Overview of PAT

PAT's Green Initiative

February 7, 2023

Port Authority of Thailand (PAT)

An autonomous government agency under the jurisdiction of the Ministry of Transportation (MOT)

5 ports under the good governance of PAT including Bangkok Port, Laem Chabang Port, Chiang Saen Commercial Port, Chiang Khong Port and Ranong Port

1 River port, 1 International deep sea port and 3 Regional ports

Operate 4 ports, only Laem Chabang Port is landlord port

Land area: Total of 941 Acres, only 342 Acres are utilized for Port

Consists of 2 Cargo operation areas: West and East Quay

Inland location limits access to ships of 1.34 million T.E.U.s/year

West Quay is used for container general cargo and domestic/international berth

South Quay is used for rendering services for containerized cargo and container berths with 2 container terminals.

- Outbound Container Freight station (CFS), Open Stuffing Area
- Loading cargo to ships up to 12,000 deadweight tonnes or less

Quality of loaded container not over 1.34 million T.E.U.s/year

Electric consumption produces 35,590 ton carbon dioxide in 2012 and growth rate

Sharing of 70% of sea transp volume

Thai government plans to open as the main trading gateway to Indochina with the future expansion phase 3

Consists of 2 Basins

11 berths at Basin 1 were leased to private sectors' investment, management and operation.

5.83 million T.E.U.s in 2012 and growth rate

Adjacent to the Mekong River, opposite to Lao PDR (Houay Xai District of Bokeo Province)

Enhancing the efficiency of import-export services and promoting border trade between Lao PDR and Thailand

22 x 208 meters quayside terminal

Accommodates 3-5 motor vessels of up to 80-150 gross tonnage

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Presentation Outline

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PAT's Green Initiative

PAT's Greenport Projects

Environmental Management Timeline

Environmental Policy

Environmental Calculations

Guideline: 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Tier 1)

GHG: Carbon dioxide (CO₂), Methane (CH₄) and Nitrous oxide (N₂O)

Sectors: Energy - Road Transport, Off-road Transport and Water Transport

Time Period: 2009-2013
Greenhouse Gas Emission Inventories and Forecasts

Compare Thailand CO2 emission to PAT

Emission Reduction Target

Ton of CO2 eq.

Reduce Emissions by 10% by 2019 from the Baseline (2013)

Green Port Development

Reduce Emissions by 10% by 2019 from the Baseline (2013)

Corporate Plan 2015-2019

Good Governance, Service Mind, Innovation, Environmental Concern

9.3 Green Port Development

Development of Environmental Policies, Plans, Measures and Studies

Installation of Energy Efficient/Renewable Energy Equipment and Improvement of Environmental Performances

Raise Environmental Awareness among Personnel

Implement On-site Renewable Energy

Implement Energy Efficiency

Improve Waste Water Management

Improve Waste Management

Raise Environmental Awareness among Personnel

Increase public participations

On-site projects

Growing Air Emissions of Cargo Handling Equipment Project

Replace 3.0 Metric Ton Diesel Forklifts to electric ones

Install electric quay cranes

Install energy-saving equipment for RTGs

Energy Efficiency Project

Replace of ordinary light to LED for street light and office building

Install solar panels in the four sides of a cubic buoy

Install solar panel on the water level station

Continuously monitoring reporting and verification project

Implement Environmental management Information Systems (EMIS)

Current projects

Implement Environmental management Information Systems (EMIS)

Waste Management System in Bangkok Port, MARPOL Annex 5 Compliance

Sink Plantation Projects

Reforestation of near-port areas

Safety, Health and Environmental Management System (PSHE-MS)

Bangkok Port: 3rd PSHEMS for All Services on March 2015

Laem Chabang Port: on the process of recertification
**Environmental Programs and Projects**

- Measurement of black smoke
- Cooperate with Department of Land Transport (twice a year)
- Measure carbon monoxide, hydrocarbon and noise levels from the PAT's vehicles

**Monitor and Survey**

- Environmental Quality Monitoring Program
  - Parameters: Ambient Air Quality, Noise Level, Waste Water, River quality
- Environmental Surveillance Program
  - Monthly Surveillance

**Workshop & Workshops**

- Management and executive
  - Gain fresh perspectives on broader economic, environmental, and societal challenges
  - Understand the role and direction of PAT towards sustainable development and green economy
- Personnel
  - Raise awareness of environmental issues and possible impacts related to port performance
  - Workshop for Environmentally responsible personnel
    - Learn more about new technologies and inventions

**Partnership between PAT and the City of Yokohama**

- Partnership between PAT and the City of Yokohama to promote “Green Port Project” and increase possibility for PAT to achieve the goal of Green Port project.
  - The City of Yokohama and Yokohama Port Corporation will share their knowledge and experiences about carbon reduction gained through environmentally friendly measures introduced at the Yokohama port.
  - Proposed projects are such as installation of solar rooftop on the warehouse, implementation of environmentally friendly technologies like electronicklifts and hybrid RTG etc.

**Thank you for your kind attention**