



ASEAN – German Technical
Cooperation



Sustainable Port Development in the ASEAN Region

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About us

GTZ – German Technical Cooperation

- International organization for sustainable development with worldwide operations
- Supports the German Government in implementing its development policy objectives
- Promotes complex reforms and change processes in developing and transition countries
- Corporate objective is to improve people's living conditions on a sustainable basis
- Works on behalf of the German Federal Government and other national and international clients



Priority Areas

Every partner, every task, every contract and every solution is unique

- Combating structural poverty
- Education and youth
- Energy, transport, infrastructure management
- Development-oriented emergency and transitional aid
- Health and social protection
- Governance
- Rural development
- Management of natural resources
- Sustainable economic development
- Environment, climate, biodiversity
- Water





Facts and Figures

	2007	2008
Head Office staff	1,044	1,150
Seconded experts	1,189	1,391
Project personnel in Germany	441	545
National personnel	9,231	9,913
Integrated experts (CIM)	789	767

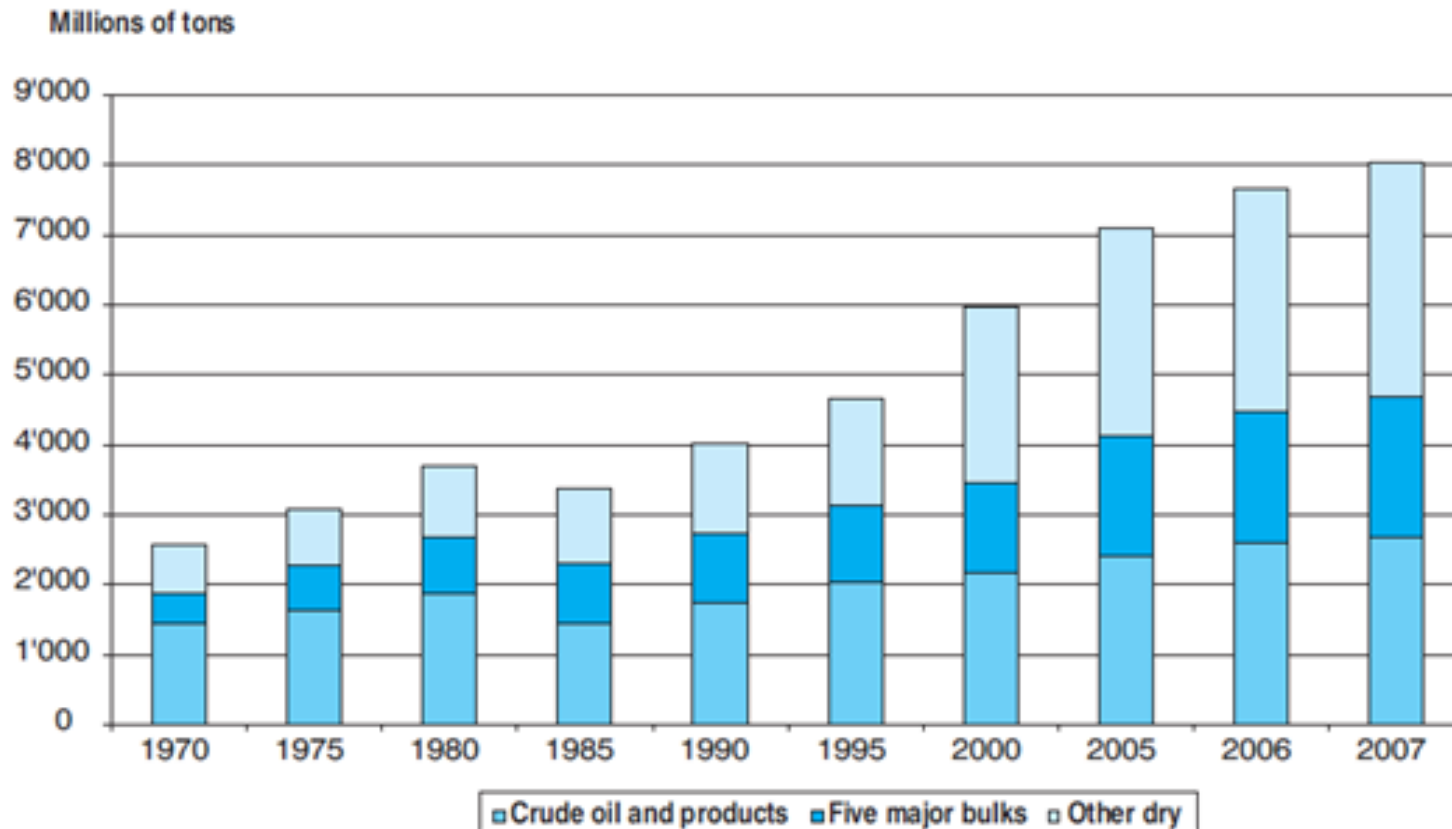
	2008
Turnover	EUR 1.224 billion
New contracts	EUR 1.554 billion
Contracts in hand	EUR 2.887 billion



Project Context

International Seaborne Trade 1970 – 2008

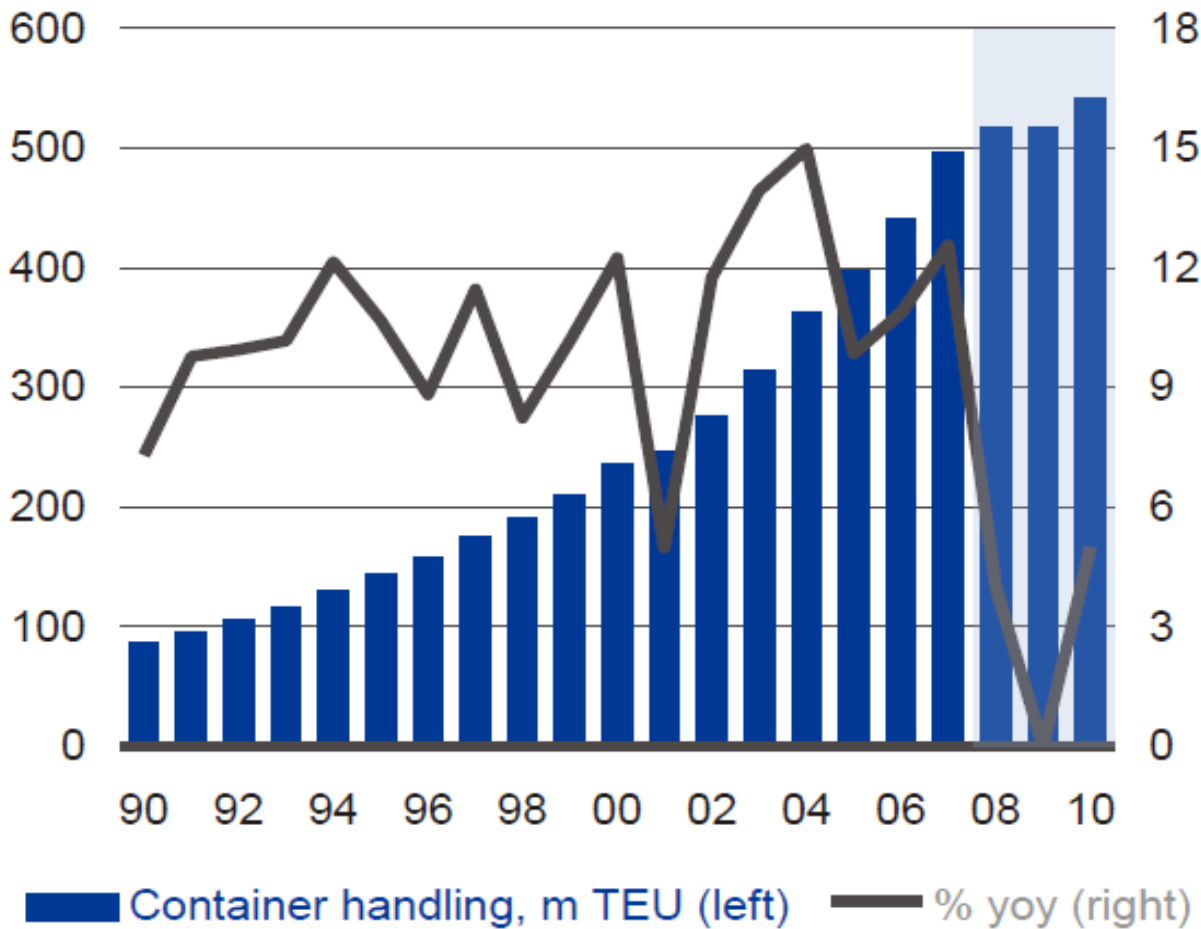
[*million of tons loaded*]



Source: UNCTAD: Review of Maritime Transport 2009



International Container Port Traffic [million TEU]

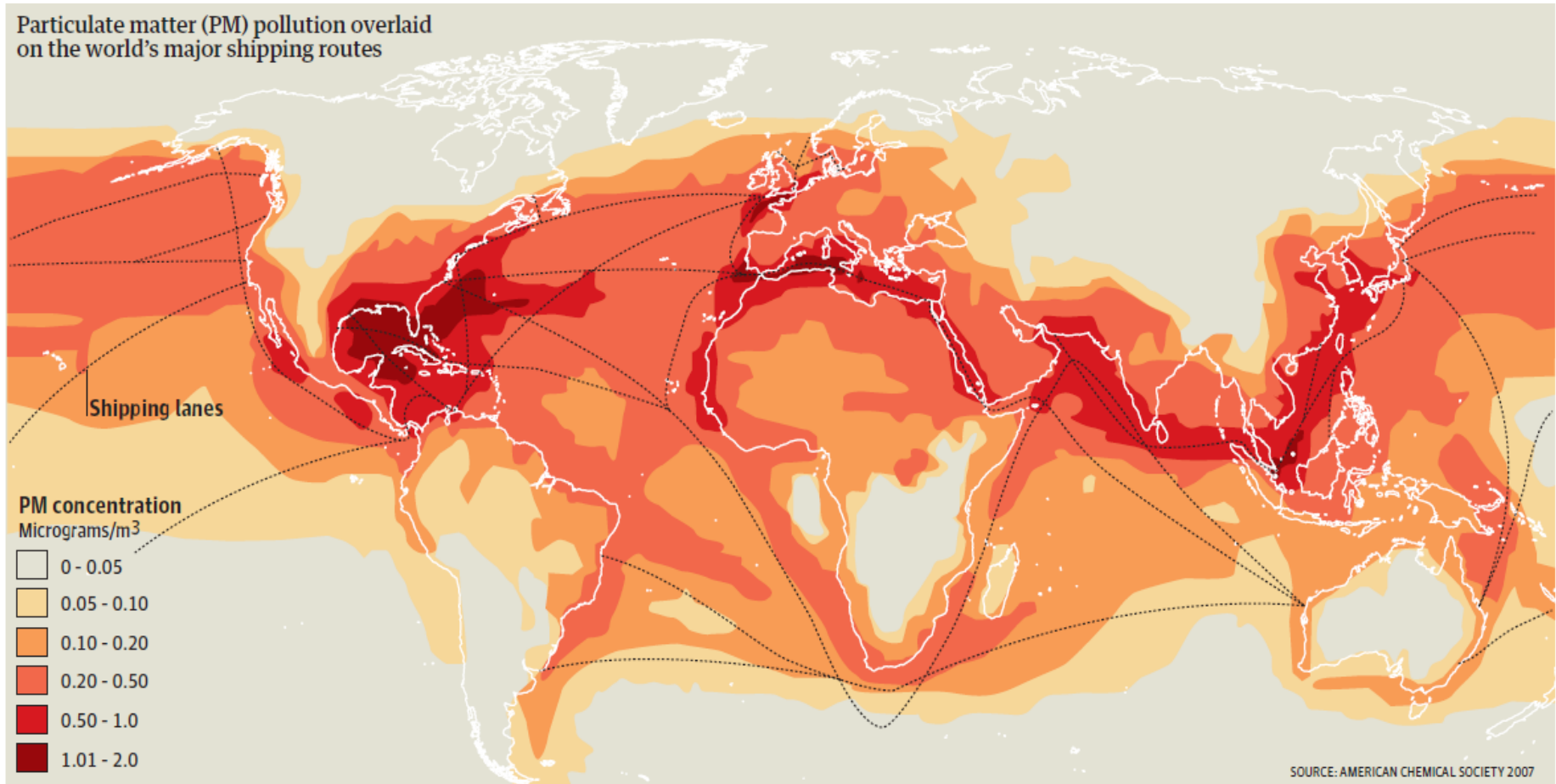


Sources: Drewry / Deutsche Bank Research 2009

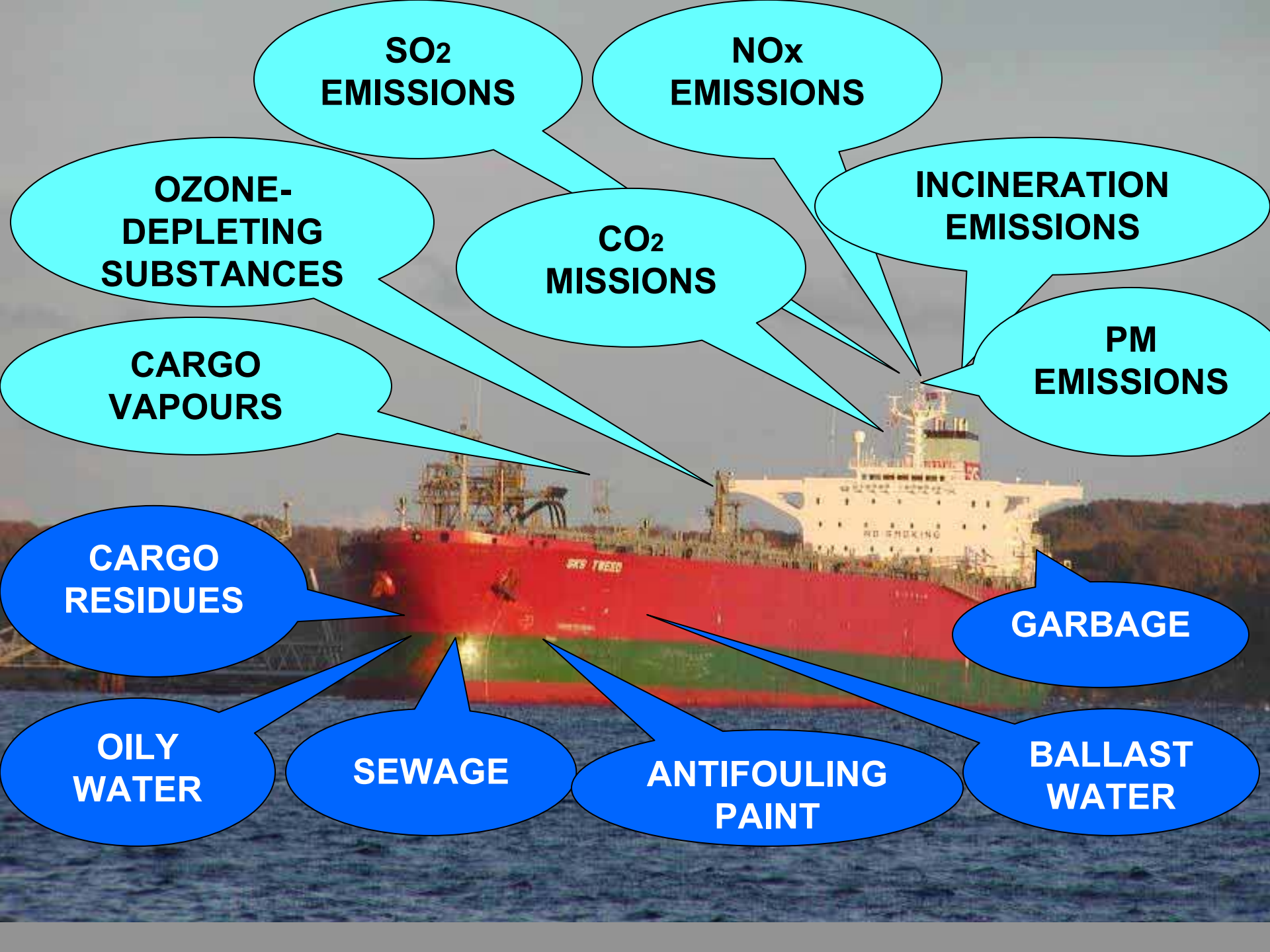


Shipping Pollution

Particulate matter (PM) pollution overlaid
on the world's major shipping routes



Sources: American Chemical Society 2007 / U.S. National Academy of Science (NAS)



**SO₂
EMISSIONS**

**NO_x
EMISSIONS**

**OZONE-
DEPLETING
SUBSTANCES**

**CO₂
MISSIONS**

**INCINERATION
EMISSIONS**

**CARGO
VAPOURS**

**PM
EMISSIONS**

**CARGO
RESIDUES**

GARBAGE

**OILY
WATER**

SEWAGE

**ANTIFOULING
PAINT**

**BALLAST
WATER**



ANNUAL MARINE POLLUTION FROM OIL DISCHARGES

SHIPPING
0.21 – 1.02
million tons

TOTAL
0.24 - 6.13
million tons

**BEST ESTIMATE
SHIPPING**
0.61 million tons





**TANKER
ACCIDENTS**
0.10 – 0.13
million tons

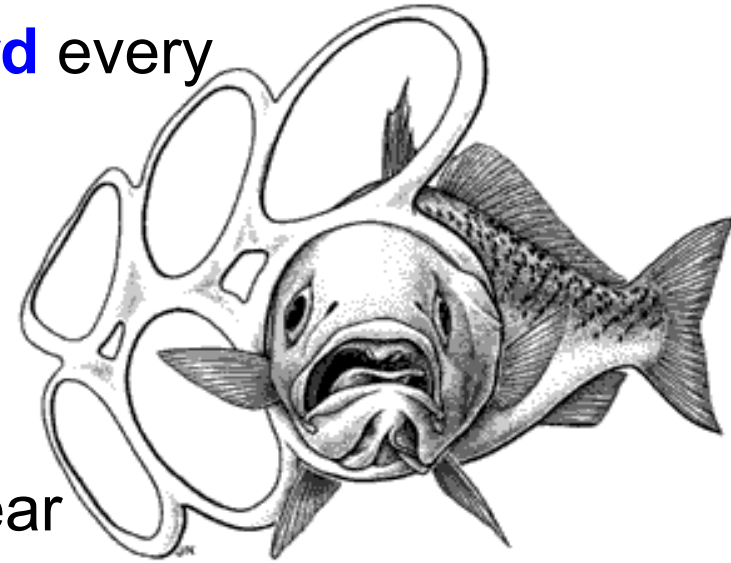
**OPERATIONAL
DISCHARGES**
0.31 – 0.89
million tons



Marine Pollution from Solid Waste

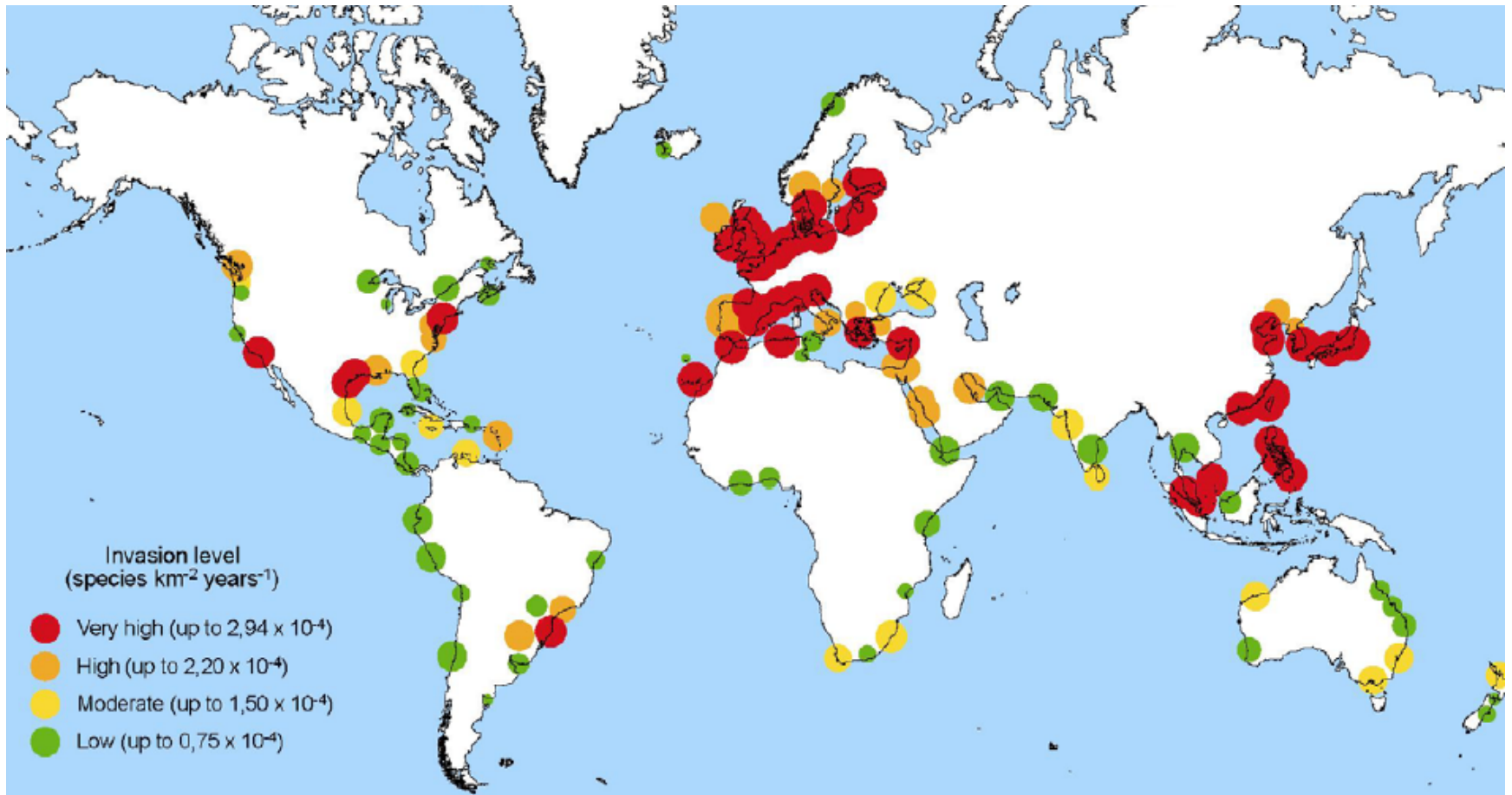
Oceans = Global Garbage Can

- ❑ **8 million items of marine litter** (solid waste) enter oceans and seas every day
- ❑ **5.5 million items thrown overboard** every day from commercial ships, incl.
 - **4.8 million metal containers**
 - **640,000 plastic containers**
 - **300,000 glass containers**
- ❑ > **6.4 million tons total** input per year
- ❑ > **5.6 million tons** from merchant shipping
- ❑ Three times more garbage thrown into the ocean each year than fish taken out





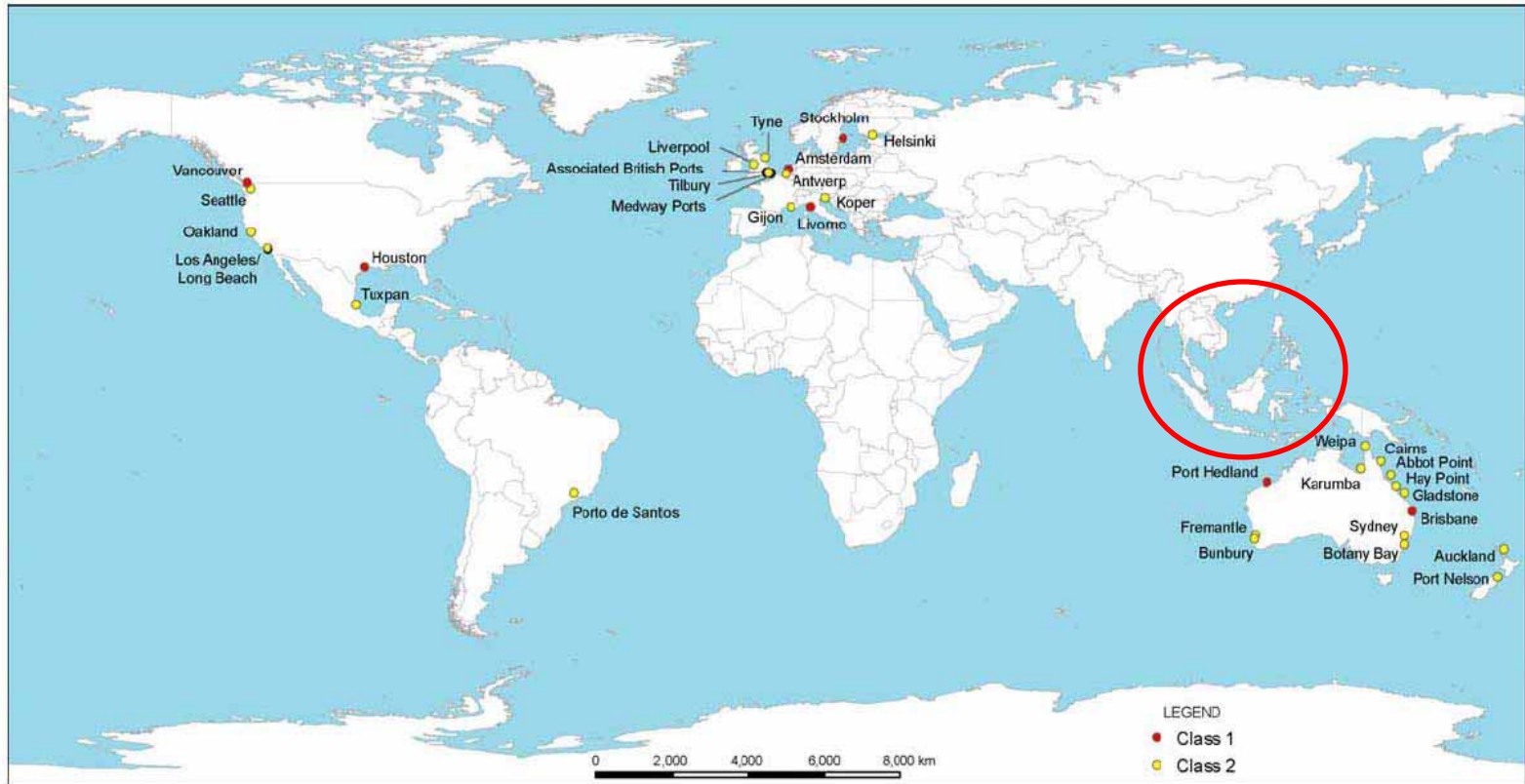
Biological Invasions by Ballast Water Around the World



Source: Claude Comtois and Brian Slack: Restructuring the Maritime Transportation Industry: Global Overview of Sustainable Development Practices, Études et Recherches en Transport, Québec, 2007



Port Authorities with the best Environmental Performance



Class 1: Uses a certified environmental management system, mentions environmental impact of its activities, has an environmental policy, presents sustainable development objectives and publishes an annual report pertaining to sustainability;

Class 2: Uses a certified environmental management system, has an environmental policy, mentions environmental impact of its activities, publishes a report.

Source: Claude Comtois and Brain Slack: Restructuring the Maritime Transportation Industry: Global Overview of Sustainable Development Practices, Études et Recherches en Transport, Québec, 2007



Clean Shipping

- ❑ Integrated approach focusing on three fronts:

Clean Ship

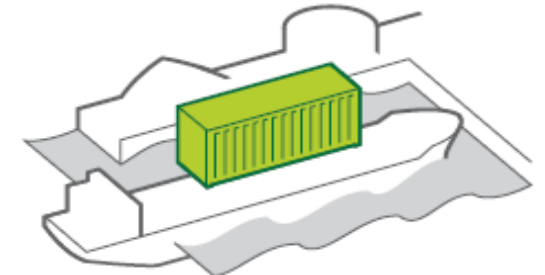
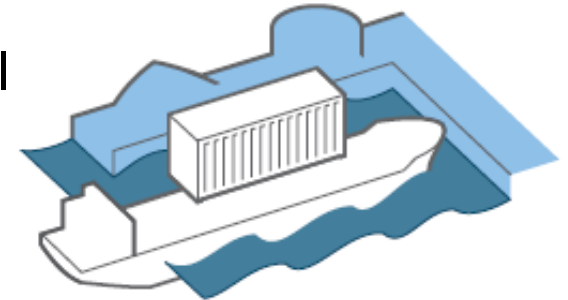
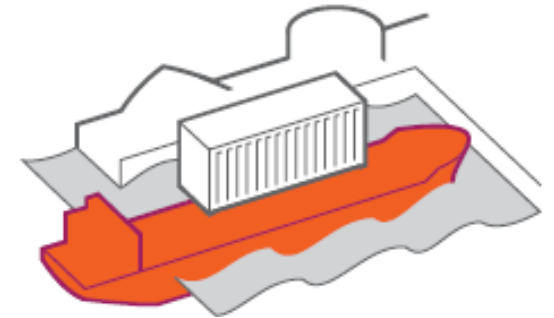
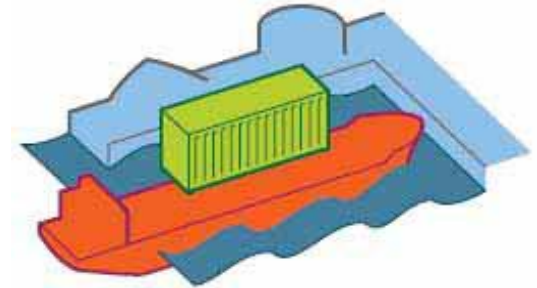
- ❑ State of the art ship that is welcome in every port, causing no negative effects to the environment. The long-term objective is zero emission

Clean Port

- ❑ Highly efficient port with excellent environmental services and strong incentives to facilitate and encourage clean shipping

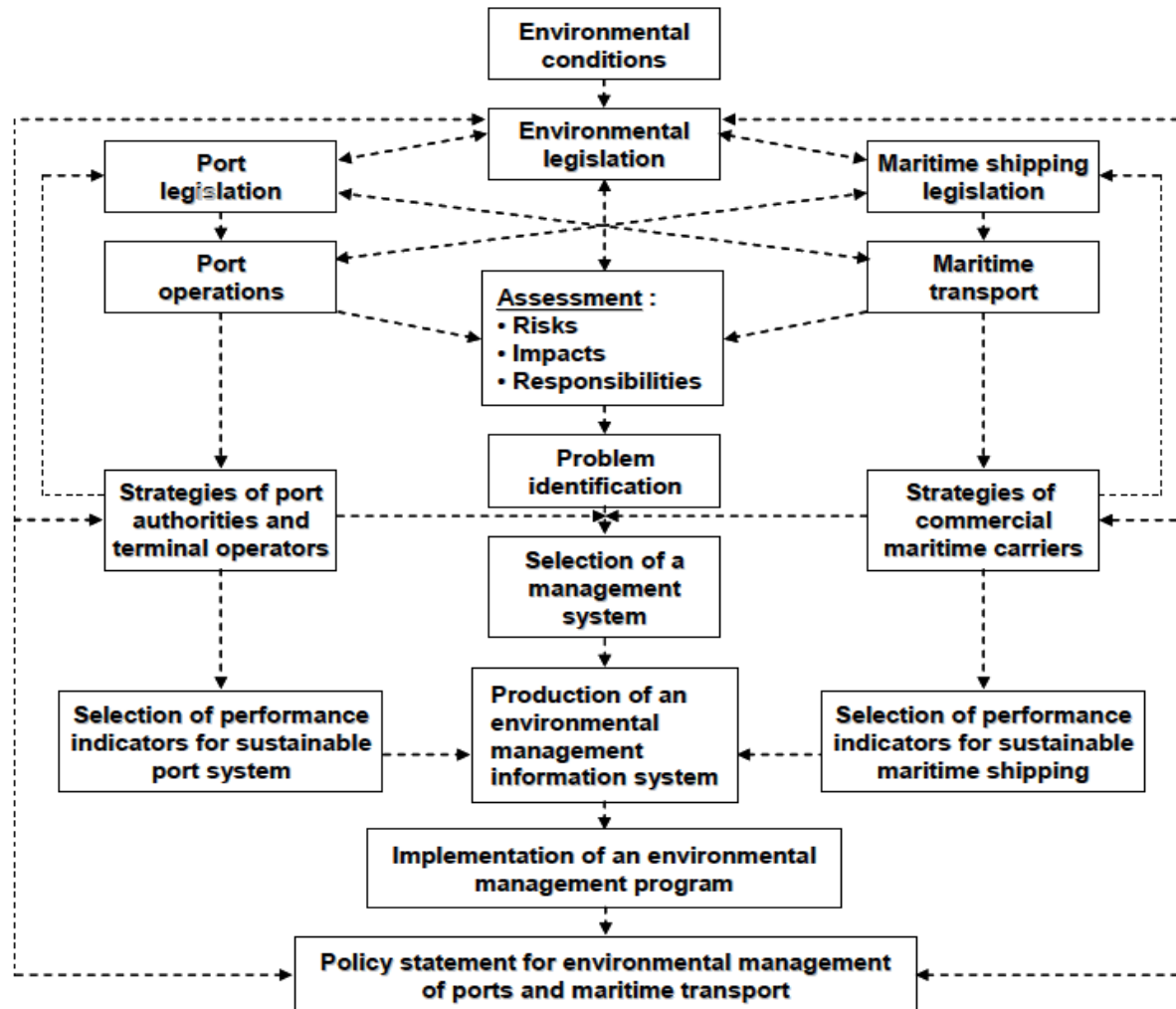
Clean Cargo

- ❑ To improve their corporate footprint, cargo owners include environmental issues in their decision making process when contracting carriers





Framework of Sustainable Development Applied to Ports and Maritime Transport





Project History

- 1995 ASEAN Ports Association (APA) / GTZ
Dangerous Cargo Workshop Jakarta
- 2005 – 2006 APA / GTZ project ***Handling of Dangerous Goods in ASEAN Ports***
- Apr 2008 ASEAN / APA request for new project to German Government
- Jul 2008 Appraisal mission for new project
- Jun 2009 German Ministry for Economic Cooperation and Development (BMZ) commissions GTZ to implement new project
- Aug 2009 Start of new APA / GTZ project ***Sustainable Port Development in the ASEAN Region***



Project Objectives

- Objective Phase I (2009 – 2012)**
Selected ports comply with relevant international safety, health and environmental (SHE) codes, standards and conventions

- Objective Phase II (2012 – 2015)**
Selected ports have improved quality, efficiency and sustainability of their SHE management systems



Project Concept

Shifting emphasis from reactive compliance to pro-active management aimed at quality, efficiency and sustainability

Capacity development through application of proven tools, systems and best available practices

Cooperation with other organizations and programmes: PEMSEA, EMSA, ECOPORTS, etc

Adapting national legislation to international regulations, codes of practice and standards

Development and implementation of modular training program on Port SHE Management



Issues to be Addressed by the Project (I)

- Environmental impact assessment
- Environmental management
- Risk assessment and management
- Air quality
- Noise
- Soil quality
- Water quality
- Handling of dangerous goods
- Bunkering
- Ballast water treatment
- Waste management





Issues to be Addressed by the Project (II)

- ❑ External and internal port traffic management
- ❑ Occupational safety & health management
- ❑ Accident prevention and investigation
- ❑ Dredging
- ❑ Port development
- ❑ Emergency plans
- ❑ Emergency management
- ❑ Good housekeeping





Expected Project Impacts

- ❑ Reduction of environmental impacts and risks in participating ports
- ❑ Ports actively contribute to prevention of marine pollution
- ❑ Better working conditions and welfare of port personnel
- ❑ Reduced accident rates
- ❑ Improved quality of life in urban areas surrounding participating ports
- ❑ Enhanced competitiveness and attractiveness
- ❑ Ports contribute to *'clean and green'* maritime transport services



Project Organization

- ❑ Project partner ASEAN Secretariat
- ❑ Executing agency APA Secretariat
- ❑ Steering Committee ASEAN Secretariat, APA, GTZ
- ❑ Regional project office Port Authority of Thailand (PAT)
Bangkok
- ❑ Costs Phase I € 2,500,000 (German side)
- ❑ Project period
 - Phase I 2009 – 2012 (approved)
 - Phase II 2012 – 2015 (proposed)



Project Contributions

- ❑ **Germany:**
 - Two seconded international experts
 - Local personnel
 - Local, regional and international short-term experts
 - Funds for meetings, workshops and conferences
- ❑ **APA:** Support and coordination
- ❑ **Port Authority of Thailand:** Regional project office
- ❑ **Participating ports:**
 - Management support
 - Active participation
 - Provision of counterparts
 - Project offices and training facilities



Criteria for Selecting Participating Ports

- ❑ Maximum of two ports per country:
 - prepared to carry out initial assessment / review of their SHE performance
 - willing to allocate adequate human and financial resources to SHE management and training
 - aiming at the implementation of SHE management systems
 - willing to collaborate with different stakeholder groups affected by port activities
 - ready to become active member in regional cooperation network among ASEAN ports in the field of SHE management



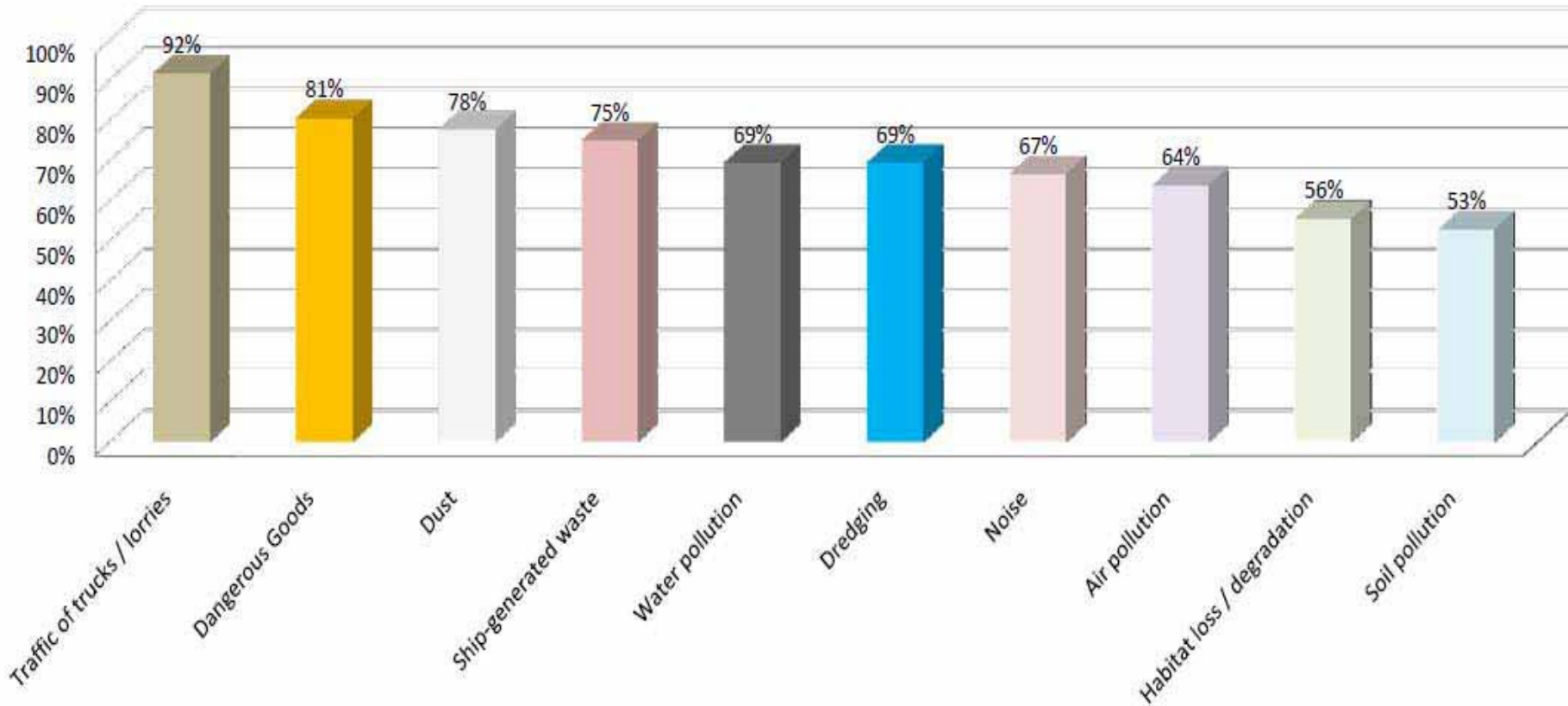
Ports selected until 23 Nov 2009

1. Iloilo
2. Bangkok
3. Laem Chabang
4. Sihanoukville
5. Phnom Penh
6. Saigon
7. Tanjung Priok
8. Cagayan de Oro





Preliminary Priority Areas of Participating Ports





Project Activities Aug – Dec 2010

- ❑ Establishment of project office in Port Authority of Thailand
- ❑ Selection of participating ports
- ❑ Concluding cooperation agreement with ***Partnerships in Environmental Management for the Seas of East Asia*** (PEMSEA)
- ❑ Initial Review of SHE management at Bangkok Port and Iloilo Port
- ❑ Presentation / discussion of project approach with management of Bangkok Port, Saigon Port, Phnom Penh Autonomous Port, and Sihanoukville Autonomous Port





Programmed Project Activities 2010

- ❑ **Presentation / discussion of project approach** with management of Tanjung Priok and Cagayan de Oro (Jan / Feb 2010)
- ❑ **Regional Planning Workshop** Bangkok (21 - 22 Jan 2010)
- ❑ **Initial Review** at
 - Saigon (25 – 28 Jan 2010)
 - Sihanoukville (01 – 04 Feb 2010)
 - Phnom Penh (08 – 11 Feb 2010)
 - Tanjung Priok / Cagayan de Oro (Feb / Mar 2010)
- ❑ **Development of strategic action plan** / work program for each port based on Initial Review results (Feb / Mar 2010)



Programmed Project Activities 2010

- ❑ Development of **Model Port SHE Regulations** (Mar – Dec 2010)
- ❑ **Air Emission Inventory Bangkok Port** (Mar – Jun 2010)
- ❑ **Access Control / Traffic Management Study Bangkok Port** (Mar – Jun 2010)
- ❑ Implementation of **Port Safety, Health and Environmental Management System (PSHEMS)** in each participating port in accordance with **PSHEM Code** of PEMSEA (Feb – Dec 2010)





PSHEMS Development, Implementation and Continual Improvement Process

- **Phase 1** ■ **Initial Review** - system review to establish current status of existing processes and SHE management systems being implemented
- **Phase 2** ■ **Strategic Planning** - identification of hazards, risk assessment, establishment of objectives, targets and programs
- **Phase 3** ■ **System Development and Documentation** - establishment of business processes, manuals and procedures to facilitate control of processes and address identified risks



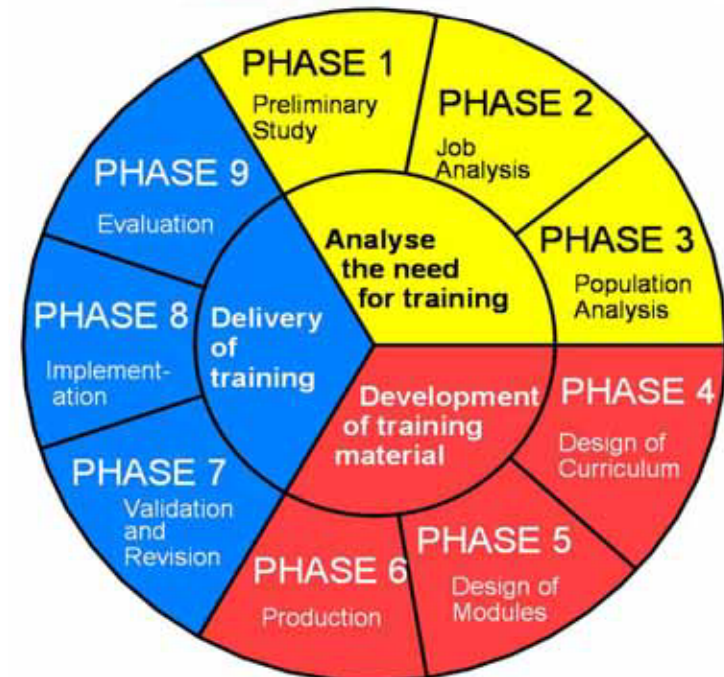
PSHEMS Development, Implementation and Continual Improvement Process

- **Phase 4** ■ **Implementation and Monitoring** - progressive implementation of policy, programs and procedures, measurement of performance
- **Phase 5** ■ **PSHEMS Auditing** - planning and conduct of audits, reporting of audit findings
- **Phase 6** ■ **Continual Improvement** - top management review of the PSHEMS, its policy and achievement of objectives



Programmed Project Activities 2010

- ❑ **Development of training modules to meet IMDG Code mandatory training requirements** entering into force January 2010 (Jan – Jul 2010)
- ❑ **Training of Course Developers** (Apr / May 2010)
- ❑ Development of modular standardized training courses on:
 - **Air Quality Management in Ports**
 - **Occupational Safety & Health Management in Ports**





Contact

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