Current Situation and Future Prospect: Environmental Protection of Shanghai Port

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Shanghai Port is located at the central point of China’s 18000-kilometer coastline and the mouth of Chang Jiang, where the Chang Jiang east-west transportation corridor and the Shanghai north-south transportation corridor intersect. It is an estuarine coastal port. 60% of Shanghai cargoes and 99% of traded cargoes are imported and exported via the port.

In 2005, with port cargo capacity reaching 443 million tons that comprise around 15.1% of the capacity of coastal ports above national scale, Shanghai Port leaped to become the world’s largest freight port. In 2005, with container capacity reaching 18084900 TEU that comprise around 25.9% of the total capacity of ports above national scale, it was the top nationwide and continued to maintain the third position worldwide next to Singapore Port and Hong Kong Port.

Shanghai Port pays a lot of attention to environmental protection work. During the 80’s in the last century, Shanghai Harbor Environmental Protection Center was already set up. After the reform of the port administration system, the Shanghai Municipal Port Administration Bureau has been responsible for the supervision and management functions of the environmental protection of the port. Shanghai Port Administration Center is specifically responsible for managing the environmental protection work of the Shanghai Port.
Shanghai Port Planning

The overall planning of the Shanghai Port is coordinated with the industry structure of Shanghai city and city planning. 5 major functional areas are identified for the switching and adjustment of the functions of Shanghai port terminal.

**North-Western Area:**
With Baoshan at the center and in line with the steel and metal as well as gold smelting industries, big scale ore and coal terminals such as Luojing phase one bulk cargo loading and unloading terminal, Luojing phase two bulk cargo loading and unloading terminal, and Baogang raw materials terminal will be built.

**Northern Area:**
With Waigaoqiao as the base, Waigaoqiao phase one, phase two, phase three, phase four, and phase five big-scale container terminals will be built consecutively. Waigaoqiao phase six integrated terminal is currently being built. At the same time, in line with the Shanghai automobile industry, Haitong International Automotive Terminal and Waigaoqiao phase six roll-on roll-off terminal will be built.

**South-Western Area:**
Located at the northern coast of the Hangzhou Bay and in line with the Shanghai chemical industry park, a batch of special purpose terminals for oil and chemical has been built and is being planned to be built.

**Southern Area:**
Shanghai container and bulk freight centers will be built at the Xiaoyangshan Deepwater Port and the logistics area of the integrated area of Luchao port.

**Huangpu River Bank:**
In conjunction with World Expo 2010 Shanghai, adjustments will be made to the functions of ports along Huangpu River Bank. The original bulk cargo terminals between Lupu Bridge and Yangpu Bridge will be shifted to the outskirts. A landscape belt with big scale passenger transportation terminals primarily for sightseeing and tourist transportation such as the Gaoyang international passenger transportation center and the Shiliupu tourist and passenger transportation terminal will be built along the bank. Small scale bulk cargo loading and unloading terminals at the upstream and downstream of Huangpu River will be shut down and developed into new terminals primarily for domestic container transportation.
Environment Management Measures for Construction Projects
• Environmental impact assessment system for port construction projects

• Implementation of Environmental Supervision and Management System for Big Scale Projects

• Ecological compensation and repair
Daily Management
Pollution Management

• Wastewater, waste gas, and solid waste receipt/treatment rate reaches 100%;

• Implement total emission control for pollutant emissions and establish pollutant reduction targets;

• Implement the principle of “the new leading the old”, manage the original pollution, control the new pollution, and achieve increased production but not increased pollution.
Environmental Management

• Implement joint law enforcement management

• Develop technical research on enterprise environmental behavior with regard to ports and terminals

• Build up an environmental management information system to announce environmental information
International Cooperation

• Cooperate with international shipping societies, formulate international conventions in areas such as increasing the standardization of ship engine design, increasing the quality of fuel oils and air emission;

• Establish automatic environmental monitoring stations at container terminals, Luojing bulk cargo terminals, Xiaoyangshan ports, Hangzhou bay ports and Huangpu river bank ports;

• Develop various communication and cooperation methods with governmental organizations and non-governmental organizations;
Pollution Control

• Supervise and manage Shanghai port terminal enterprises that directly emit untreated domestic and industrial sewerage, enforce target emissions of sewerage for such enterprises;

• Request terminals with more serious fugitive dust emission problems to establish sprinkler facilities at yards and perform the hardening process for roads, conditionally adopt closure or semi-closure of yards;

• Implement elimination mechanisms for transportation vehicles in the port areas, select and use fuels of good quality;

• Solid wastes of the ports are all received and treated by the regional environment and sanitation departments, the receipt and treatment rate is above 90%, solid waste classification and collection systems will be gradually built in the port areas;

• Select and use low-noise, highly efficient loading and unloading facilities and transportation vehicles; place them on flat surfaces with reasonable layouts.
Improvement of Environmental Air

- The Maritime Safety Administration formulates laws and regulations on air pollutant emissions from ships;
- The Environmental Protection Bureau formulates the air pollutant emission standard for diesel auxiliary engines;
- The Shanghai Port Administration Center coordinates with the Environmental Protection Bureau and measures air pollutant emission and dispersion.
For the first time, a construction plan is proposed for an ecological model port area.

Zhanghuabang container port is selected as the very first model port for the ecological port construction.
《Feasibility Study for the Use of Onshore Electricity Technology by Vessels Calling on Shanghai Port》

- Obtain the economic and social benefits of using onshore electricity from the technical demonstration of the feasibility of using onshore electricity by major shipping models at Shanghai Port;

- The infrastructure hub at the Gaoyang international passenger transportation center has already put in place cables and laid pipes. Pilot tests of the use of onshore electricity are under planning.
Thank You