ASHOKA MODEL UNITED NATIONS 2026

UN OCEAN

OCEANS AND THE LAW OF THE SEA

THE RACE FOR THE OCEAN FLOOR

Critical Minerals • Deep-Sea Mining • Marine Biodiversity • Maritime Governance

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AGENDA

The Race for the Ocean Floor: Preventing Conflict over Deep-Sea Critical Mineral Extraction

A delegate-first guide: understand the resource race, learn the international legal framework, map competing interests, and enter committee ready to negotiate.

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1. INTRODUCTION TO THE COMMITTEE

The United Nations system for ocean governance is built primarily around the **United Nations Convention on the Law of the Sea (UNCLOS)**.

Adopted in 1982 and entering into force in 1994, UNCLOS establishes the legal framework governing activities in the oceans and seas, including maritime zones, marine environmental protection, scientific research, seabed resources and dispute settlement.

One of the institutions established through this framework is the **International Seabed Authority (ISA)**.

The ISA is responsible for organising and controlling mineral-resource activities in **the Area** — the seabed and ocean floor beyond national jurisdiction — for the benefit of humankind as a whole, while ensuring effective protection of the marine environment.

This distinction is fundamental to the agenda.

WHAT THIS COMMITTEE IS REALLY DEBATING

The issue is **not simply:**

> *"Should we mine the ocean?"*

The real debate is:

> **How can the international community manage growing demand for deep-sea critical minerals without triggering environmental degradation, geopolitical competition, inequitable resource access or conflict over the ocean floor?**

Delegates will have to balance:

Critical Minerals ↔ Marine Biodiversity

Resource Security ↔ Environmental Protection

Economic Development ↔ Intergenerational Equity

Technological Progress ↔ Scientific Uncertainty

National Interests ↔ Common Heritage of Humankind

Exploitation ↔ Precaution

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2. THE RACE FOR THE OCEAN FLOOR

STATEMENT OF THE PROBLEM

The global transition toward renewable energy, electrification and advanced technologies has increased interest in minerals such as **nickel, cobalt, copper and certain rare-earth elements**.

The deep ocean contains potentially valuable deposits of these minerals, including:

- **polymetallic nodules;**
- **polymetallic sulphides;**
- **cobalt-rich ferromanganese crusts.**

These deposits occur across areas of the seabed that can be extremely difficult to access.

The ISA notes that these resources contain metals important to industries including renewable-energy and technology manufacturing.

This has created a strategic question:

> **Could the deep ocean become a new source of critical minerals — and what happens if states begin competing for access to it?**

THREE TERMS TO KEEP SEPARATE

TERM	WHAT IT MEANS	WHY IT MATTERS
Deep-Sea Mining	Extraction of mineral resources from the deep seabed.	The broad activity at the centre of the agenda.
The Area	The seabed and ocean floor beyond national jurisdiction.	Governed through the UNCLOS/ISA framework.
Critical Minerals	Minerals considered strategically important for technologies, industry or energy systems.	Creates economic and geopolitical incentives for extraction.

DELEGATE SHORTCUT

Deep-sea mining ≠ all seabed mining

The Area ≠ a country's EEZ

Exploration ≠ commercial exploitation

Critical mineral ≠ automatically scarce mineral

That last distinction matters enormously.

A mineral can be considered *critical* because of its economic or strategic importance, supply-chain concentration or vulnerability — not necessarily because it exists only in tiny quantities.

HISTORY OF THE PROBLEM

THE OCEAN AS A GLOBAL COMMON

The modern debate over seabed resources emerged alongside the development of modern ocean law.

In 1967, Maltese diplomat **Arvid Pardo** famously argued before the United Nations that the deep seabed should not simply become another frontier for powerful states to claim.

His proposal contributed to the development of the principle that the mineral resources of the international seabed are the **"common heritage of humankind."**

That principle subsequently became embedded in UNCLOS and the institutional framework surrounding the ISA.

THE CREATION OF UNCLOS

After years of negotiations, UNCLOS was adopted in **1982** and entered into force in **1994**.

It established the legal framework for:

- maritime zones;
- seabed resources;
- marine environmental protection;
- scientific research;
- technology transfer;
- navigation;

- and dispute settlement.

It also established institutions including:

- **International Seabed Authority (ISA);**
- **Commission on the Limits of the Continental Shelf (CLCS);**
- **International Tribunal for the Law of the Sea (ITLOS).**

THE RISE OF DEEP-SEABED EXPLORATION

As technology improved, states and contractors became increasingly capable of surveying and exploring the deep seabed.

Exploration has focused primarily on three resource types:

Polymetallic Nodules

Rock-like deposits lying on or near the seabed surface.

Often associated with:

- manganese;
- nickel;
- copper;
- cobalt.

Polymetallic Sulphides

Mineral deposits associated with hydrothermal vent systems.

Cobalt-Rich Ferromanganese Crusts

Mineral-rich crusts occurring on underwater mountains and other geological formations.

The ISA has issued exploration contracts for these resources, but **commercial exploitation in the international seabed Area has not yet been approved**.

CURRENT SITUATION

1. THE DEEP SEA AS A MINERAL FRONTIER

The deep seabed has attracted attention because mineral deposits can occur in concentrations that make them potentially economically valuable.

However, the deep ocean is also one of the least understood ecosystems on Earth.

This produces a fundamental dilemma:

> **The more economically attractive the seabed becomes, the greater the pressure to exploit an environment whose ecological systems remain incompletely understood.**

The UN Secretary-General's Scientific Advisory Board has warned that deep-sea mining could have **wide-ranging, long-lasting and potentially irreversible effects** on marine ecosystems.

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2. CRITICAL MINERALS AND THE ENERGY TRANSITION

The push toward:

- electric vehicles;
- batteries;
- renewable energy;
- energy-storage systems;
- digital technologies;
- and advanced manufacturing

has increased attention to mineral supply chains.

This creates a powerful argument **for** seabed extraction:

THE RESOURCE-SECURITY ARGUMENT

If the world needs more critical minerals, additional sources could:

- diversify supply;
- reduce dependence on concentrated terrestrial producers;
- potentially strengthen supply-chain resilience;
- and support technological development.

But there is an important counterargument:

THE DEMAND-SIDE QUESTION

Before opening a new extraction frontier, should states first expand:

- recycling;
- material efficiency;
- substitution;
- circular-economy systems;
- and responsible land-based production?

The UN Scientific Advisory Board specifically identifies reducing reliance on new mineral extraction through circular-economy approaches as one consideration in the deep-sea-mining debate.

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3. THE THREE MAJOR SEABED RESOURCES

RESOURCE	BASIC CHARACTERISTIC	KEY MINERALS	MAIN CONCERN
Polymetallic Nodules	Mineral-rich deposits lying on seabed sediments	Nickel, cobalt, copper, manganese	Sediment disturbance and habitat removal
Polymetallic Sulphides	Deposits associated with hydrothermal systems	Copper, zinc and other metals	Impact on unique deep-sea ecosystems
Cobalt-Rich Crusts	Mineral crusts on underwater mountains	Cobalt, nickel and other metals	Habitat destruction and ecological disturbance

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4. THE ENVIRONMENTAL COST

Deep-sea mining can affect marine ecosystems through:

- removal of seabed habitat;
- sediment plumes;
- noise;
- light;
- disturbance of organisms;
- possible release of contaminants;

- and disruption of ecological processes.

The UN Scientific Advisory Board notes potential risks including biodiversity loss, ecosystem disruption, toxic releases and sediment plumes.

THE PROBLEM

Some deep-sea ecosystems recover extremely slowly.

Therefore:

> **Environmental damage cannot necessarily be evaluated using the same recovery assumptions applied to terrestrial mining.**

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5. THE GOVERNANCE PROBLEM

The biggest institutional question is:

> **Who gets to decide whether the ocean floor can be mined?**

For resources in **the Area**, the answer lies within the UNCLOS and ISA framework.

The ISA's mandate is to organise and control mineral-resource activities in the Area for the benefit of humankind while protecting the marine environment.

This means the debate is not simply between individual mining companies and environmental groups.

It is fundamentally a question of **international governance**.

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6. THE MINING CODE

The ISA is currently developing the regulations that would govern exploitation of mineral resources in the Area.

This regulatory framework is generally referred to as the **Mining Code**.

As of 2026, the Code remains under negotiation.

During the ISA Council's 31st session in 2026, Member States continued negotiations on outstanding provisions concerning issues including:

- compliance;
- environmental management;
- inspection;
- effective control;
- closure plans;
- economic mechanisms;
- environmental goals;
- and non-compliance.

DELEGATE SHORTCUT

Exploration contracts exist.

Commercial exploitation has not been approved by the ISA.

The exploitation regulations are still being negotiated.

Do **not** write your position as though large-scale commercial deep-sea mining is already operating under a completed international regime.

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7. STRATEGIC COMPETITION AND RESOURCE SECURITY

Critical minerals are increasingly connected to national security.

States may worry about dependence on a small number of suppliers.

This creates a potential strategic equation:

Critical mineral demand

↓

Supply-chain vulnerability

↓

Search for alternative sources

↓

Interest in seabed minerals

↓

Competition over technology + access + processing

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Potential geopolitical tension

The deep seabed could therefore become not merely an environmental issue, but a **resource-security issue**.

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8. THE GEOPOLITICAL QUESTION

Imagine that several major economies become dependent on the same mineral supply chain.

Now imagine that one source is controlled by a small number of countries.

Then imagine that another potential source exists in the international seabed.

The incentive to gain:

- technological expertise;
- exploration contracts;
- processing capacity;
- investment;
- and strategic partnerships

increases.

THE QUESTION

> Could competition over critical-mineral supply chains transform the seabed into a new arena of geopolitical competition?

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9. DEVELOPING STATES AND THE QUESTION OF EQUITY

The principle of the **common heritage of humankind** is central here.

The resources of the Area are not supposed to become the exclusive economic property of whichever state or corporation reaches them first.

The system therefore raises questions about:

- benefit-sharing;
- participation;
- technology;
- developing-country access;
- economic assistance;
- and intergenerational equity.

UNCLOS provides mechanisms intended to address economic effects on developing land-based mineral-producing states, including assistance where seabed production negatively affects their economies.

KEY QUESTION

> If deep-sea minerals generate enormous profits, who should benefit?

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10. NATIONAL JURISDICTION VS. THE INTERNATIONAL SEABED AREA

This is one of the **most important distinctions in the entire agenda**.

AREAS WITHIN NATIONAL JURISDICTION

States exercise rights over marine resources according to applicable UNCLOS maritime zones.

THE AREA

The seabed beyond national jurisdiction.

Its mineral resources are governed through the international framework established by UNCLOS and the ISA.

The ISA itself notes that its mandate does **not** extend to monitoring deep-sea mining activities within national EEZs.

DELEGATE SHORTCUT

Before proposing an international mechanism, ask:

> **Is this activity taking place inside or outside national jurisdiction?**

That single question can completely change which institution has authority.

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11. SCIENTIFIC UNCERTAINTY

Deep-sea ecosystems remain comparatively poorly understood.

This creates a policy dilemma.

ARGUMENT FOR WAITING

If environmental consequences could be:

- severe;
- long-lasting;
- irreversible;
- and scientifically uncertain,

then exploitation should not proceed until sufficient knowledge and safeguards exist.

ARGUMENT AGAINST INDEFINITE DELAY

States seeking mineral security may argue that:

- scientific knowledge will improve through exploration;
- technological safeguards can reduce impacts;
- demand for minerals is increasing;
- and regulation can allow responsible extraction rather than simply prohibiting it.

THE PRECAUTIONARY PRINCIPLE

Where scientific uncertainty exists but potential environmental damage may be serious or irreversible, policymakers may argue for precaution.

The UN Scientific Advisory Board specifically identifies application of the precautionary principle as one of the central considerations for deep-sea mining.

THE DEBATE

Precaution says:

> “If we cannot adequately understand the consequences, do not rush.”

Resource-security advocates say:

> “If demand is rising, refusing to develop alternatives may create another strategic vulnerability.”

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12. TECHNOLOGY AND CORPORATE ACTORS

Deep-sea mineral extraction requires sophisticated:

- surveying;
- exploration;
- remotely operated systems;
- mineral processing;
- environmental monitoring;
- and offshore engineering.

This raises another question:

> **Should access to humanity's common seabed resources depend on the technological capabilities of a relatively small number of states and corporations?**

A country may possess mineral rights under the broader international framework but lack the technological capacity to exploit them.

This creates a potential **technology-access gap**.

13. THE CASE FOR DEEP-SEA MINING

Supporters may argue that deep-sea mining could:

Diversify mineral supply

Reduce dependence on concentrated terrestrial supply chains.

Support the energy transition

Provide minerals used in modern energy and technology systems.

Generate economic opportunities

Create investment, research and technological development.

Strengthen strategic autonomy

Provide alternative sources of critical minerals.

Enable international benefit-sharing

If governed effectively through the ISA framework.

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14. THE CASE AGAINST DEEP-SEA MINING

Opponents may argue that:

Environmental consequences remain uncertain

Scientific knowledge is incomplete.

Damage may be irreversible

Some deep-sea ecosystems recover extremely slowly.

Mineral demand can be addressed elsewhere

Through recycling, substitution and improved efficiency.

Governance is not yet mature

The Mining Code remains under negotiation.

Commercial incentives could overwhelm environmental safeguards

Particularly if competition accelerates.

THE CENTRAL POLICY SPECTRUM

POSITION	CORE APPROACH
Immediate Exploitation	Approve mining quickly to address mineral demand
Regulated Exploitation	Permit mining once strict international standards are satisfied
Conditional Moratorium	Pause exploitation until scientific and regulatory thresholds are met
Precautionary Pause	Delay exploitation because environmental uncertainty remains significant
Permanent Prohibition	Reject commercial deep-sea mining altogether

IMPORTANT

These positions are **not automatically the same as country blocs**.

A state can support mineral extraction while demanding extremely strict environmental rules.

RELEVANT INTERNATIONAL ACTIONS

INTERNATIONAL OCEAN GOVERNANCE AT A GLANCE

FRAMEWORK	WHAT IT DOES	WHY IT MATTERS

UNCLOS	Establishes ocean-law framework	Foundation of seabed governance
ISA	Governs mineral activities in the Area	Central institution for deep-sea mining
1994 Part XI Agreement	Modifies implementation of UNCLOS Part XI	Modern institutional framework
Mining Code	Regulations for exploitation	Determines future commercial activity
Exploration Contracts	Permit exploration under ISA framework	Current stage of international seabed activity
Environmental Management Plans	Regional environmental governance	Protects ecosystems and sets management objectives
APEIs	Areas of Particular Environmental Interest	Areas set aside for environmental protection
BBNJ Agreement	Biodiversity beyond national jurisdiction	Broader high-seas conservation framework
ITLOS	Dispute settlement	Legal mechanism for maritime disputes

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1. UNCLOS

UNCLOS is the **foundation of the entire framework**.

It addresses:

- maritime zones;
- seabed resources;
- environmental protection;
- scientific research;
- technology transfer;
- and dispute settlement.

DELEGATE RULE

If your resolution proposes something concerning seabed governance, **first ask how it fits within UNCLOS**.

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2. INTERNATIONAL SEABED AUTHORITY

The ISA is the central institution for mineral resources in the Area.

Its mandate is not simply:

> “Approve mining.”

It includes:

- organising mineral activities;
- regulating them;
- monitoring compliance;
- protecting the marine environment;
- managing benefit-sharing;
- and administering the international seabed framework.

The ISA's current work demonstrates that environmental management and compliance are major components of the Mining Code negotiations.

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3. THE MINING CODE

The Mining Code is being developed to establish detailed rules for exploitation.

Current negotiations cover issues including:

- environmental goals;
- monitoring;
- inspections;
- compliance;
- closure plans;
- non-compliance;
- effective control;
- and economic mechanisms.

WHY IT MATTERS

The Mining Code could determine whether future seabed extraction is:

effectively regulated

or

environmentally and politically destabilising.

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4. EXPLORATION CONTRACTS

The ISA has approved exploration contracts for different seabed mineral resources.

But:

> **Exploration is not exploitation.**

Exploration involves studying and assessing mineral resources and environmental conditions.

Commercial exploitation would involve actual extraction at scale.

The ISA states that no commercial exploitation has yet been approved.

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5. ENVIRONMENTAL MANAGEMENT AND MONITORING

Environmental management is a major component of the ISA framework.

The objective is to establish:

- environmental baselines;
- monitoring systems;
- impact assessments;
- regional environmental objectives;
- mitigation measures;
- and responses to environmental harm.

The 2026 ISA Council negotiations specifically included environmental management and monitoring as an active area of work.

6. AREAS OF PARTICULAR ENVIRONMENTAL INTEREST

The ISA has established areas intended to protect representative deep-sea ecosystems from mining-related activity.

The Authority states that almost **2 million km²** of seabed has been set aside as Areas of Particular Environmental Interest.

WHY THIS MATTERS

Environmental protection does not necessarily require banning all exploration everywhere.

It can also involve:

- protected areas;
- exclusion zones;
- environmental thresholds;
- regional management;
- and monitoring.

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7. BBNJ AGREEMENT

The **Agreement under UNCLOS on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction**, commonly known as the **BBNJ Agreement or High Seas Treaty**, establishes a broader framework for biodiversity in areas beyond national jurisdiction.

It is relevant to the agenda because deep-sea mining exists within a wider system of **ocean biodiversity governance**.

DELEGATE CAUTION

BBNJ is **not a replacement for the ISA's seabed-mining mandate**.

Delegates should think about **coordination**, not institutional duplication.

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8. MARINE SCIENTIFIC RESEARCH

Scientific research is crucial because policy decisions depend on understanding:

- ecosystem structure;
- biodiversity;
- mineral deposits;
- environmental baselines;
- and potential cumulative impacts.

The debate therefore extends beyond:

> **“Mine or don't mine.”**

It also concerns:

> **“What information must we have before we decide?”**

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9. BENEFIT-SHARING

The common-heritage principle creates a major equity question.

If mineral resources in the Area are considered to belong to humanity collectively, then economic benefits cannot simply be treated as private gains.

The international framework therefore considers:

- financial payments;
- benefit-sharing;
- economic assistance;
- participation of developing countries;
- and equitable access.

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10. COMPLIANCE AND ENFORCEMENT

A regulation is only useful if someone can determine whether it has been followed.

This is why current ISA negotiations address:

- inspection;
- compliance;
- enforcement;
- non-compliance notices;
- suspension;
- termination;
- and monitoring.

DELEGATE SHORTCUT

Every environmental clause should make you ask:

Who monitors?

What threshold triggers action?

Who investigates?

What happens after non-compliance?

OCEAN GOVERNANCE RULEBOOK AT A GLANCE

IF THE ISSUE INVOLVES…	START WITH…	ASK…
International seabed minerals	**UNCLOS + ISA**	Does the activity occur in the Area?
Mining regulations	**Mining Code**	What standards apply to exploitation?
Exploration	**ISA exploration framework**	What environmental data is required?
Environmental protection	**ISA + environmental frameworks**	What ecological thresholds apply?
Biodiversity beyond national jurisdiction	**BBNJ Agreement**	Is this a biodiversity-governance issue?

Maritime legal disputes	**UNCLOS / ITLOS**	Which legal mechanism has jurisdiction?
Benefit-sharing	**UNCLOS Part XI / ISA**	Who receives the benefits?
Non-compliance	**ISA compliance framework**	Who monitors and what happens?
Scientific uncertainty	**Precautionary approach**	Is enough evidence available?
National EEZ activity	**Coastal-state jurisdiction + UNCLOS**	Does ISA actually have authority here?

BLOC POSITIONS

These are analytical starting points. Delegates must research the actual position of their assigned state.

MAJOR MINERAL-CONSUMING ECONOMIES

Likely to emphasise:

- secure mineral supply;
- supply-chain diversification;
- technological innovation;
- responsible extraction;
- international standards.

Likely tension: mineral security vs. environmental restrictions.

STATES SUPPORTING REGULATED DEEP-SEA MINING

Likely to argue that:

- mining should not automatically be prohibited;
- regulation can manage environmental risks;
- mineral demand requires additional sources;
- scientific research should continue;
- and the ISA is the appropriate institution.

Likely priority: completing a robust Mining Code.

PRECAUTIONARY / MORATORIUM ADVOCATES

Likely to emphasise:

- scientific uncertainty;
- biodiversity protection;
- irreversible environmental harm;
- precaution;
- and alternative mineral strategies.

Likely priority: ensuring exploitation cannot begin before adequate safeguards exist.

LAND-BASED MINERAL PRODUCERS

May have concerns about:

- declining mineral prices;
- competition from seabed resources;
- economic dependence on terrestrial mining;
- and the effect of seabed extraction on developing economies.

UNCLOS's framework specifically recognises potential economic effects on developing land-based mineral producers.

DEVELOPING AND LEAST-DEVELOPED STATES

Likely to emphasise:

- equitable benefit-sharing;
- technology transfer;
- capacity-building;
- participation in decision-making;
- and economic assistance.

CORE ARGUMENT

> The seabed is a common heritage; therefore, its benefits cannot become concentrated among technologically advanced states alone.

SMALL ISLAND DEVELOPING STATES

Likely to emphasise:

- ocean conservation;
- climate resilience;
- marine biodiversity;
- sustainable development;
- and protection of ocean ecosystems.

They may favour particularly strong environmental safeguards.

COASTAL STATES

Likely to focus on:

- maritime jurisdiction;
- environmental spillovers;
- marine ecosystems;
- national resource rights;
- and protection of coastal economies.

QUESTIONS A RESOLUTION MUST ANSWER

A good resolution should not simply say **“protect the ocean.”**

It should answer:

1.

Should commercial exploitation of seabed minerals proceed before the Mining Code is completed?

2.

What minimum environmental standards should apply before exploitation can begin?

3.

What level of scientific certainty should be required?

4.

Should an international moratorium or precautionary pause be established?

5.

If so, what conditions would allow it to end?

6.

How should the ISA monitor environmental impacts?

7.

Who should pay for independent environmental monitoring?

8.

How should environmental damage be defined?

9.

What happens when a contractor violates environmental standards?

10.

How should benefits from the Area be distributed?

11.

How can developing states access seabed technology and scientific expertise?

12.

How can land-based mineral-producing developing states be protected from economic shocks caused by seabed mining?

13.

How can BBNJ and ISA frameworks cooperate without duplicating mandates?

14.

How can states prevent the deep seabed from becoming an arena for geopolitical competition?

15.

Should environmental impact assessments be publicly accessible?

16.

What role should independent scientific bodies play?

17.

How should cumulative environmental impacts be measured?

18.

How should the international community balance mineral demand against recycling, substitution and circular-economy strategies?

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