Indonesia: A National Strategy

8th ASEAN Ports Conference

Presented By: David Wignall
Law 17/2008

(1) NPMP should cover the location, development, construction and operation of ports

(2) NPMP is to consider
   a. national, provincial and local spatial plans
   b. regional socio-economy development (and potential)
   c. natural resources
   d. strategic economic initiatives (growth triangles)

(3) NPMP is to contain:
   a. national port policy
   b. location plan and chain of command

(4) Plan to be for a period of 20 (twenty) years

(5) NPMP to be reviewed every 5 years

(6) NPMP can be reviewed after special events
National Port Plan

Long terms needs
- Trade, commodities, transit....
- Productivity, service standards,
- Ports areas and terminals

Planning Guidelines
- Demand
- Zoning, supporting infrastructure

Industry Structure
- PPP, Competition,
- Unions, Stevedores....

Human Resources
Vision for 2030...

Long terms needs
• Trade, commodities, transit....
• Productivity, service standards,
• Ports areas and terminals

Planning Guidelines
• Demand
• Zoning, supporting infrastructure

Industry Structure
• PPP, Competition,
• Unions, Stevedores....

Human Resources
Forecast Method

• Different methods used to ensure veracity

• Container/general cargo:
  • From trends of container and general cargo growth and growth assessments
  • Top down, from overall world forecast

• Commodities:
  • Bottom up from resource developments
  • Comparators with similar countries/regions or “growth” targets
Indonesian Container Traffic Forecasts
Trend Growth versus World Approaches (Million TEU)

- Actual
- World Low
- World Base
- World High
- Growth Low
- Growth Base
- Growth High
Crude Palm Oil

Historic and Forecast Indonesian Palm Oil Production (Million Tonnes)

1985 - 2009 Data
Palm Oil Forecast
Exponential Trend 1985 to 2009
# Petroleum Products

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual / Est.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>90.4</td>
<td>38.3</td>
<td>9.3</td>
<td>10.7</td>
<td>10.1</td>
<td>60.9</td>
</tr>
<tr>
<td>2000</td>
<td>83.4</td>
<td>29.2</td>
<td>11.5</td>
<td>8.8</td>
<td>14.0</td>
<td>70.8</td>
</tr>
<tr>
<td>2005</td>
<td>62.3</td>
<td>21.5</td>
<td>15.6</td>
<td>6.0</td>
<td>21.1</td>
<td>71.5</td>
</tr>
<tr>
<td>2006</td>
<td>59.5</td>
<td>18.1</td>
<td>14.6</td>
<td>7.0</td>
<td>18.7</td>
<td>67.6</td>
</tr>
<tr>
<td>2007</td>
<td>56.3</td>
<td>18.2</td>
<td>15.1</td>
<td>6.3</td>
<td>19.5</td>
<td>66.5</td>
</tr>
<tr>
<td>2008</td>
<td>56.8</td>
<td>18.2</td>
<td>12.7</td>
<td>5.7</td>
<td>22.4</td>
<td>68.0</td>
</tr>
<tr>
<td>% growth 96/08</td>
<td>-3.80</td>
<td>-5.99</td>
<td>2.62</td>
<td>-5.07</td>
<td>6.83</td>
<td>0.92</td>
</tr>
<tr>
<td>Forecast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>55.0</td>
<td>18.0</td>
<td>12.0</td>
<td>5.0</td>
<td>21.0</td>
<td>65.0</td>
</tr>
<tr>
<td>2010</td>
<td>52.8</td>
<td>17.8</td>
<td>11.9</td>
<td>5.0</td>
<td>25.0</td>
<td>67.0</td>
</tr>
<tr>
<td>2015</td>
<td>43.1</td>
<td>16.9</td>
<td>11.3</td>
<td>4.7</td>
<td>44.9</td>
<td>77.6</td>
</tr>
<tr>
<td>2020</td>
<td>35.1</td>
<td>16.1</td>
<td>10.7</td>
<td>4.5</td>
<td>64.7</td>
<td>90.0</td>
</tr>
<tr>
<td>2030</td>
<td>23.3</td>
<td>14.6</td>
<td>9.7</td>
<td>4.0</td>
<td>106.5</td>
<td>120.9</td>
</tr>
<tr>
<td>% growth 09/30</td>
<td>-4.00</td>
<td>-1.00</td>
<td>-1.00</td>
<td>-1.00</td>
<td>8.04</td>
<td>3.00</td>
</tr>
</tbody>
</table>
Forecast Headlines

In 2030 the National Port System to handle

- 500 mtpa of Coal
- 420 mtpa or 42 m TEU
- 150 mtpa of Crude Palm Oil
- 107 mtpa of import petroleum products
- Other commodities

Key changes

- Large scale petroleum product imports
- CPO volume will increase 800%
- Container volume will increase 500%
- Coal will increase by 300% to 2030
## Ports in 2030

<table>
<thead>
<tr>
<th>Region</th>
<th>Conts.</th>
<th>Pet.</th>
<th>Coal</th>
<th>CPO</th>
<th>Rice</th>
<th>Cocoa</th>
<th>Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Sumatra/Aceh</td>
<td>56.6</td>
<td>14.4</td>
<td>0.0</td>
<td>92.0</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>West Kalimantan</td>
<td>7.2</td>
<td>1.8</td>
<td>100.0</td>
<td>9.5</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>South Sumatra</td>
<td>30.3</td>
<td>7.7</td>
<td>100.0</td>
<td>24.9</td>
<td>0.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Java</td>
<td>227.7</td>
<td>58.0</td>
<td>0.0</td>
<td>0.4</td>
<td>3.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Bali and eastward</td>
<td>21.8</td>
<td>5.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>22.7</td>
<td>5.8</td>
<td>300.0</td>
<td>17.4</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Western Sulawesi</td>
<td>19.5</td>
<td>5.0</td>
<td>0.0</td>
<td>4.8</td>
<td>0.3</td>
<td>3.0</td>
<td>1.5</td>
</tr>
<tr>
<td>The East</td>
<td>34.0</td>
<td>8.7</td>
<td>0.0</td>
<td>1.1</td>
<td>0.5</td>
<td>0.0</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>420.0</td>
<td>107.0</td>
<td>500.0</td>
<td>150.0</td>
<td>6.0</td>
<td>3.0</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total 2009</strong></td>
<td>80.0</td>
<td>15.0</td>
<td>200.0</td>
<td>20.0</td>
<td>1.00</td>
<td>1.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Shipping
Do not ignore shipping…

Primary means of cargo transport

Need coastal tanker fleet

Need competitive domestic liners

Need small bulk carriers
Container Shipping
Container Distribution
There are some clear hinterlands and region where concentrating cargo flows makes sense.
Domestics Container Trade

• Current and future ship sizes
  – 300-500 TEU feeder vessels
  – 1,000-2,000 TEU short route line/feeder
  – 2,000-4,000 TEU+

• Carrying potential
  – Feeders: 30,000 to 50,000 per year
  – Short liner: 100,000 ish per year
  – “Intra” Indonesia: 150,000+ per year

• Routes and volumes
  – Semarang, 2,000,000 TEU?
  – Makassar, 1,000,000+ TEU
  – Benoa, Palembang, Jambi, Banjarmasin 500,000+ TEU
Tankers
Petroleum Products
In context
Tankers and Indonesia

• Current domestic tankers
  – Limited availability of 80,000 DWT
  – Makassar 30,000 DWT

• Distribution volumes in 2030
  – Makassar, 10 mt
  – Kalimantan, 7 mt

• Tanker scaling
  – Load, transport, discharge cycle 7 days?
  – 200,000 mt per week
  – Tanker sizing 50,000 to 100,000 DWT
Ports
Major New Terminals

Major common user coal terminals
  • Attracting added value
  • Enabling exports
  • Blending

Large expansion of container capacity
  • Specialist facilities across country
  • Large transshipment capability
  • Direct calls to Intrasian/US/Europe

• Petroleum Import Terminals
  • Mainly common user

• CPO Terminals
  • Common user as well as dedicated
## Container Terminals

<table>
<thead>
<tr>
<th></th>
<th>Containers</th>
<th>Productivity (TEU/yr)</th>
<th>Port Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TEU</td>
<td>t</td>
<td>Berth (m)</td>
</tr>
<tr>
<td>NSumatra</td>
<td>5.66</td>
<td>56.6</td>
<td>2,000</td>
</tr>
<tr>
<td>W Kalimantan</td>
<td>0.72</td>
<td>7.2</td>
<td>1,000</td>
</tr>
<tr>
<td>S Sumatra</td>
<td>3.03</td>
<td>30.3</td>
<td>1,000</td>
</tr>
<tr>
<td>Java</td>
<td>22.77</td>
<td>227.7</td>
<td>2,000</td>
</tr>
<tr>
<td>Bali +++</td>
<td>2.18</td>
<td>21.8</td>
<td>1,000</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>2.28</td>
<td>22.7</td>
<td>1,000</td>
</tr>
<tr>
<td>W Sulawesi</td>
<td>1.95</td>
<td>19.5</td>
<td>1,000</td>
</tr>
<tr>
<td>The East</td>
<td>3.40</td>
<td>34.1</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Including Transhipment

<table>
<thead>
<tr>
<th></th>
<th>TEU</th>
<th>t</th>
<th>Berth (m)</th>
<th>Crane</th>
<th>Area (Ha)</th>
<th>Berth (m)</th>
<th>Crane</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Java</td>
<td>18.10</td>
<td>181.0</td>
<td>2,000</td>
<td>150k</td>
<td>20k</td>
<td>9,050</td>
<td>121</td>
<td>905</td>
</tr>
<tr>
<td>East Java</td>
<td>8.20</td>
<td>82.0</td>
<td>2,000</td>
<td>150k</td>
<td>20k</td>
<td>4,100</td>
<td>55</td>
<td>410</td>
</tr>
</tbody>
</table>
# Product Terminals

<table>
<thead>
<tr>
<th></th>
<th>Petroleum</th>
<th>Productivity</th>
<th>Port Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Storage (m³/m²)</td>
<td>Berths</td>
</tr>
<tr>
<td>North Sumatra</td>
<td>14.42</td>
<td>2.0</td>
<td>180</td>
</tr>
<tr>
<td>West Kalimantan</td>
<td>1.84</td>
<td>1.0</td>
<td>23</td>
</tr>
<tr>
<td>South Sumatra</td>
<td>7.72</td>
<td>1.0</td>
<td>97</td>
</tr>
<tr>
<td>Java</td>
<td>58.02</td>
<td>2.0</td>
<td>725</td>
</tr>
<tr>
<td>Bali and eastward</td>
<td>5.56</td>
<td>1.0</td>
<td>70</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>5.80</td>
<td>1.0</td>
<td>72</td>
</tr>
<tr>
<td>Western Sulawesi</td>
<td>4.97</td>
<td>1.0</td>
<td>62</td>
</tr>
<tr>
<td>The East</td>
<td>8.67</td>
<td>1.0</td>
<td>108</td>
</tr>
</tbody>
</table>
## CPO Terminals

<table>
<thead>
<tr>
<th>Region</th>
<th>CPO</th>
<th>Storage</th>
<th>Berths</th>
<th>Storage</th>
<th>Berths</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Sumatra/Aceh</td>
<td>91.97</td>
<td>72</td>
<td>3.0</td>
<td>128</td>
<td>31</td>
</tr>
<tr>
<td>West Kalimantan</td>
<td>9.46</td>
<td>48</td>
<td>3.0</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>South Sumatra</td>
<td>24.87</td>
<td>48</td>
<td>3.0</td>
<td>52</td>
<td>8</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>17.35</td>
<td>48</td>
<td>3.0</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>Western Sulawesi</td>
<td>4.77</td>
<td>48</td>
<td>3.0</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>
Key Investments

- Java
  - 9 km of container quay, 120 STS cranes and 900 Ha of storage area
  - 4 km of container quay in East Java with over 55 STS cranes and 410 Ha of Storage
  - 80 or more petroleum products berths with over 700 Ha of storage terminal
  - Investment over US$ 20 billion
Key Investments

Southern Sumatra

• 3 km of container quay, 20 STS cranes and 152 ha of storage area
• A large petroleum products terminal
• A 100 mtpa coal terminal and CPO terminals
• Investment over US$ 2 billion

Bali

• 2 major cruise terminals
• Improved roro links to Java
• Petroleum product distribution terminals
• Investment over US$ 0.5 billion
Key Investments

Northern Sumatra

• 4km of container quay, 40 STS cranes and 300 Ha of storage area
• 3 to 6 major petroleum storage terminals
• 10 to 20 CPO terminals
• Investment over US$ 5 billion

West Kalimantan

• Container Terminals
• CPO Terminals
• Coal Terminals?
• Investment over US$ 0.5 billion
Key Investments

West Sulawesi
- 2 km of container quay, 15 STS cranes and 100 Ha of storage area
- A major petroleum products terminal
- A common use CPO and agri-bulk terminals
- Investment over US$ 1.5 billion

South and East Kalimantan
- 2.5 km of container quay, 15 STS crane and 120 Ha of storage area
- 3/4 coal terminals of 100 mtpa capacity
- Petroleum products and CPO terminals
- Investment over US$ 10 billion
Key Investments

The Maritime East

• 4 km of container quay, 25 STS cranes and 200 Ha of storage area
• Substantial consolidation and logistics support facilities
• A major petroleum products terminal
• Investment over US$ 2 billion
Thank You

Seaport Consultants Asia
http://seaportasia.com/
Tel: +65 9621 8738