

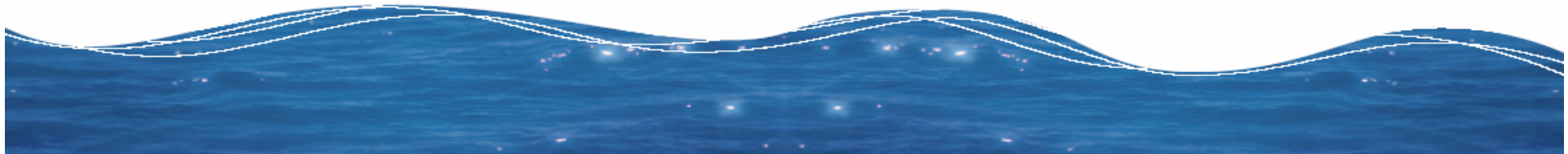


# *ECSA Seminar*

## *6 March 2007*

# SHIPPING THE ENVIRONMENT FRIENDLY TRANSPORT MODE

**John C. Lyras - ECSA Board of Directors Member**  
**Director, Paralos Maritime Corp SA**





# SHIPS ARE THE MOST ENVIRONMENTAL FRIENDLY MEANS OF TRANSPORT

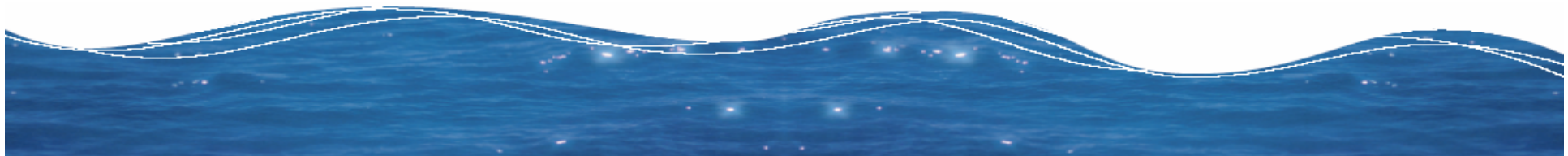
## Comparison: ship, train, truck

Same cargo, same distance:



Atmospheric pollutants	<b>1</b> (15.73g/t-km)	<b>1.4</b>	<b>7.6</b>
Energy consumption	<b>1</b> (130kjoule/t-km)	<b>2.2</b>	<b>9.7</b>

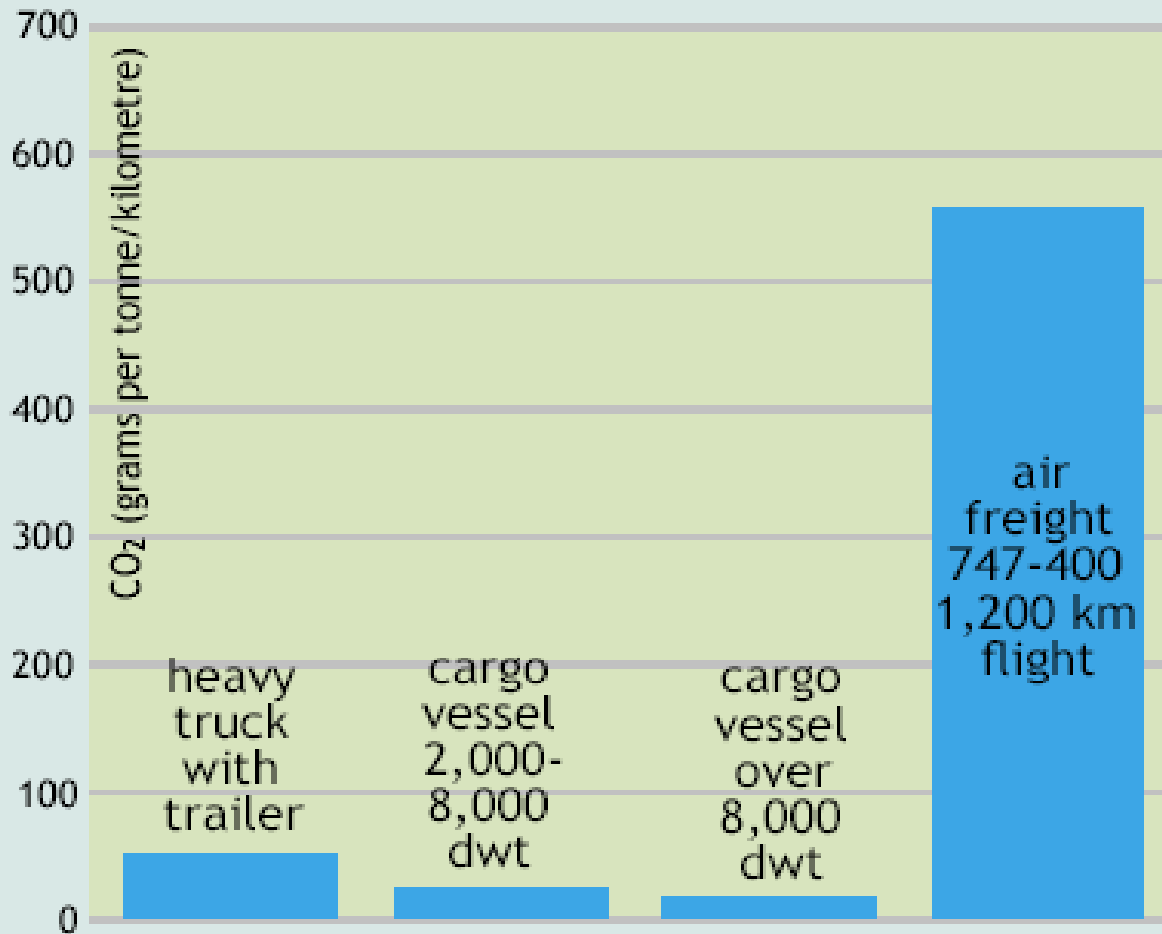
Source: Canadian Shipowners' Association, MARPOL Annex VI Consultation Meeting, Washington, DC, February, 2006





# AIR EMISSIONS

Comparison of CO<sub>2</sub> emissions between different transport modes



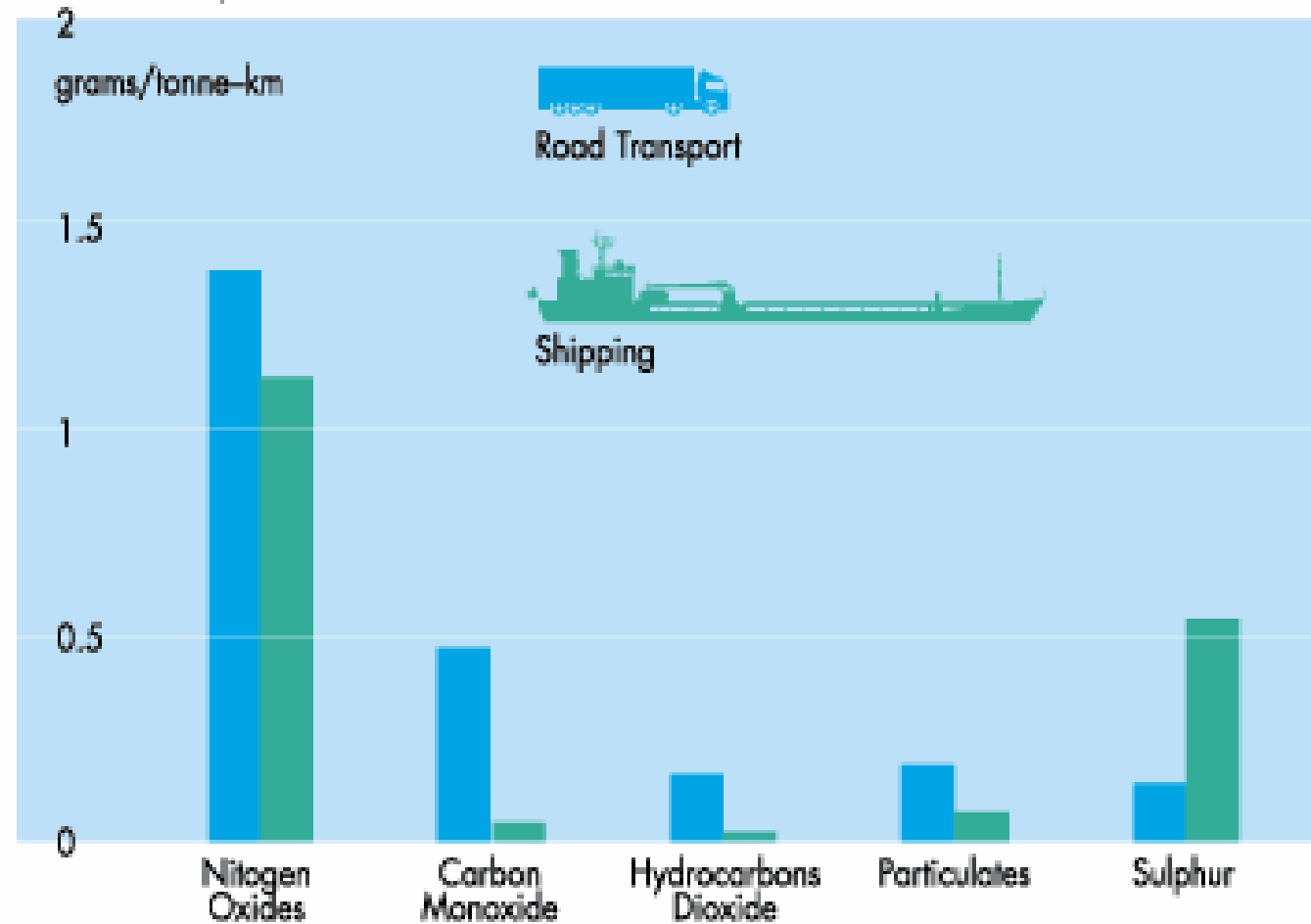
Source: NTM (Swedish Network for Transport and the Environment)



# AIR EMISSIONS

*Equivalent exhaust gas emissions -  
heavy domestic road transport vs shipping*

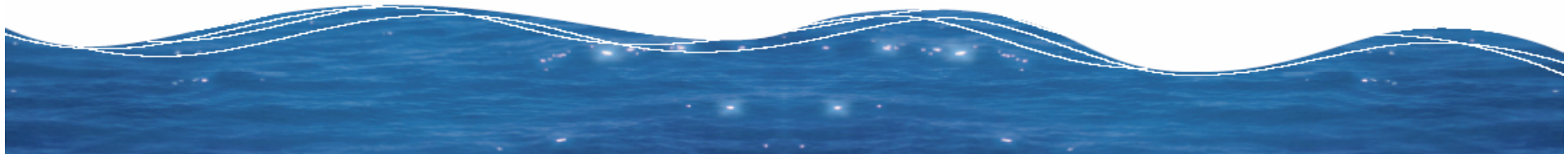
Source: Swedish Transport Research Board 1993





# AIR EMISSIONS

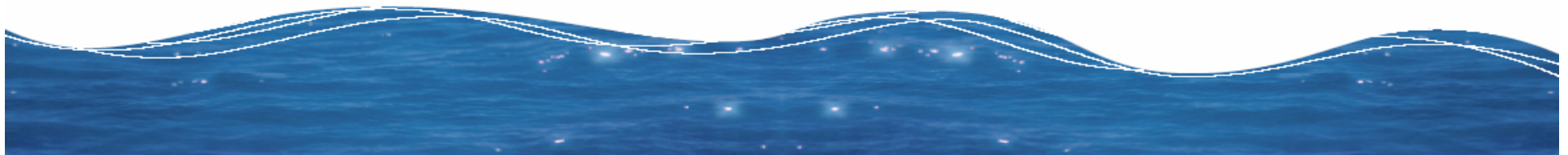
- **SHIPPING INDUSTRY COMMITTED TO FURTHER IMPROVING ENVIRONMENTAL PERFORMANCE**
- **CREDIBLE LONG TERM ACTION TO BE BASED ON SOUND ENVIRONMENTAL, TECHNICAL, SCIENTIFIC, ECONOMIC AND SOCIAL ASSESSMENTS**
- **A HOLISTIC INTERNATIONAL APPROACH AIMING AT AN OVERALL ENVIRONMENTAL BENEFIT**





# AIR EMISSIONS

- **PROACTIVE ATTITUDE**
- **INVESTIGATION IN NEW TECHNOLOGIES**
- **R&D**





# PROTECTION AND CONSERVATION OF THE MARINE ENVIRONMENT

- **OBJECTIVES OF THEMATIC STRATEGY SHARED**
- **FREEDOM OF NAVIGATION/GLOBAL SERVICES**
- **LISBON STRATEGY**
- **EXPANSION OF PORTS AND HINTERLAND CONNECTIONS ESSENTIAL**

