Shipping and Environment
Sweden

Control of Vessel Emissions in Hong Kong

Peter Louie
Environmental Protection Department
Hong Kong SAR Government
21 September 2017
Source of Hong Kong Emissions

Respirable suspended particulates (RSP)
Total 5,430 tonnes

- Biomass Burning: 14%
- Non-combustion: 17%
- Other Combustion: 15%
- Civil Aviation: 1%
- Road Transport: 9%
- Public Electricity Generation: 11%
- Navigation: 34%

Nitrogen oxides (NOx)
Total 91,700 tonnes

- Biomass Burning: <1%
- Other Combustion: 11%
- Civil Aviation: 5%
- Road Transport: 18%
- Public Electricity Generation: 28%
- Navigation: 37%

Sulphur dioxide (SO2)
Total 19,540 tonnes

- Biomass Burning: <1%
- Other Combustion: 1%
- Civil Aviation: 3%
- Public Electricity Generation: 37%
- Road Transport: <1%
- Navigation: 59%
Characteristics of Hong Kong Port

- Top 5 container port in the world in 2016 (in TEUs throughput);
- Terminals close to population;
- Major water fairways nearby.

Container Throughput of Hong Kong Port
Benefits of Controlling Marine Emission

- **Environmental nuisance**
- **Air quality, health**
- **Territory emission reduction**
- **Green port**

- RSP
- SO₂
Marine Light Diesel Regulation

- Capped sulphur content of locally supplied marine light diesel at 0.05% since 1 April 2014
Fuel at Berth Regulation

- Mandate OGVs to use compliant fuel (e.g. low sulphur fuel (<0.5%)) while at berth since 1 July 2015
- The first port in Asia to mandate fuel switch at berth

- At downwind of Kwai Chung container Terminals
- Compare SO$_2$ levels from July 2015 to June 2016 with that from July 2014 to June 2015.
## Port Facilities and Light Dues Incentive Scheme

**Sept 2012**
- Extended till 31 Mar 2018

**50% port dues concession**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of application</strong></td>
<td>~9,300</td>
<td>~37,900</td>
</tr>
<tr>
<td><strong>Revenue forgone (HK$)</strong></td>
<td>~47.6M</td>
<td>~173M</td>
</tr>
</tbody>
</table>
Regional Cooperation

- Maximize environmental and health benefits in the region
- Level-playing field for the shipping industry
Domestic Emission Control Areas in Mainland China

- In December 2015, the Ministry of Transport issued an Implementation Plan of setting up three Domestic Emission Control Areas (DECAs) in the Mainland.

- PRD ECA
- Bohai Rim ECA
- YRD ECA
Implementation Plan on Domestic Emission Control Area (DECA)

- Use low sulphur fuel while at berth in core ports (2017)
- Use low sulphur fuel while at berth in all ports (2018)
- Use low sulphur fuel within DECA (2019)
- IMO Global Sulphur Cap (2020)
- Review the implementation of DECAs
# New Control on Marine Emission

**Prevailing Control**

<table>
<thead>
<tr>
<th>SO₂</th>
<th>RSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,340 tonnes</td>
<td>710 tonnes</td>
</tr>
</tbody>
</table>

**New Control**

- Mandate ocean-going vessels to use compliant fuel while at berth
- Mandate all vessels to use compliant fuel within HK waters in January 2019
New Regulation in Hong Kong

- Consulted the marine trades and stakeholders in the first half of 2017
- Preparing a new regulation for implementing the new control 1 January 2019.
Future of Green Shipping

- To explore green marine technologies that could be technically feasible for local applications
- Consideration of operational profile
Thank you!