Poor air quality in major cities in China has raised concerns from the public and varying levels of the government. Tougher rules have been set by the central government to combat air pollution by mandating a 10% reduction in emissions of oxides of nitrogen (NO\textsubscript{X}) between 2010 and 2015 and requiring all cities to develop and execute plans for attaining improved air quality. While transportation is the focus of current air pollution improvement efforts, most measures are designed for on-road vehicles. Recent studies show that emissions from ships and port activities are a significant source of air pollution emissions. For instance, the recently released emission inventory of Hong Kong found that shipping activities became the largest source of the cities' NO\textsubscript{X} and particulate matter (PM) emissions, accounting for 32% of the NO\textsubscript{X}, 48% of the SO\textsubscript{2}, and 36% of the PM\textsubscript{10} emissions in 2010.\footnote{Hong Kong Environmental Protection Department. 2012. Hong Kong Air Pollutant Emission Inventory. (http://www.epd.gov.hk/epd/english/environmentinhk/air/data/emission_inve.html, accessed Nov. 16, 2012)} This acknowledgement of the contribution of shipping activity to cities’ emissions inventories continues to increase. As a result, there is a growing interest in cleaning up ships in major coastal and port cities, especially due to the proximity of ship operation to densely populated areas along the coast and rivers, and relatively limited controls on fuel and vessel engines.

This workshop is jointly organized by the Vehicle Emission Control Center (VECC) of the Ministry of Environmental Protection (MEP), China Waterborne Transport Research Institute (WTI) of the Ministry of Transport (MOT), and the International Council on Clean Transportation (ICCT), and sponsored by the China Sustainable Energy Program. This workshop will bring together experts from China and abroad to share experiences and best practices of controlling port-related emissions, and to discuss advantages and limitations of different emission mitigation measures and technology options. The workshop will also invite experts on ship emissions testing to review the latest research and emission factors of domestic vessels. The workshop will provide a strong constructive exchange of ideas among workshop participants on possible paths forward to control air pollution from vessels and port activities that best suit the unique situation of China.
Agenda

8:30 – 8:50 AM  
**Opening remarks**  
Representatives from the Ministry of Transport and the Ministry of Environmental Protection

**Session 1: Best practices of port emission reduction programs**

8:50 – 9:10 AM  
**Reducing air emissions in the Port of Long Beach**  
Thomas Jelenic (Port of Long Beach)

9:10 – 9:30 AM  
**Reducing air emissions in the Port of Rotterdam**  
Maurits Prinssen (Port of Rotterdam)

9:30 – 9:50 AM  
**Reducing air emissions in Hong Kong**  
Phoebe Lui (Hong Kong Environmental Protection Department)

9:50 – 10:00 AM  
**Questions and discussions**

10:00 – 10:10 AM  
**Tea break**

**Session 2: Technical and policy measures for reducing air pollution from ships**

10:10 – 10:30 AM  
**Vessel speed reduction: a multi-port overview**  
Kevin Maggay (Port of Los Angeles)

10:30 – 10:50 AM  
**Marine fuel quality standard: fuel quality, cost, availability, technical concerns, and enforcement challenges**  
Penelope McDaniel (U.S. Environmental Protection Agency)

10:50 – 11:10 AM  
**Shore power – reducing air emissions at berth**  
Joint presentation: Thomas Jelenic (Port of Long Beach)/ Chuansheng Peng (Waterborne Transport Research Institute (Joint presentation))

11:10 – 11:30 AM  
**Marine engine air pollution control measures: US experiences**  
Dana Lowell (MJ Bradley Associates LLC)
11:30 AM – 11:50 PM  
**Environmental Incentive Tool – A voluntary approach to reduce port and ship emissions**  
*Haifeng Wang (The International Council on Clean Transportation)*

11:50 – 12:00 PM  
**Questions and discussions**

12:00 – 1:30 PM  
**Lunch break**

**Session 3: Ship Testing and Emission Factor Determination**

1:30– 1:50 PM  
**Best practices in developing emission factors for domestic vessels, and ship testing in the United States**  
*Bill Welch (University of California Riverside)*

1:50 – 2:10 PM  
**Case study of emission testing of inland vessels and harbor crafts in Jiangsu and Guangdong province**  
*Yunshan Ge (Beijing Institute of Technology)*

2:10 – 2:30 PM  
**Assessment of air pollution control of port regions in China**  
*Bing Qiao (China Waterborne Transport Research Institute)*

2:30 – 2:50 PM  
**Questions and Discussions**

2:50 – 3:00 PM  
**Tea break**

3:00 – 3:20 PM  
**Shipping inventory in Pearl River Delta region and health assessment**  
*Simon Ng (Civic Exchange)*

3:20 – 3:40 PM  
**Navigation, energy conservation and air pollution mitigation**  
*Guangwei Xie (Zhejiang Danshan Navigation Station)*

3:40 – 3: 50 PM  
**Questions and discussions**

**Session 4: Roundtable discussion**

3:50 – 5:00 PM  
**Roundtable discussion: Discussion of lessons learned and possible solutions to reduce air emissions from shipping and ports in China**