International Seabed Authority
Mining Standards

International Conference on Regulation of Continental Shelf Development
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International Seabed Authority
International Seabed Authority Mining Standards

Outline

Functions of the International Seabed Authority

Relationship between the Area and the Continental Shelf

Standards for mineral exploration in the Area

Environmental standards and guarantees

Health, labour and safety standards

Considerations for national regulatory regimes
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The regulatory body for the ‘Area’
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The relationship between the Area and the continental shelf
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*The relationship between the Area and the continental shelf*
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Standards for mineral exploration in the Area

The Mining Code

**Convention (Part XI) and 1994 Agreement**
- General principles
- Article 145
- Article 146

**Annex III of the Convention**
- Procedural requirements
- Enabling provisions (Article 17)

**Rules, regulations and procedures**
- Progressively adopted by Council
- Supplemented by detailed recommendations

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A comprehensive set of rules, regulations and procedures issued by the Authority to regulate prospecting, exploration and exploitation of marine minerals in the Area.
Current regulations cover prospecting and exploration phases for polymetallic nodules and polymetallic sulphides.

- Polymetallic nodules (2000)
- Polymetallic sulphides (2010)
- Cobalt-rich crusts (2012)?

Regulatory framework largely identical, differences reflect different nature of resources.
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Seafloor Production System

- Production Support Vessel (PSV)
- Riser and Lifting System (RALS)
- Subsea Slurry Lift Pump (SSLP)
- Seafloor Production Tools (SPTs)

- Transport Ship
- Mining Platform
- Tailings Discharge
- Hydraulic Pump System
- Nodule Buffer
- Sediment Plume
- Shear Forces
- Pressure
- Tracked Mining Vehicle
- Nodules & Semi-Liquid Layer
Indicative area comparison: Largest open pit mine in the USA (Bingham copper mine, Utah) compared to a model mining operation for polymetallic nodules (model parameters: 4.5 million metric tonnes annual ore production over 20 years at a recovery rate of 10 kg per m²)
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**Environmental standards**

- Precautionary approach
- Baseline data
- Environmental studies
- Reporting
- Environmental impact assessment
- Impact reference zones and preservation reference zones
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Actually, I don't think any safety program would have caught this one.
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