Discussion streams to date relating to Payment Regime

- Fees - administration
- Compensation to CHM / ISA for mineral resource extraction
- Environmental responsibilities
Objectives and Principles: payment mechanism

**Article 13 UNCLOS**
- Optimum revenues (Best?)
- Attract investments and technology
- Equal treatment and comparable financial obligations

**Section 8, Agreement**
- Fair system
- Rates of payment “within range”
- Not complicated
- Royalty or royalty / profit-share system
- Periodic review
Possible transitional approach

- Economic incentive to attract investment
- Low cost administration
- Early years: stability, certainty and predictability
- Ad valorem royalty: 2 phases?
- Admin + fixed fee
- Alternatives: rent models but complex: longer term?
Challenges (some)

- Aligning stakeholder goals + different entities
- Transparency / transfer pricing / valuation
- Technological development and innovation: still emerging / untested regulatory regime / untested economics
- Sponsoring State / home country fiscal impacts
- Mineral price volatility
- The CHM(H) & intergenerational equity: capturing preferences of society: current v. future consumption
Building a package to reflect environmental responsibilities of contractors and other actors:

Two principle objectives:

1. **Reduce likelihood / magnitude of damage in cost effective way**

2. **Provide funds for compensation**
Building a package to reflect environmental responsibilities of contractors and other actors

Policy approaches and instruments......

1. Regulation

2. Environmental fees

3. Responsibility & Liability (+ jurisdictional competence)

4. Insurance / bonds

5. Funds: Environmental liability trust fund / Seabed sustainability fund

...... for detailed discussion
Regulatory development

• Part V, *Financial terms of a Contract*, but also……

• Other obligations (known / potential) having an economic / financial impact

• *I.e. regulatory impact on DSM activities throughout the value chain*
  
  • E.g. feasibility studies ("modifying factors"), contract term / renewal etc.
......the need for a financial model
Objectives

Discussion on key cost drivers

Cost components of financial model
Objectives
Objectives

1. Standardization of variables to cost / financial model
   • Consistency in use of terms
   • Those particularly relevant to assist development of ISA financial rules (the payment mechanism)

2. Focus on objective variables
   • Objective variables rather than absolute number variables & outputs

3. Total cost approach here
   • Cost variables for compliance
   • What are the sources of those costs? Not all known?
4. Gaining consensus / understanding on key metrics / high level drivers e.g.
   - Mine life
   - Nodule content
   - Metal extraction scenarios
   - Understanding the potential business cases

5. The value chain: understanding
   - Interdependency between collection and processing: impact of ISA rules downstream??
6. Need for clear, unambiguous rules and their application to facilitate / promote industry development and access to funding
   • Consistency in the language adopted should lead to clearer understanding and articulation of regulatory rules and principles....across the stakeholder base

7. Aid the development of the substantive deliverables and operationalisation of the CHM....reduce confusion on variables and related regulatory determinations
Cost components of financial model
• **Cost Components of Financial Model** – word document

• Currently populated with 34 cost components

• To aid common understanding in the language (classification / definitions) of key cost, economic & risk drivers of a financial model

• Number of references to “impact of ISA exploitation regulations” – keep in mind (perhaps exploration regs too?)
• Cost Components of Financial Model – word document

• Goal: to agree core components of a possible model (note: different entities / different drivers?)

• Update document as we work through
  • Clarify components / commentary
  • Populate with further components
  • Not too complicated: no requirement to drill down to last $
  • Audience: LTC / stakeholder base (keeping simple)

• Later stage: inputs to variable components (ranges)
Discussion on key cost drivers
The importance of clear and concise language.....

• Resources (convention)
• Minerals (convention)
• Ore ("depletion of the ore" (convention))
• Mineral resource (ISA reporting standard)
• Mineral reserve (ISA reporting standard)
• Metals
• ...and we’ve seen more!
Geology
Name the three types of rock.

1. Classic
2. Punk
3. Hard
Understanding the “nodule” value chain scenarios – feasibility to construction to collection to processing – cost drivers

<table>
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<th>1. Pre-feasibility components</th>
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<td>2. Feasibility components</td>
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<td>3. Timelines</td>
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<td>4. Mine life</td>
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<td>5. Collection</td>
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<td>6. Content</td>
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**1. Pre-feasibility components**

**2. Feasibility components**

- (Note: working draft regs Annex II)

**3. Timelines**

- What are phases / timelines from contract award to production? (And processing?)
- Triggers for commercial (full) production?

**4. Mine life**

- Operational mine life?
- Total mine life? (Business case)
- Where is model cut-off?

**5. Collection**

- What are the collection scenarios (production requirements) & variables?
- Annual recovery?
- Cut-off / abundance?
- Efficiency factors?
- Wet versus dry?

**6. Content**

“Average” metal content (grade)?
### Starter discussion II

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<td><strong>7. Metal scenarios</strong></td>
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<tr>
<td>• Recovery scenarios? Is there are optimum? Which “metals”?</td>
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<td>• Recovery / yield %?</td>
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<td><strong>8. Transport &amp; Processing</strong></td>
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<tr>
<td>• Cost components – what’s known, what’s unknown? Potential scenarios?</td>
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<td><strong>9. Financing</strong></td>
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<td>• Equity / debt scenarios and phasing?</td>
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<td><strong>10. “Unknowns”</strong></td>
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<td>• What are the material “unknowns” by category?</td>
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<td><strong>11. Key project / business metrics</strong></td>
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<td>• How are projects evaluated? (Peter Jantzen session)</td>
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<td><strong>12. CHM issues</strong></td>
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