesian processing may struggle to clear independently — joint supply chains incorporating Australian low-carbon inputs and ESG certification provide the compliance pathway.^[55]

Drafting note on calibration: The 40% regional value content threshold and 10 percentage point green bonus are initial proposals requiring validation through industry consultation. The 40% RVC is set to ensure Southeast Asian processors with significant imported ore inputs can meet the threshold while incentivising local value addition — comparable to USMCA's 75% RVC for autos but lower to reflect the less integrated state of Australia-ASEAN mineral supply chains. The 10 percentage point reduction (to 30% effective RVC for ESG-certified producers) is calibrated to represent a meaningful commercial incentive without rendering the origin threshold perfunctory. Both thresholds should be tested against actual production economics through the business advisory mechanism before finalisation.

Feasibility caveat: Southeast Asian partners may resist a mechanism that conditions preferential origin treatment on environmental certification they perceive as reflecting developed-country standards. Indonesia, whose nickel processing sector relies heavily on coal-fired RKEF (rotary kiln electric furnace) smelters with high carbon intensity, may view the green bonus as structurally disadvantaging its producers. The incentive structure, however, runs in both directions: it rewards Indonesian processors who invest in cleaner production methods with a tangible commercial benefit (lower RVC threshold), and — critically — it creates the documented supply chain narrative that enables IRA and EU Battery Regulation compliance for jointly produced minerals. The certification standard should be negotiated bilaterally through the mutual recognition arrangements in Section 3.2, not imposed unilaterally, ensuring that the pathway to the green bonus is achievable for partners at different stages of industrial development.

Priority status: The conventional ROO provisions (paragraphs 1-2) are *essential* — without clear origin determination and full cumulation, multi-country supply chains cannot access preferential treatment. The green bonus provision (paragraph 3) is *important but secondary* — it creates valuable market incentives but supply chains can function under standard ROO without it.

Negotiation vehicle and timeline: Conventional ROO provisions build on AANZFTA's 2025 upgrade, which already establishes full cumulation — the first ASEAN FTA to do so. Full cumulation utilisation guidance is developed through the Tier 1 utilisation programme (Section 2.2) by end-2027. For bilateral agreements, ROO provisions are negotiated as part of the critical minerals chapter (Section 4.1) — for IA-CEPA, targeted for inclusion in the critical minerals protocol negotiated 2028-2031. The green bonus provision requires the mutual recognition arrangements developed under Section 3.2 to define the "internationally recognised sustainability certification scheme" that triggers the RVC reduction — this dependency means the green bonus cannot be operationalised until Tier 2 standards work is substantially complete (earliest 2029 for the Philippines, 2030 for Indonesia), reinforcing the staged implementation timeline in Section 5.2.

Verification: Conventional ROO utilisation is verified through the annual utilisation reporting mechanism (Section 5.4) — specifically tracking the proportion of critical minerals trade that claims preferential origin treatment under full cumulation provisions. The green bonus provision is verified through the certification schemes designated under the MRA framework (Section 3.2): producers claiming the RVC reduction must demonstrate compliance with a mutually recognised sustainability certification scheme, verified through the audit arrangements established under the MRA. The business advisory mechanism (Section 3.1) validates that the 40% RVC threshold and 10 percentage point green bonus are commercially workable — threshold calibration is revisited at the first five-year review if utilisation data indicates the thresholds are set too high or too low.

Country differentiation: The full cumulation provision benefits *Indonesia* and *Malaysia* most directly, as minerals processed across multiple ASEAN countries (e.g., Indonesian nickel ore refined in Malaysia or Singapore) can count as originating content – creating supply chain configurations that compete with vertically integrated Chinese processing. The green bonus provision presents an asymmetric challenge: *Philippines* producers operating under TSM are closest to meeting the certification threshold; *Indonesian* producers using coal-fired RKEF processing face the longest pathway to certification, though those investing in HPAL (high-pressure acid leach) technology – which produces lower carbon intensity per tonne of refined nickel – could qualify more readily. *Thailand*, as a downstream manufacturer rather than primary processor, benefits from the green bonus through the supply chain narrative for IRA compliance – Thai-assembled batteries incorporating green-bonus-qualified Australian and Indonesian minerals create a documented compliance pathway that neither country achieves alone.

4.4 ESG Standards Integration

Model Provision – Sustainability Standards Framework:

This provision addresses a distinct challenge from the ESG safeguards in Article X+4. Where Article X+4 establishes environmental protection floors – non-derogation, ILO labour rights, forced labour prohibitions – this provision targets *standards fragmentation and duplicative compliance*. Multiple overlapping frameworks govern responsible mining: IRMA (420+ auditable requirements, recognised under the EU Battery Regulation), TSM (9 protocols with 34 indicators, adopted by Australia and the Philippines), ICMM Mining Principles (38 performance expectations), IFC Performance Standards (the global development finance baseline), and the OECD Due Diligence Guidance (the EU Battery Regulation's benchmark from 2027).^[56] This fragmentation imposes significant compliance costs on producers operating across multiple jurisdictions and creates barriers for institutional investors requiring standardised ESG assessments.

The strategic rationale for proactive standards cooperation is competitive positioning. The EU Battery Regulation's mandatory carbon footprint declarations (from February 2025) and due diligence requirements for cobalt, lithium, nickel, and natural graphite (enforceable from August 2027) will increasingly determine market access in key export markets.^[57] Producers who demonstrate compliance through mutually recognised certification will enjoy competitive advantages. The Consolidated Mining Standard Initiative (CMSI) – merging ICMM, Copper Mark, Mining Association of Canada, and World Gold Council standards into a single framework – plans to launch in mid-2026, prescribing three levels of operational performance across business practices, worker and social safeguards, social performance, and environmental stewardship for more than 600 minerals facilities operated by approximately 100 companies across 60 countries.^[58] The CMSI has attracted criticism from civil society for insufficient alignment with UN Guiding Principles, but its scale will substantially reshape the compliance landscape regardless – making proactive regional standards engagement urgent.

Article X: Standards Cooperation

1. The Parties shall endeavour to cooperate on the development, adoption, and implementation of sustainability standards for critical minerals, including environmental, labour, community, and governance dimensions.
2. The Parties shall work toward mutual recognition of sustainability certification schemes for critical minerals, with the objective of reducing duplicative compliance requirements while maintaining high levels of protection. Mutual recognition shall be limited to schemes meeting independently verified, multi-stakeholder governance criteria.
3. Each Party shall endeavour to promote the adoption of internationally recognised standards, including the Towards Sustainable Mining (TSM) framework, the Initiative for Responsible Mining Assurance (IRMA) standard, and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

4. The Parties shall cooperate on alignment with third-market regulatory requirements, including the EU Battery Regulation and US Inflation Reduction Act provisions, to ensure that jointly produced critical minerals maintain access to key global markets. For greater certainty, the Parties intend that critical minerals originating under this Agreement, and products incorporating such minerals, should satisfy sourcing requirements under third-market trade and environmental regulatory frameworks.
5. The Parties shall publish and maintain an equivalency mapping of recognised sustainability certification schemes, updated annually, to provide certainty for producers and investors on compliance pathways.

Rationale: Stakeholders identified the green steel certification race as illustrative of the strategic stakes: major trading partners are actively promoting standards definitions that could disadvantage Australian and Southeast Asian critical minerals production. Without proactive regional cooperation, Australia-ASEAN supply chains risk assessment against EU or US frameworks designed without reference to regional production conditions — particularly the carbon intensity of Southeast Asian processing and the governance challenges of artisanal mining sectors.^[59] The Philippines' adoption of TSM — the only Asian country implementing the framework alongside Australia — provides the bilateral foundation for building regional standards cooperation before external standards are imposed.^[26:1]

Feasibility caveat: Article 4 on third-market regulatory alignment (IRA, EU Battery Regulation) is the most ambitious element. Southeast Asian partners — particularly Indonesia and Vietnam — have historically resisted FTA provisions perceived as subordinating domestic regulatory autonomy to third-party market requirements. The provision is framed as cooperative (“shall cooperate on alignment”) rather than obligatory, but its practical effect is to orient regional standards toward EU and US benchmarks. This orientation serves Southeast Asian producers' commercial interests — EU and US markets are the destination for value-added critical minerals products — but the framing must emphasise joint competitiveness rather than compliance with external demands.

Priority status: *Important but secondary.* ESG standards integration improves supply chain competitiveness in third markets and reduces compliance costs, but supply chains can function under existing national standards frameworks without it. Its value increases over time as EU Battery Regulation due diligence requirements tighten from 2027 and as the Consolidated Mining Standard Initiative (CMSI) reshapes the global certification landscape.

Negotiation vehicle and timeline: Standards cooperation provisions operate through joint technical committees established under the relevant FTA's institutional chapter, housed within the same institutional structure as the MRA framework in Section 3.2 — creating a single standards cooperation architecture rather than parallel processes. For the Philippines, TSM provides an existing bilateral foundation — the first equivalency mapping (Article 5) is published by end-2028, benchmarked against OECD Due Diligence Guidance and EU Battery Regulation requirements. For Indonesia and Vietnam, cooperation provisions are negotiated as part of the critical minerals chapter (Section 4.1), with initial standards cooperation dialogues commencing by 2028. The CMSI launch (mid-2026) creates a natural inflection point — Australia should engage the CMSI Secretariat by end-2026 to ensure that regional standards cooperation is aligned with the consolidated standard from the outset. CPTPP's Environment Chapter (Article 20.15) provides an additional institutional platform for standards cooperation with Vietnam and Malaysia, with enforceable provisions subject to state-to-state dispute settlement.

Verification: The equivalency mapping (Article 5) is the primary verification instrument — it is published online, updated annually, and provides producers and investors with definitive guidance on which certification pathways satisfy which regulatory requirements. The number of producers operating under mutually recognised certification arrangements is tracked annually through the Joint Committee. Compliance with EU Battery Regulation due diligence requirements (from August 2027) serves as the external verification benchmark — the measure of success is whether jointly produced critical minerals maintain EU market access without additional certification beyond the mutually recognised schemes.

Country differentiation: *Philippines* is the clear first mover — all 19 COMP member-companies with operating mines are fully implementing TSM protocols, providing the bilateral foundation for regional standards cooperation.^[26:2] *Indonesia* has the largest standards gap: its mining governance framework lacks an equivalent multi-stakeholder sustainability certification scheme, and the CMSI merger (ICMM, Copper Mark, Mining Association of Canada, World Gold Council) will create new compliance requirements for Indonesian operations of CMSI member companies that may not extend to domestically-owned operations. *Malaysia's* CPTPP membership provides a stronger regulatory baseline than *Indonesia's*, but Malaysian industry's emphasis on technology transfer and value capture — rather than ESG certification — suggests that standards cooperation should be framed around market access benefits (EU Battery Regulation compliance) rather than governance improvement. *Vietnam's* governance challenges, including the 2023 arrests of rare earth executives on tax fraud charges that disrupted development partnerships, underscore both the need for governance provisions and the sensitivity of the topic.^[60]

4.5 Investment Facilitation

The gap: Existing FTAs address investment *protection* — national treatment, most-favoured-nation, expropriation safeguards — but not investment *facilitation*: regulatory predictability, transparent procedures, and defined timelines that make it easier to invest in the first place. Stakeholder evidence consistently identifies investment barriers as more consequential than tariff barriers for critical minerals. Some parties impose mandatory divestment thresholds, large-scale licence revocations, and termination of bilateral investment treaties — creating regulatory uncertainty for foreign investors.^[61] The Philippines imposes permitting processes of up to 10 years, with the Fraser Institute ranking it 72nd of 86 mining jurisdictions for investment attractiveness in 2023.^[62] Even in Malaysia — where the Lynas rare earth processing facility represents the most significant non-Chinese processing hub — each operating licence renewal has remained contentious, with the most recent extension granted only until March 2026.^[63]

Model Provision:

Article X: Investment Facilitation for Critical Minerals

1. Each Party shall ensure that procedures for obtaining authorisations for exploration, extraction, and processing of Listed Critical Minerals are transparent, non-discriminatory, and administered within defined timelines: (a) 90 days for standard permits, renewals, and regulatory approvals not requiring environmental impact assessment; (b) 12 months for complex project authorisations requiring environmental impact assessment, community consultation, or inter-agency coordination, with extensions permitted only upon written notice specifying the reasons for delay.
2. Each Party shall publish and maintain accessible information on all requirements for investment in critical minerals projects, including environmental approvals, licensing requirements, local content provisions, and equity restrictions. Such information shall be maintained in a publicly accessible online register, updated at least quarterly.
3. No Party shall require the transfer of technology or proprietary knowledge as a condition of investment approval for critical minerals projects.
4. The Parties shall cooperate on regulatory best practices for minerals investment, including through shared approaches to environmental impact assessment, community consultation, and benefit-sharing arrangements.
5. Each Party retains the right to adopt and maintain measures it considers necessary for the protection of its essential security interests, including measures relating to critical minerals supply security. Essential security measures shall be limited to measures necessary to protect a Party's defence, strategic stockpiling, or critical infrastructure interests, and shall not be used as a disguised restriction on investment.

Rationale: The shift from investment protection to investment facilitation reflects both Australia's policy against investor-state dispute settlement in new FTAs and stakeholder evidence that regulatory unpredictability — not lack of legal protection — is the primary barrier to critical minerals investment in Southeast Asia. KADIN Chairman Arsjad Rasjid's call for countries to "stop seeing each other as competitors and must be complementary" reflects industry demand for facilitation frameworks that work with sovereign development ambitions rather than constraining them.^[64] Investment facilitation provisions also create the regulatory conditions to deploy a substantial allied financing architecture. Export Finance Australia's A\$4 billion Critical Minerals Facility, Japan's JOGMEC equity investment model, the Forum on Resource Geostategic Engagement (FORGE, successor to the Minerals Security Partnership) coordinating government export credit agencies across participating nations,^[65] and US Development Finance Corporation project financing collectively offer an alternative to the Chinese state-backed capital that has dominated Southeast Asian processing investment. FTA investment facilitation provisions — transparent licensing, defined timelines, regulatory predictability — are the precondition for deploying this allied capital at scale.^[66]

Precedent: The EU-Chile AFA's Investment Court System provides one model. The US-Japan CMA's Article 3.5 on investment screening cooperation provides a lighter-touch alternative. Given Australia's policy against ISDS in new FTAs, the emphasis should be on facilitation rather than traditional investment protection.^[67]

Feasibility caveat: The defined approval timelines (90 days for standard permits, 12 months for complex authorisations) and the technology transfer prohibition (paragraph 3) go substantially beyond what Southeast Asian partners have accepted in existing agreements. The Philippines' permitting processes — up to 10 years for mining authorisations involving multiple agencies — reflect deep institutional constraints that treaty commitments alone cannot resolve. Indonesia's 2020 Omnibus Law on Job Creation attempted domestic permitting reform with mixed results. The technology transfer prohibition directly contradicts Indonesia's downstream industrialisation strategy, which uses local content requirements (TKDN) and processing mandates as leverage for technology acquisition. The case for these provisions rests on a simple comparison: the investment facilitation gap — not tariff barriers — is the primary obstacle to deploying allied capital into Southeast Asian critical minerals processing, and the alternative to FTA-embedded facilitation commitments is continued reliance on Chinese state-backed investment, which comes with its own conditionalities. Australia's own Environment Protection and Biodiversity Conservation Act (EPBC Act) permitting timelines may exceed the proposed 90-day and 12-month caps for projects triggering matters of national environmental significance, and the ongoing Nature Positive reform trajectory — including the proposed Environment Protection Australia agency — is relevant context for Australia's own commitments under this provision. For Indonesia specifically, framing the technology transfer prohibition as protecting Indonesian as well as Australian IP — Indonesian companies developing nickel HPAL (high-pressure acid leach) technology also benefit from IP protection norms — may improve the political reception.

Priority status: *Essential.* Investment facilitation provisions are the precondition for deploying the substantial allied financing architecture — Export Finance Australia's A\$4 billion Critical Minerals Facility, JOGMEC equity investment, FORGE coordination of allied government export credit agencies and development finance institutions — into Southeast Asian processing. Without regulatory predictability and defined timelines, allied capital cannot compete with Chinese state-backed investment that operates through bilateral government-to-government channels and turnkey industrial park approvals.

Negotiation vehicle and timeline: Investment facilitation provisions are incorporated into FTA investment chapters (IA-CEPA Chapter 14, AANZFTA Chapter 11) through amendment or protocol, negotiated alongside the critical minerals chapter (Section 4.1). The transparency provisions (paragraph 2 — publicly accessible online register of investment requirements) are implemented through administrative action without treaty amendment and should be operational by 2028, starting with Indonesia (where the Omnibus Law on Job Creation provides a domestic reform alignment) and the Philippines (where the Marcos Jr. administration's digital permitting initiative creates the institutional platform). The defined approval timelines (paragraph 1) require domestic regulatory reform — treaty commitments provide the external anchor for reform but cannot substitute for domestic institutional capacity. For IA-CEPA, investment facilitation provisions are

targeted for inclusion in the critical minerals protocol (2028–2031). For AANZFTA, a transparency annex covering critical minerals investment requirements is proposed by 2029. The technology transfer prohibition (paragraph 3) is negotiated bilaterally, with Indonesia as the most challenging and therefore most consequential partner — framing it as mutual IP protection (protecting Indonesian as well as Australian IP) and targeting inclusion in the IA-CEPA protocol.

Verification: Investment facilitation compliance is verified through three mechanisms: (a) the publicly accessible online register of investment requirements (paragraph 2) is itself a verification tool — its existence and quarterly update cycle are directly observable; (b) defined approval timelines are verified through the digital tracking systems that the provisions mandate, with permitting delays reported to the Joint Committee; (c) the annual Critical Minerals Trade Report to Parliament (Section 3.5) tracks allied capital deployment into Southeast Asian processing — the benchmark is a measurable increase in non-Chinese FDI in critical minerals processing in partner countries, tracked against the baseline data in Section 4.5's country differentiation analysis.

Country differentiation on investment barriers: *Indonesia* is the priority partner for investment facilitation — it presents the highest barriers (Government Regulation No. 25 of 2024 mandates 51% Indonesian ownership in mining ventures, successive administrations have revoked over 2,000 mining licences for non-compliance, and Indonesia has terminated 60+ bilateral investment treaties since 2015) but also the highest returns (FDI in mineral processing increased 207.9% from US\$3.56 billion in 2019 to US\$10.96 billion in 2022, with 75%+ from Chinese sources — the investment facilitation provision aims to redirect this flow toward diversified sourcing).^[68] Transparency provisions (online investment register) are targeted for implementation by 2028, with the full investment facilitation protocol negotiated through IA-CEPA by 2031. *Philippines* is the second priority (targeting 2029–2030): permitting processes of up to 10 years reflect multi-agency coordination failures rather than deliberate policy — the Marcos Jr. administration's 2022 reversal of the mining moratorium and 2024 digital permitting launch signal reform trajectory that FTA investment facilitation provisions can anchor. The Fraser Institute's ranking (72nd of 86 mining jurisdictions) understates the improvement direction.^[62:1] *Malaysia:* the Lynas operating licence renewal controversy — each renewal since 2012 has been contentious, with the most recent extension granted only until March 2026 — illustrates that even investment-friendly jurisdictions can create regulatory uncertainty through licence-by-licence decision-making; the priority is regulatory predictability for existing investments rather than new market opening.^[63:1] *Vietnam:* governance disruptions (the 2023 rare earth executive arrests) have stalled development despite geological potential — investment facilitation provisions should be pursued through CPTPP's existing investment chapter as the high-standard baseline, supplemented by bilateral technical cooperation. *Thailand:* offers the most favourable investment environment for downstream manufacturing — the Board of Investment's EV 3.5 Policy (2024–2027) provides 8-year corporate income tax exemptions and investment promotion applications reached a 10-year high of 1.14 trillion baht in 2024 — but this favourable environment applies to manufacturing, not upstream minerals extraction; investment facilitation provisions are less urgent here than with other partners.^[69]

4.6 Technology Transfer and Capacity Building

Model Provision:

Article X: Technology Cooperation and Capacity Building

1. The Parties shall cooperate on the development and transfer of technologies relevant to critical minerals extraction, processing, refining, and recycling, on a mutual and voluntary basis.
2. Cooperation under this Article may include: (a) joint research and development programmes for processing technology; (b) skills exchange programmes, including vocational training, professional secondments, and academic collaboration; (c) technology demonstration projects at pilot or commercial scale; (d) capacity building for environmental management and sustainability standards in critical minerals operations.

3. Technology cooperation under this Article shall respect the intellectual property rights of both Parties' nationals and enterprises. No Party shall require the transfer of proprietary technology as a condition for market access or investment approval.
4. Where an enterprise of a Party considers that the other Party has imposed a requirement contrary to paragraph 3, the enterprise may raise the matter through its Party's representative to the Technology Cooperation Working Group established under paragraph 6. The Working Group shall consider the matter and may issue a recommendation to the relevant Party within 90 days. If the matter remains unresolved 12 months after the Working Group's recommendation, the complaining Party may refer the matter to state-to-state consultation under the Agreement's dispute settlement chapter.
5. *Interpretive note on paragraph 3:* Nothing in paragraph 3 affects the right of a Party to maintain local content requirements of general application relating to government procurement or industrial development policy – including requirements such as Indonesia's Tingkat Komponen Dalam Negeri (TKDN) – provided that such requirements do not condition market access or investment approval on the transfer of specific proprietary technologies or trade secrets. The distinction is between local participation requirements (which are preserved) and compelled technology disclosure (which is prohibited). This interpretive note applies only to the scope of paragraph 3 and does not affect the Parties' rights and obligations under other provisions of this Agreement or under the WTO Agreement on Trade-Related Investment Measures.
6. The Parties shall establish a Technology Cooperation Working Group to identify priority areas, facilitate partnerships, and report annually to the Joint Committee. Establishment of the Working Group and its annual reporting obligation are mandatory; participation in specific cooperation activities identified by the Working Group (including joint R&D programmes, technology demonstration projects, and skills exchange activities) is voluntary – no Party shall be compelled to participate in a cooperation activity under this Article.

Rationale: Technology transfer addresses the central bottleneck in the supply chain integration this paper proposes. Southeast Asian partners possess the mineral endowments (Indonesian nickel, Vietnamese rare earths, Philippine chromite and nickel laterite) but lack the processing technology to move from ore export to refined, battery-grade products – the stage where value is captured and where Chinese firms dominate. Australian METS companies hold proprietary expertise in hydrometallurgy, flotation chemistry, and environmental management that Southeast Asian partners explicitly seek, but stakeholders also identify IP protection as essential for companies operating in jurisdictions with uneven enforcement. The model provision balances these interests by framing technology cooperation as mutual and voluntary while explicitly protecting intellectual property – ensuring that Australian technology flows into joint supply chains rather than being withheld due to IP risk.^[70]

Technology transfer provisions in FTAs frequently amount to best-endeavour language that generates cooperation committee meetings but not actual technology flows. What distinguishes these provisions is that they operate alongside government-backed financing mechanisms (Export Finance Australia's A\$4 billion Critical Minerals Facility, JOGMEC equity investment) that create the capital incentive for technology deployment. The Technology Cooperation Working Group (paragraph 6) reports annually to the Joint Committee, converting aspirational cooperation into a reviewable obligation with institutional visibility.

Precedent: IA-CEPA's human capital development provisions – including up to 200 skills training visas annually – provide the most developed bilateral precedent. The EU-Chile AFA's Article 8.13 on value-addition cooperation provides a multilateral model.^[71] Evidence from existing partnerships demonstrates that government-backed technology cooperation can achieve measurable outcomes. The JOGMEC-Sojitz-Lynas partnership – in which Japan's government-backed JOGMEC and Sojitz Corporation provided US\$250 million in financing and equity to Lynas from 2011, enabling construction of the world's only major non-Chinese rare earth processing facility in Malaysia – is the most consequential example of allied critical minerals technology cooperation to date.^[72] The Thiess apprenticeship programme in Indonesia, training over 1,600 students to Australian standards certified by CQUniversity (formerly Central Queensland Institute of TAFE) since 1992,

with a 95% completion rate, demonstrates that sustained cross-border mining workforce development is achievable when structured through institutional partnerships.^[73] These examples confirm that the model provision's combination of government-facilitated cooperation and IP protection can produce lasting capability transfer.

Negotiation vehicle and timeline: Technology cooperation provisions are negotiated as part of the critical minerals chapter (Section 4.1) or as a standalone cooperative arrangement under existing FTA economic cooperation chapters. For Indonesia, the Technology Cooperation Working Group (paragraph 6) is established under IA-CEPA by 2028, building on the Katalis programme's existing METS cooperation mandate. For the Philippines, the working group is established under the bilateral Trade Investment Dialogue by 2029. Priority technology areas — HPAL for Indonesia, rare earth processing for Vietnam and Malaysia, smelting for the Philippines — are identified in the first year of each working group's operation, with pilot technology demonstration projects commissioned within two years. The IP protection framework (paragraph 3) is negotiated alongside the investment facilitation provisions (Section 4.5) to ensure coherent treatment of technology transfer and investment conditions.

Verification: The Technology Cooperation Working Group reports annually to the Joint Committee, with reporting covering: (a) number and scale of joint R&D programmes and technology demonstration projects; (b) skills exchange volumes under IA-CEPA visa provisions and AANZFTA economic cooperation programmes; (c) patent filing and IP enforcement data in partner countries, tracked against the USTR Special 301 Report baseline; (d) processing capacity additions attributable to technology cooperation (measured in tonnes of refined output). The Thiess apprenticeship model (1,600+ students trained with 95% completion rate) provides the benchmark for workforce development volume.

Priority status: *Important but secondary.* Technology cooperation provisions create the enabling conditions for processing capacity development but do not themselves create market access or reduce trade barriers. Their value is highest when paired with the investment facilitation provisions (Section 4.5) and METS services commitments (Section 4.2) — technology cooperation without services access or investment predictability is aspirational.

Country differentiation: Technology transfer is the universal priority across all five partner countries, but the specific technologies sought differ. *Indonesia* seeks HPAL capabilities for battery-grade nickel processing — a gap that Australian METS companies can address. *Malaysia* seeks "mine to magnet" capacity for rare earth permanent magnet manufacturing. *Philippines* seeks smelting and downstream processing technology. *Vietnam* requires rare earth extraction and refining expertise — domestic technology currently supports only 40% of processing steps needed for high-purity rare earth oxide production.^[74] *Thailand* needs battery cell manufacturing know-how rather than upstream mining technology. Australia's IP protection concerns are most acute in *Indonesia*, where patent processing takes 4–5 years (compared to 6–9 months in Singapore) and the USTR Special 301 Priority Watch List reflects systemic IP enforcement deficiencies.^[75] The model provision's explicit IP protection (paragraph 3) addresses this reality while maintaining the cooperative framing that makes technology cooperation politically achievable. The Thiess apprenticeship programme in Indonesia — training over 1,600 students to Australian standards since 1992 — demonstrates that sustained cross-border technology cooperation is achievable when structured through institutional partnerships rather than ad hoc project arrangements.

4.7 Indigenous Participation and First Nations Trade

Model Provision:

Article X: Indigenous Participation

1. The Parties recognise the rights of Indigenous peoples in relation to critical minerals resources, including rights to consultation, participation, and benefit-sharing in accordance with their respective domestic laws and international obligations.

2. The Parties shall endeavour to promote Indigenous participation in critical minerals supply chains, including through: (a) consultation with Indigenous communities in relation to critical minerals projects affecting their territories or cultural heritage, consistent with each Party's domestic legal frameworks; (b) recognition of Traditional Knowledge relevant to resource management and environmental stewardship; (c) support for Indigenous-owned enterprises in critical minerals trade and services; (d) support for benefit-sharing mechanisms that provide Indigenous communities with opportunities to share in the economic benefits of critical minerals development.
3. The Parties should exchange best practices on Indigenous consultation and benefit-sharing frameworks in the context of minerals development.

Rationale: Indigenous participation is a supply chain necessity, not merely an equity provision. In Australia, the majority of identified critical minerals deposits are located on or near Indigenous land, and projects proceeding without effective Indigenous engagement face delays, litigation, and social licence risks that undermine supply chain reliability. The Juukan Gorge destruction (2020) demonstrated that governance failures in Indigenous consultation create material risk for the entire project pipeline. In the Philippines, FPIC requirements under IPRA mean that mining projects on ancestral domains cannot proceed without Indigenous community agreement – making Indigenous participation a precondition for accessing significant nickel laterite and chromite deposits. This is consistent with the *Invested* strategy's recommendation to "establish a targeted program to support Australian First Nations businesses to increase trade and investment with the region" and its recognition that "economic links and cooperation have existed between Australian First Nations peoples and regional communities for centuries."^[76]

Adaptation note: Domestic legal frameworks for Indigenous participation vary significantly across partner countries and will shape how paragraph 2 is implemented in practice. Australia's Indigenous Land Use Agreements (ILUAs) under the Native Title Act provide a mature framework for negotiated benefit-sharing in mining contexts. The Philippines' Indigenous Peoples' Rights Act (IPRA) requires Free, Prior, and Informed Consent (FPIC) for mining activities on ancestral domains – the most rights-protective framework in ASEAN. Indonesia's recognition of *adat* (customary) community rights in mining areas, while constitutionally grounded, remains inconsistently implemented across provinces. Malaysia's Native Customary Rights, particularly in Sabah and Sarawak where significant mineral deposits exist, present distinct legal considerations. Provisions should reference "respective domestic laws" (as in paragraph 1) rather than imposing a single model, while the best-practices exchange in paragraph 3 creates a mechanism for progressive convergence.

Priority status: *Important but secondary* for supply chain integration outcomes, though *essential* for supply chain security. Projects that proceed without effective Indigenous engagement face delays, litigation, and social licence risks that undermine supply chain reliability – the Juukan Gorge destruction demonstrated that governance failures in Indigenous consultation create material risk for the entire project pipeline. The Philippines' FPIC requirements make Indigenous participation provisions a practical precondition for accessing significant nickel laterite and chromite deposits on ancestral domains.

Negotiation vehicle and timeline: Indigenous participation provisions are included in the critical minerals chapter (Section 4.1) as cooperative provisions not subject to dispute settlement – consistent with the approach taken in CPTPP and AANZFTA's TSD chapter. For IA-CEPA, Indigenous participation provisions are included in the critical minerals protocol negotiated 2028-2031. For AANZFTA, the provisions are included in any critical minerals annex. Implementation is through domestic legal frameworks. The best-practices exchange (paragraph 3) is built into the Track 1.5 dialogue agenda (Section 3.6) from its first meeting (2027), and into the business advisory mechanism (Section 3.1) from its establishment (2028 for Indonesia). The Philippines' IPRA framework and Australia's ILUA framework are the priority focus for first bilateral best-practices exchange, given their complementary maturity.

Verification: Indigenous participation provisions are verified through qualitative assessment rather than quantitative metrics, reflecting their cooperative character. The Track 1.5 dialogue (Section 3.6) includes Indigenous consultation experience as a standing agenda item, with

representatives of Indigenous communities invited to participate. The annual Critical Minerals Trade Report to Parliament (Section 3.5) includes a section on Indigenous participation in critical minerals trade, drawing on Native Title reports and partner country community engagement data. For the Philippines specifically, FPIC compliance rates for mining projects on ancestral domains provide a measurable benchmark.

4.8 Gender Equality and Inclusive Trade in Critical Minerals

The gap: No existing Australia-Southeast Asia FTA addresses gender equality in critical minerals or mining. This gap matters because the workforce expansion required to support diversified processing — Southeast Asia will need an additional 5.5 million trained workers in renewables-related sectors by 2050^[77] — cannot be achieved while drawing from only half the talent pool. The mining sector's structural gender imbalance — female workforce participation ranging from 8% in Indonesia to approximately 20% in Australia — represents untapped labour supply that directly constrains processing capacity growth.^[78] DFAT has identified "gender and inclusivity" as an emerging trade area warranting FTA modernisation, and the *Invested* strategy explicitly identifies gender and small business as objectives Australia's trade architecture should advance.^[79]

The AANZFTA 2025 upgrade's new chapters on MSMEs and Government Procurement, alongside its sustainable development chapter, create the first ASEAN FTA institutional platform for addressing inclusive trade. The *Invested* strategy's emphasis on "empowering women and girls to participate in business" and its recommendation to "facilitate young, female entrepreneur linkages with the region" (Recommendation 21) provide the policy mandate.^[80]

Model Provision:

Article X: Gender Equality and Inclusive Participation in Critical Minerals Trade

1. The Parties recognise that gender equality and women's economic empowerment contribute to sustainable and inclusive critical minerals development. The Parties affirm their commitment to advancing gender equality in the context of trade and investment in critical minerals, consistent with their respective domestic laws and international obligations.
2. The Parties shall cooperate to promote women's participation in critical minerals supply chains, including through: (a) sharing information and best practices on programs and initiatives that promote women's participation in the mining, processing, and services sectors, including workforce participation targets and their effectiveness; (b) cooperation on workplace safety standards in mining and processing operations, including the elimination of harassment and gender-based violence, aligned with applicable ILO conventions; (c) joint programs supporting women's entrepreneurship in mining equipment, technology, and services sectors, building on existing bilateral initiatives; (d) gender-responsive procurement practices in government-funded critical minerals supply chain programs.
3. Recognising that women-owned and women-led enterprises are disproportionately represented among micro, small, and medium-sized exporters, the Parties shall cooperate to enhance MSME access to and benefit from the preferences established under this Agreement for critical minerals trade, including through: (a) simplified compliance procedures for Rules of Origin and Certificates of Origin, recognising the disproportionate burden on smaller firms; (b) digital tools and information resources enabling MSMEs to identify and utilise FTA preferences for critical minerals transactions; (c) capacity-building programs for MSMEs in critical minerals supply chains, including mentoring, business matching, and market intelligence services.
4. Each Party shall designate a contact point for gender equality and MSME matters within its trade administration. The contact points shall meet at least annually to review implementation, share experiences, and identify areas for enhanced cooperation.

Rationale: The *Invested* strategy documents a fivefold increase in women in Australian full-time mining employment over twenty years, from 8,700 in 2002 to 45,000, demonstrating that targeted interventions shift workforce composition.^[79:1] Australia's Investing in Women program confirms

the commercial viability of gender-focused economic engagement: 82 women-led SMEs supported in Indonesia, the Philippines, and Vietnam have catalysed over A\$525 million in additional capital since 2016.^[81] The SME provisions address the documented utilisation disparity — only 17% of businesses make significant use of FTAs, with smaller exporters disproportionately excluded by procedural complexity.^[82]

Precedent: The AANZFTA 2025 upgrade's MSME chapter and Implementation Support Program provide the institutional architecture. The *Invested* strategy's Recommendation 21 (female entrepreneur linkages) provides the programmatic hook. The World Bank's Climate-Smart Mining Initiative identifies gender inclusion as one of four crucial cross-cutting themes alongside citizen engagement, strong governance, and innovation — providing the normative framework for embedding gender equality in minerals governance.^[83]

Adaptation note: Gender provisions in FTAs typically employ cooperative language ("shall cooperate," "shall endeavour") rather than binding obligations subject to dispute settlement — reflecting the approach taken in CPTPP's development chapter and AANZFTA's TSD chapter. The model provision follows this convention. Implementation will depend on domestic policy frameworks: Australia's Workplace Gender Equality Agency provides an established monitoring architecture; Southeast Asian partners will implement through their own institutional mechanisms. The MSME provisions in paragraph 3 complement the AANZFTA MSME chapter and can be implemented through the AANZFTA Implementation Support Program's existing business engagement activities.

Negotiation vehicle and timeline: Gender equality and MSME provisions are pursued primarily through the AANZFTA platform, leveraging the 2025 upgrade's MSME chapter and TSD chapter. Australia proposes critical minerals-specific MSME provisions through the AANZFTA MSME Committee by 2028. The Investing in Women programme's existing operations in Indonesia, the Philippines, and Vietnam provide the programmatic vehicle for immediate implementation — a critical minerals sector module is developed within the existing programme by end-2027. Contact points (paragraph 4) are designated within each party's trade administration within 12 months of the AANZFTA provisions entering into force.

Verification: Contact points report annually on: (a) women's workforce participation rates in critical minerals sectors in each partner country, benchmarked against the 8–20% baseline range; (b) MSME utilisation of FTA preferences for critical minerals transactions; (c) number and value of women-led SMEs supported through bilateral programmes. Australia's Workplace Gender Equality Agency reporting provides the domestic verification mechanism; for partner countries, the Investing in Women programme's existing monitoring framework provides the data infrastructure.

Priority status: *Important but secondary.* Gender equality and MSME provisions contribute to inclusive supply chain development and workforce expansion but do not themselves create the market access or standards infrastructure that determines supply chain viability. They are most effectively implemented through the AANZFTA platform (leveraging the 2025 upgrade's MSME chapter and TSD chapter) rather than through bilateral negotiations, where agenda space is more constrained.

4.9 Just Transition, Workforce Development, and Community Transition

The gap: No existing Australia-Southeast Asia FTA addresses just transition in the context of critical minerals development. The supply chain integration proposed in this paper will directly reshape regional labour markets: new processing facilities require skilled workforces that do not yet exist, while communities hosting extraction and processing operations bear environmental and social costs that, if unmanaged, generate political opposition that halts projects. Southeast Asia will require an additional 5.5 million trained workers in the renewables sector alone by 2050,^[77:1] and the critical minerals workforce — mining engineers, metallurgists, hydrogeologists, environmental assessors — represents the most acute skills shortage within that broader figure.

IA-CEPA's human capital development provisions — up to 200 skills training visas annually and the \$40 million Katalis program — provide the most developed bilateral precedent for embedding workforce development within FTA architecture.^[84] The 2024 Australia-Indonesia Energy Transition Policy Dialogue's focus on social-justice aspects of coal phase-out and workforce transition represents the only dedicated treatment of just transition in the bilateral policy landscape.^[85]

Model Provision:

Article X: Just Transition and Workforce Development in Critical Minerals

1. The Parties recognise that the development of critical minerals supply chains and the transition to clean energy economies should be managed in a manner that promotes just transition for affected workers and communities, consistent with each Party's domestic policies and international commitments.
2. The Parties shall cooperate on workforce development for critical minerals supply chains, including through: (a) mutual recognition of qualifications and competency standards relevant to mining, processing, environmental management, and associated services sectors, building toward a regional skills recognition framework; (b) joint skills development programs for roles in critical minerals processing, recycling, and green economy manufacturing, including vocational training, professional secondments, and academic collaboration; (c) expansion of existing skills exchange mechanisms, including workplace placement programs for mining, engineering, and green economy sectors; (d) cooperation on green qualifications development and recognition for Southeast Asian markets, as recommended in the *Invested* strategy.
3. The Parties shall cooperate to ensure that critical minerals development delivers benefits to affected communities, including through: (a) exchange of best practices on community engagement and benefit-sharing in resource projects, drawing on respective domestic frameworks including Australia's Critical Minerals Strategy and relevant Indigenous consultation mechanisms; (b) cooperation on social impact assessment for major critical minerals investment projects; (c) support for community economic diversification in regions where mining and processing operations represent significant employment.
4. Each Party shall designate a focal point for just transition matters. The focal points shall meet annually to review implementation and coordinate with the Technology Cooperation Working Group established under Article X [Technology Transfer and Capacity Building].

Rationale: Every Southeast Asian country's industry perspective identifies skills development and technology transfer as critical priorities, with stakeholders uniformly indicating that trade agreements and partnerships lacking strong capacity-building components would struggle to secure full industry endorsement.^[86] The IA-CEPA Skills Development Exchange Pilot — allowing 12-month workplace placements in sectors including mining, engineering, and green economy — demonstrates that such mechanisms are practically achievable.^[84:1] Australia's Critical Minerals Strategy identifies growing a skilled workforce as one of its six core focus areas, citing national shortages of mining engineers, geologists, metallurgists, and hydrogeologists.^[87] The community benefit-sharing provisions respond to the strategic reality that — as the ASPI assessment observes — “poorly managed exploration, mining and processing can cause significant harm to communities and the environment” and that “any supply chain built on such practices is inherently insecure.”^[88]

Precedent: IA-CEPA's skills exchange model (200 visas annually) provides the primary bilateral precedent. The EU's Critical Raw Materials Strategic Partnerships explicitly include skills transfer and local workforce upskilling as core objectives alongside ESG alignment and local value addition.^[89] The concept of a “regional skills passport” for the resources sector — enabling certification portability between Australia and ASEAN countries — reflects industry aspirations expressed in submissions to the project.^[90] The Thies apprenticeship program in Indonesia, training over 1,600 students to Australian standards certified by CQUniversity (formerly Central Queensland Institute of TAFE) since 1992, demonstrates the feasibility of cross-border mining workforce development over sustained periods.^[73:1]

Adaptation note: Just transition provisions are inherently cooperative rather than binding in trade agreement practice. The model provision's "shall cooperate" language reflects this convention. Implementation will differ by bilateral context: the IA-CEPA framework (with its existing Katalis program and skills exchange infrastructure) is the most ready for immediate deployment; for other agreements, the provisions establish the cooperative mandate while implementation mechanisms are developed through joint committee decisions. Paragraph 3 on community benefit-sharing should be coordinated with the Indigenous Participation provisions in Section 4.7, as community engagement frameworks often overlap with Indigenous consultation requirements. The ILO's *Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All* (2015) provides the international normative framework, though the model provision references domestic policies rather than specific international instruments to accommodate variation in parties' commitments.

Priority status: *Important but secondary.* Workforce development provisions address the most acute skills shortages constraining processing capacity expansion — particularly mining engineers, metallurgists, and hydrogeologists — but they operate on longer timeframes than the trade facilitation and market access provisions that determine near-term supply chain viability. The exception is qualifications mutual recognition (paragraph 2(a)), which directly enables Mode 4 movement of mining professionals and should be prioritised as part of the METS services commitments in Section 4.2.

Negotiation vehicle and timeline: The IA-CEPA framework provides the most developed institutional platform for immediate deployment: the Katalis programme's remaining budget cycle funds the initial skills development programmes, the Skills Development Exchange Pilot (allowing 12-month workplace placements) is expanded to include critical minerals sector allocations by end-2027, and the 200 skills training visas annually are targeted with a dedicated mining and processing sector allocation. For AANZFTA, workforce development provisions are proposed through the Implementation Support Programme by 2028, with green qualifications development for Southeast Asian markets initiated by 2029. Qualifications mutual recognition (paragraph 2(a)) is prioritised alongside the METS services commitments in Section 4.2 — the regional skills recognition framework is developed bilaterally with Indonesia first (2028–2029), then extended to other partners through AANZFTA. For other bilateral relationships, resourcing draws on AANZFTA's Implementation Support Programme and the *Invested* strategy's recommendation to develop "green qualifications" for Southeast Asian markets.

Verification: Workforce development outcomes are verified through: (a) IA-CEPA skills exchange visa utilisation rates, tracked against the 200-visa annual allocation — with a target of 80% utilisation for mining and processing sector placements within three years; (b) the number of professionals holding mutually recognised qualifications under paragraph 2(a), tracked through the joint technical committees established under Section 3.2; (c) processing capacity workforce metrics — the number of trained mining engineers, metallurgists, and processing operators in partner countries, assessed through the Technology Cooperation Working Group (Section 4.6) against the baseline established in Australia's Critical Minerals Strategy workforce analysis. Community benefit-sharing (paragraph 3) is monitored through the business advisory mechanism's annual report, which includes community engagement data as a reporting requirement.

5. Implementation Design

5.1 Flexible and Modular Architecture

The model provisions are designed as a menu from which parties select according to three factors: the depth of the existing bilateral relationship, institutional capacity of both parties, and the specific supply chain complementarity (e.g., Indonesia warrants the full critical minerals chapter given its nickel significance, while Thailand may need only the battery/EV side arrangement from Section 4.3). Not every provision need be adopted in every agreement. The legitimate concern is that flexibility can become a euphemism for no commitment — if everything is optional, parties select the least demanding provisions and the architecture produces dialogue without discipline.

This risk is real. The history of ASEAN-centred economic agreements provides cautionary precedents where consensus-based flexibility diluted commitments to ineffectiveness.

Modularity must not become an excuse for inaction. Analysis of the provision interdependencies identifies a minimum viable package for any bilateral arrangement aspiring to meaningful supply chain integration: (a) Tier 1 institutional activation (Sections 2.1 and 2.3) to create governance infrastructure; (b) standards mutual recognition (Section 3.2) to reduce compliance cost barriers; (c) either the critical minerals chapter (Section 4.1) or a sector-specific side arrangement covering at minimum export discipline, ESG safeguards, and institutional mechanisms; and (d) the monitoring and review framework (Section 5.4) to ensure provisions are operationalised. A bilateral arrangement that adopts only cooperative dialogue provisions without these structural elements would not measurably improve on the status quo.

The priority designations throughout this paper distinguish *essential* provisions (those without which the architecture lacks the structural elements for meaningful supply chain integration) from *important but secondary* provisions (those that improve outcomes but are not preconditions for supply chain viability). The essential provisions are: Tier 1 activation (Section 2), FTA utilisation improvement (Section 2.2), standards mutual recognition (Section 3.2), self-certification of origin (Section 3.3), domestic cross-portfolio coordination (Section 3.5), the critical minerals chapter or equivalent (Section 4.1), METS services commitments (Section 4.2), conventional rules of origin with full cumulation (Section 4.3), and investment facilitation (Section 4.5). The secondary provisions — business advisory mechanism, circular economy cooperation, Track 1.5 dialogue, green bonus ROO, ESG standards integration, technology cooperation, Indigenous participation, gender equality, just transition — improve governance quality, inclusivity, and long-term sustainability but can be phased in as institutional capacity develops.

This modularity, within those minimum parameters, enables:

- **Variable geometry:** AANZFTA provisions would apply across all ASEAN members, while bilateral provisions (under IA-CEPA, MAFTA, or standalone agreements) can go deeper on specific issues. A country might adopt Tier 1 and Tier 2 provisions initially, adding Tier 3 provisions as institutional capacity develops.
- **Progressive implementation:** Provisions can be staged, with simpler measures (self-certification, digital documentation) preceding more complex ones (critical minerals chapters, green ROO). Each stage builds the institutional experience needed for the next. The staged timeline in Section 5.2 is designed so that Tier 1 and Tier 2 measures are substantially operational before Tier 3 negotiations conclude — if Tier 1 activation has not occurred within 18 months, the subsequent tiers lack the institutional foundation to function.
- **Agreement-appropriate adaptation:** IA-CEPA warrants a comprehensive critical minerals chapter (reflecting the depth of the bilateral relationship and Indonesia's resource significance). TAFTA is better served by a focused side arrangement on battery materials and EV supply chain integration. MAFTA and SAFTA fall between these poles — sector-specific side arrangements anchored to the existing agreement architecture.

5.2 Staged Implementation Timeline

Phase	Period	Focus	Key Instruments
Activation	2026–2027	Tier 1: operationalise existing provisions	Joint committee decisions, work programs, administrative action
Institutional building	2027–2030	Tier 2: administrative and institutional reforms	MRAs, side arrangements, ministerial decisions, business advisory establishment
Targeted negotiation	2031–2035	Tier 3: new provisions	FTA amendments, critical minerals chapters, services schedule updates
Review and expansion	2036–2040	Assessment and extension	Comprehensive review, extension to other sectors, regional leadership

Note: These phases are not strictly sequential — different bilateral relationships will progress at different rates, and early progress on Tier 2 or Tier 3 items should not be deferred where political momentum exists. The Activation phase (2026–2027) is, however, a genuine precondition: if Tier 1 institutional mechanisms — joint committee agenda items, working groups, supply chain mapping — are not operational by end-2027, subsequent phases lack both the evidence base and the institutional relationships needed for effective negotiation. The IA-CEPA General Review (submissions due March 2026) and the AANZFTA TSD chapter activation are the immediate decision gates whose outcomes determine whether later phases are feasible within the proposed timeframes.

Prerequisite dependencies: The provisions in this paper form three dependency chains that determine sequencing:

- 1. Institutional chain:** Tier 1 activation (Section 2.1–2.3) creates the joint committee working groups and coordination mechanisms required for all subsequent work. The domestic Critical Minerals Trade Strategy Group (Section 3.5) coordinates Australian Government positions across portfolios. Both must be operational before Tier 2 negotiations commence — specifically, the IA-CEPA Critical Minerals Working Group and the AANZFTA TSD cooperation pilot must be established before MRA negotiations (Section 3.2) or services schedule discussions (Section 4.2) begin. The business advisory mechanism (Section 3.1) depends on Tier 1 activation having created substantive agenda items that the council monitors.
- 2. Standards chain:** Standards mutual recognition (Section 3.2) is the prerequisite for three Tier 3 provisions. Green rules of origin (Section 4.3, paragraph 3) cannot be operationalised until the MRA framework defines the “internationally recognised sustainability certification scheme” that triggers the RVC reduction. ESG standards integration (Section 4.4) depends on the equivalency mapping infrastructure built through Section 3.2. The green bonus ROO in turn creates the market incentive for producers to invest in meeting ESG safeguard standards (Section 4.1, Article X+4). This chain means that standards work initiated in 2027–2028 must be substantially complete before the green bonus ROO can enter into force — realistic earliest date of 2030 for the Philippines (where TSM provides a head start), 2031 for Indonesia.
- 3. Investment chain:** Investment facilitation (Section 4.5) depends on the transparency provisions that the domestic enabling architecture (Section 3.5) coordinates. METS services commitments (Section 4.2) are a prerequisite for technology cooperation (Section 4.6) — without services access, technology cooperation provisions lack the commercial channel through which technology is deployed. Technology cooperation in turn enables the processing capacity expansion that gives the critical minerals chapter (Section 4.1) its economic substance.

Decision gates: The following milestones function as go/no-go decision points for subsequent phases:

- *March 2026:* IA-CEPA General Review submissions — the recommendation to add critical minerals to the Joint Committee agenda determines whether the IA-CEPA pathway proceeds on schedule.
- *End-2027:* Tier 1 activation assessment — if joint committee working groups, supply chain mapping, and standards gap analysis are not operational, Tier 2 negotiation timelines are extended by the duration of the delay.
- *End-2028:* First MRA component equivalency completed (Philippines) — this validates the standards chain and provides the precedent for subsequent bilateral MRAs.
- *2030:* Five-year interim assessment — determines whether Tier 3 provisions negotiated to date are achieving measurable supply chain integration outcomes, and whether timeline adjustments are required for remaining provisions.

5.3 Agreement-Specific Recommendations

AANZFTA (highest priority for multilateral provisions):

- Phase 1: Activate TSD chapter for critical minerals cooperation; pilot digital certification; pursue full cumulation utilisation
- Phase 2: Negotiate negative-list services schedules including METS; develop circular economy cooperation framework
- Phase 3: Negotiate critical minerals chapter or annex; implement green ROO; establish regional standards framework

IA-CEPA (highest priority for bilateral depth):

- Phase 1: Expand Joint Committee agenda; increase Katalis METS focus; establish business advisory consultation
- Phase 2: Negotiate expanded METS services; develop standards MRAs; establish formal business advisory council
- Phase 3: Negotiate comprehensive critical minerals chapter; implement investment facilitation provisions; develop joint R&D programme

RCEP (leveraging breadth, but recognising institutional limits):

- Phase 1: Propose critical minerals trade facilitation cooperation; utilise e-commerce provisions for digital certification
- Phase 2: Develop supply chain resilience cooperation on critical minerals
- Phase 3: Propose RCEP upgrade including sustainability and critical minerals provisions at the next RCEP Joint Committee review
- *Feasibility note:* RCEP's consensus-based decision-making among 15 parties and deliberately shallow institutional architecture make it the least likely vehicle for substantive critical minerals provisions. Its value lies in establishing baseline digital trade facilitation and cumulation rules that complement — but cannot substitute for — the deeper provisions in IA-CEPA and AANZFTA

CPTPP (leveraging high standards):

- Phase 1: Utilise existing environment chapter and services commitments as the high-standard baseline for critical minerals engagement with Vietnam and Malaysia. CPTPP's Environment Chapter (Article 20.15) explicitly recognises the transition to a low-emissions economy and includes enforceable provisions subject to state-to-state dispute settlement, with the possibility of suspension of benefits under the agreement's general dispute settlement mechanism — making it the strongest environmental framework among Australia-Southeast Asia agreements.^[91]
- Phase 2: Advocate for Indonesia's accession with provisions accommodating critical minerals cooperation.^[92]
- Phase 3: Propose critical minerals annex building on CPTPP's enforceable environment provisions

Bilateral FTAs (MAFTA, TAFTA, SAFTA):

- Phase 1: Activate joint committee mechanisms with critical minerals agendas
- Phase 2: Negotiate sector-specific side arrangements (battery materials with Thailand, rare earths with Malaysia)
- Phase 3: Comprehensive updates incorporating critical minerals provisions

New bilateral instruments:

- Negotiate Singapore GEA-style standalone green economy agreements with Indonesia and Vietnam, targeting initiation by 2028. The Singapore-Australia GEA (2022) — the world's first bilateral agreement focused entirely on climate change and clean energy cooperation — provides a replicable framework across seventeen areas of cooperation — from sustainable

agriculture to green shipping to standardised metrics for measuring the green economy — that is legally anchored to the existing SAFTA without requiring full renegotiation.^[93]

- Negotiate standalone critical minerals agreements following the US-Japan CMA model where FTA amendment is not feasible within required timeframes. The CMA model — compact, focused, and negotiable within months rather than years — is particularly appropriate for Indonesia, where IA-CEPA provides a bilateral foundation but resource nationalism complexity warrants a sector-specific instrument.^[94] Any standalone instrument must include, at minimum, export discipline, ESG safeguards, institutional mechanisms, and review provisions. The US-Japan CMA demonstrates that these four elements can be achieved in a compact agreement without multi-year negotiation cycles

5.4 Monitoring and Review

Agreements risk remaining aspirational without structured review mechanisms. IA-CEPA Joint Committee reviews have noted that tariff rate quotas remain “not fully implemented” and import permit delays persist.^[95] The ASPI assessment that many of Australia’s 30 international critical minerals agreements “remain dormant, overtaken by market realities or stalled by implementation hesitancy” reinforces the need for provisions with built-in accountability.^[96]

Each provision should include the following review mechanisms:

- **Annual utilisation reporting:** The business advisory mechanism (Section 3.1, Tier 2) produces an annual implementation report tracking FTA utilisation rates for critical minerals, METS services trade volumes, and standards mutual recognition progress. Reports are tabled at Joint Committee meetings and published online to enable independent assessment. The first report is due within 18 months of Tier 1 activation.
- **Biennial minerals list review:** The critical minerals list (annex) is reviewed every two years by a technical working group comprising government officials and industry representatives, with authority to add or remove minerals based on evolving technology and demand patterns. The US-Japan CMA’s updatable annex provides the procedural model — review is initiated by either party and decided by mutual agreement.
- **Five-year comprehensive chapter review:** A comprehensive review of all chapter provisions is conducted at the five-year mark, with formal stakeholder consultation including business advisory council input, independent economic assessment of trade and investment outcomes, and recommendations for provision amendments. Where targets have not been met, the review identifies specific implementation barriers and mandates remedial actions with defined timelines.
- **Sunset clauses for transitional provisions:** Provisions designed as transitional — such as equity cap phase-downs, preferential processing requirements, or staged services liberalisation schedules — should include explicit sunset dates. Where a party has not met its transitional commitments by the sunset date, the provision should automatically escalate to the Joint Committee for remedial action rather than lapsing silently.

The business advisory council (Section 3.1) serves as the primary data source for utilisation reporting, with its annual report providing disaggregated data on FTA utilisation rates, standards adoption, and implementation barriers. The Trade 2040 Taskforce established under the *Invested* strategy provides the overarching annual review mechanism within which critical minerals partnership outcomes should be assessed — connecting agreement-specific monitoring to the government’s broader Southeast Asia economic engagement framework.^[97] Where utilisation rates fall below agreed benchmarks or barriers persist across consecutive reporting periods, automatic referral to the Joint Committee for remedial action within six months should be triggered.

6. Conclusion

International precedent for critical minerals FTA provisions is well-established — from the US-Japan CMA's compact, focused approach to the EU-Chile AFA's comprehensive and enforceable model. The challenge for Australia-Southeast Asia is adaptation. ASEAN's consensus-based decision-making, the sovereignty sensitivities surrounding resource nationalism (particularly in Indonesia and Vietnam), and wide variation in institutional capacity across partner countries mean that no single model can be transplanted wholesale. The country-specific analysis throughout this paper reveals a clear sequencing logic: Indonesia and the Philippines are the most ready bilateral partners for deep engagement (IA-CEPA's institutional depth and the Philippines' TSM adoption provide the strongest foundations); Vietnam offers high-level political commitment requiring institutional operationalisation; Malaysia's engagement is best anchored through the Lynas commercial relationship and CPTPP disciplines; and Thailand requires targeted engagement on battery materials and EV supply chain integration through the Federation of Thai Industries and Board of Investment. The modular architecture presented here accommodates this variation while insisting on a minimum viable package — institutional activation, standards mutual recognition, sector-specific commitments, and accountability mechanisms — without which flexibility becomes indistinguishable from inaction.

The three-tier structure provides a realistic pathway. Tier 1 actions begin immediately using existing agreement provisions that have simply not been operationalised for critical minerals. Tier 2 reforms build the institutional ecosystem — business advisory mechanisms, standards mutual recognition, digital trade facilitation — that makes agreements work in practice. Tier 3 provisions fill genuine gaps where existing agreements lack minerals-specific architecture. These tiers interlock by design: Tier 2 standards mutual recognition arrangements provide the certification infrastructure that makes Tier 3 green rules of origin operational; green ROO in turn create the market incentive for producers to invest in meeting Tier 3 ESG safeguards; and the Tier 2 business advisory mechanism generates the implementation data that feeds review mechanisms across all tiers. Provisions that depend on each other for effectiveness are more durable than those that stand alone.

These provisions cannot substitute for the structural cost advantages that have drawn processing investment to China — lower energy costs, economies of scale, and lower environmental compliance expenditure. What FTA provisions can address is the regulatory and institutional environment: reducing compliance costs through mutual recognition, providing regulatory predictability through investment facilitation, creating market access premiums through green ROO and ESG certification, and mobilising allied financing as an alternative to Chinese state-backed capital. The provisions in this paper operate on these levers — making Australia-ASEAN supply chains commercially viable not by matching Chinese cost structures but by building compliance, governance, and market access advantages that Chinese-dominated supply chains cannot easily replicate.

The modular architecture, staged timelines, and standards-based approach presented here are designed not only for critical minerals but as a transferable framework. The pathfinder methodology demonstrates that provisions developed for one sector — mutual recognition arrangements, green rules of origin, business advisory mechanisms, investment facilitation — generate institutional experience and procedural precedent that lower the cost of extending similar frameworks to agriculture, green manufacturing, and services. The standards mutual recognition approach (Section 3) illustrates this most directly: the bilateral expert committee and equivalence assessment process developed for mining ESG certification can be adapted, with relatively modest institutional investment, for agricultural SPS and MRL standards or professional services qualifications. Phase 4 deliverable D4.5 will formally assess the extension of this pathfinder model to additional sectors, drawing on implementation experience from the initial critical minerals provisions to evaluate cross-sectoral applicability.

Taken together with the Final Recommendations Report, these model provisions offer a targeted, evidence-based, and stakeholder-informed roadmap for FTA modernisation that serves both Australia's and Southeast Asia's interests in building resilient, sustainable, and mutually beneficial critical minerals supply chains.

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1. The nine clause families are: (1) market access and tariff discipline; (2) export restriction disciplines; (3) non-market practices and supply security cooperation; (4) ESG, labour, and circular economy safeguards; (5) rules of origin and cumulation; (6) investment facilitation and downstream value-add; (7) stockpiling, offtake, and financing; (8) rapid response and remediation; (9) dispute settlement and enforcement. This typology is the authors' analytical framework derived from comparative analysis of the seven FTAs and international precedents examined in this study.
 2. IA-CEPA Chapter 15, <https://www.dfat.gov.au/trade/agreements/in-force/iacepa/iacepa-text/Pages/iacepa-chapter-15-economic-cooperation>; RCEP Chapter 15; AANZFTA Chapter 12 and Chapter 13 (TSD, 2025), <https://www.dfat.gov.au/trade/agreements/in-force/aanzfta/official-documents/agreement-establishing-asean-australia-new-zealand-free-trade-area-aanzfta/chapter-13-trade-and-sustainable-development>
 3. Stakeholder consultation under Chatham House Rule, consultation with a critical minerals policy expert, 2025–2026.
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