

WALLENIUS MARINE'S ENVIRONMENTAL POLICY

WALLENIUS MARINE is engaged in international shipping and specialises in the global shipping of vehicles. Although shipping is the most resource-efficient means of transport for large volumes of goods, it also generates emissions into air and water.

Wallenius Marine is taking active measures to reduce the impact on the environment and the consumption of energy and natural resources per unit transported. The waste produced by our business activities is reduced by means of effective recycling and more efficient use of resources.

We undertake to comply with both national and international environmental legislation, regulations and other demands. Our traditional position at the forefront of development also demands high performance within the environmental field. Continuous improvements and the prevention of pollution are

a natural aspect of our activities, and we support environmental research. Our environmental measures include the development and introduction of modern technology, training, environmental requirements and regular checks on ourselves and our suppliers. Customers, colleagues and outside parties shall have confidence in Wallenius Marine's environmental activities, today and into the future.

Stockholm, February 2004
WALLENIUS MARINE AB



Per Croner
President

Significant Environmental Aspects

Description of activity	Aspect	Impact	Objective	What is done?	New projects
Running engines	Fuel oil	Use of natural resources.	Reduce fuel consumption per transported unit.	Speed adjustment and route planning to reduce fuel consumption.	<ul style="list-style-type: none"> ✦ Evaluate a newbuilding in a joint project about evaluation of energy efficient vessels. ✦ Reduce fuel consumption by 1% in 2004. ✦ Propeller cleaning every 9 to 12 months. ✦ Model testing in order to establish the effect of wind resistance on fuel consumption. ✦ Fuel cells to be evaluated within FellowSHIP.
Running engines	CO ₂ (from engine operation)	Global warming; Changing the Earth's energy balance, leading to damaging climate change.	Reduce fuel consumption per transported unit.	Speed adjustment and route planning to reduce fuel consumption.	
Running engines	NO _x (from engine operation)	Eutrophication. Acid rain. Can form ground level ozone.	Reduce NO _x emissions by 25% in 10 years per transported unit. (1998-2008)	Total NO _x -reduction of the fleet is 17.6%.	<ul style="list-style-type: none"> ✦ Installation of slide valves with low NO_x nozzles on FALSTAFF. ✦ CASS installation on MANON to be evaluated within EU-project HERCULES. ✦ Fuel cells to be evaluated within FellowSHIP. ✦ HAM technique to be installed onboard one vessel within EU-project HERCULES.
Running engines	SO ₂ (from engine operation)	Acid rain.	Wallenius Wilhelmsen is to reduce average sulphur content to 1.5% until end of 2004.	The average sulphur content was 2.04% for 2003.	<ul style="list-style-type: none"> ✦ Wallenius Wilhelmsen group monitor. Average sulphur content shall be max 1.5% at end of 2004. ✦ Fuel cells to be evaluated within FellowSHIP.
Maintenance	Batteries/ fluorescent tubes	Increased waste.	Reduce environmental impact from batteries.	Sorted and returned for recycling.	<ul style="list-style-type: none"> ✦ Rechargeable batteries to be used in flashlights and hand searchlights on all vessels.
Maintenance	Chemicals/detergent	May contain non biodegradable compounds which affect sea and ecosystem.	Use of chemicals less damaging to the environment from 1998.	Use of chemicals according to list of approved products. Use of cathodic protection devices instead of chemicals in 22 applications.	<ul style="list-style-type: none"> ✦ Continued installation of water treatment without chemicals on Swedish vessels. ✦ Test of new chemicals. ✦ Change dosing equipment for washing machines. ✦ Reduce dosage of chemicals. ✦ Treatment of biological growth in cooling water to be tested with unit from Benrad. ✦ Treatment of drinking water by unit from Benrad to be installed on 10 vessels.
Maintenance	Bilgewater	Increased liquid waste.	Reduce present permitted limit of 15ppm to 5 ppm in 10 years. (1998-2008)	Equipment installed on all vessels to maintain 1-3 ppm. 16 vessels have adjusted their ppm-sensor to 5 ppm.	<ul style="list-style-type: none"> ✦ Adjustment of ppm-sensor from 15 to 5 ppm on 2 remaining Swedish vessels.
Vessel Operation	Antifouling paint	Antifouling paint contains compounds that may have effect on species living in water.	Use of antifouling paint without compounds that have effect on species living in water.	The fleet has been TBT-free since 1999. 2 vessels are sailing with biocide-free silicone-based antifouling.	<ul style="list-style-type: none"> ✦ Follow Standard Quotation Form for drydockings. ✦ Participation in a VINNOVA project about antifouling. ✦ Testpatch of Ecospeed on one vessel. ✦ Old TBT-vessels docking shall be sealed or blasted. ✦ One vessel is to be coated with silicone-based antifouling. ✦ Testpatch of Ecomarine if possible.
Vessel Operation	Ballast water	Spreading of invasive species from one area to another, which affects life in local waters.	Reduce environmental impact from ballast water.	Ballast Water Exchange is conducted at open sea. Benrad prototype for ballast water treatment installed on DON QUIJOTE.	<ul style="list-style-type: none"> ✦ Biological efficiency of prototype unit to be tested during 2004. ✦ Evaluation of hoistable light weight car deck panel made of aluminium on the latest newbuilding.
Fire extinguishing	Fire extinguishing	May contribute to the greenhouse effect.	Study new alternatives.	Halon is replaced by CO ₂ since 1998.	
Cooling	Cooling agents	Contributes to the greenhouse effect.	Reduce leakages.	No CFC is used since 1998. All HCFC is removed before 2002 and only HFC is used. Leakages reduced by 45% from 1996 to 2003.	<ul style="list-style-type: none"> ✦ Regular inspections to reduce leakage at each aggregate.