Directorate for Science, Technology and Industry
Steel Committee

India
Steelmaking Raw Materials and Sea Freight Outlook

Joint India/OECD/IISI Workshop, New Delhi (India), 16-17 May 2006.

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Steelmaking Raw Materials & Sea Freight Outlook

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Contents

Global Economy
Steel Market
Seaborne Iron Ore Market
Metallurgical Coal Market
Coke Market
Sea Freight Market
Global Economic Growth Scenarios

- **High Case** - Global growth 3.5%, China 10% & strong growth in other emerging countries (e.g. 8% in India)
- **BASE Case** - Global growth 3.0%, China 7.8% & healthy growth in other emerging countries (e.g. 6.5% in India)
- **Low Case** - Global growth 2.5%, China 6.0% & slower growth in other emerging countries (e.g. 4.5% in India)

Global Economy

**Steel Market**
- Seaborne Iron Ore Market
- Metallurgical Coal Market
- Coke Market
- Sea Freight Market
Steel Supply – Crude Steel Production

Steel Supply – Pig Iron Production

Source: Various & IISI RAMCO Expert Group
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Seaborne Iron Ore Demand

Source: Various & IISI RAMCO Expert Group
China’s Iron Ore Consumption by Source

Seaborne Iron Ore Supply

Source: RAMCO Expert Group

Source: Various & IISI RAMCO Expert Group
Seaborne Iron Ore Supply/Demand

Million Tonnes

Note: Supply based on official announcements

Source: Various & IISI RAMCO Expert Group

Production Capacities of Seaborne Iron Ore Suppliers

Announced Capacities

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVRD</td>
<td>276</td>
<td>309</td>
<td>325</td>
</tr>
<tr>
<td>Rio Tinto</td>
<td>190</td>
<td>192</td>
<td>206</td>
</tr>
<tr>
<td>BHP Billiton</td>
<td>109</td>
<td>109</td>
<td>120</td>
</tr>
<tr>
<td>Others</td>
<td>441</td>
<td>465</td>
<td>497</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,016</td>
<td>1,079</td>
<td>1,157</td>
</tr>
</tbody>
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Data Based on CY 2006 (Mill. Metric Tonnes)

Source: Various & IISI RAMCO Expert Group
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Global Economy
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Seaborne Iron Ore Market
**Metallurgical Coal Market**
Coke Market
Sea Freight Market

Coal Market Overview

Total Production 5,909 mt
Export 752 mt

- **Brown Coal**: 953
- **Hard Coal**: 4,956
  - Domestic: 4,204
  - Export: 752

- **Seaborne**: 682
  - Thermal: 484
  - Metallurgical: 198

Data Based on CY 2004 (M Tonnes)

Source: Barlow Jonkers, World Coal Institute
Seaborne Metallurgical Coal Supply/Demand

Note: Includes PCI, Semi-soft & Hard Coking Coal

Sources: Various & IISI RAMCO Expert Group

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Sea Freight Market
Coke Production (All Uses)

Total Coke Supply/Demand (All Uses)

Sources: Various & IISI RAMCO Expert Group
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Sea Freight Market

Baltic Dry Index
Baltic Cape Index

Source: Baltic Daily Index

Bunker Oil 380 cst (US$/t)

Rotterdam
Japan

Source: Platts
Capesize Fleet Expansion

Source: Various

Capesize Fleet Age

Source: Various & IISI RAMCO Expert Group
Capesize Market
Supply/Demand

Million Tonnes


SUPPLY
(Lifting Capacity)

DEMAND

Sources: Various & IISI RAMCO Expert Group

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