



Parallel Workshop 4 -
Operational measures
to reduce the CO₂ emissions
from inland navigation

Ivo ten Broeke

Commissioner of the Netherlands to the CCNR

Strasbourg, April 12th, 2011

Presentation 1: Energy Efficiency Indices



The Energy Efficiency Indices of the IMO (design/operation) – useful tools also for inland navigation?

Torsten Mundt, Germanischer Lloyd

Main messages of presentation

- EEDI and EEOI can be used in inland navigation
- EEDI and EEOI will set a reference
- Benchmarks are needed, but difficult to agree
- Authorities or the industry need to take the initiative to set the benchmark

Presentation 2: CO₂ reduction Netherlands



CO₂-reduction of inland navigation in the Netherlands

Martin Koopmans, Ministry of Infrastructure and the Environment

Main messages of presentation

- Last 20 years, relative rise in Nox, decrease of CO₂ for total transport volume
- Behaviour adaptation can result in – 8%
- CO₂ competition leads in individual cases to - 40%
- LNG can result in - 25%

Presentation 3: Automatic navigation systems



Reduction of fuel consumption by using automatic navigation systems

Alexander Lutz, University Stuttgart

Main messages of presentation

- Saving potential up to 6% CO₂
- Optimal lane (lateral position) is important
- Sailing strategy for entire route depends on current and available water depth

Presentation 4: Operational measures



Operational measures to reduce fuel consumption in inland navigation

Desire Savelkoul, Autena Marine

Main messages of presentation

- Fuel saving based on real time information of waterway
- Gathering information from navigation
- Advice on optimal position, route and speed

Presentation 5: Ship handling simulators as training tool



CO₂ reduction due to "topography orientated" voyage-planning and navigation – Prerequisites of ship handling simulators as training tool

Olaf Kammertöns, DST

Main messages of presentation

- Shallow water effects are crucial
- Topography is important to take into account
- Awareness is insufficient
- Simulation can be a great help

Parallel Workshop 4: Operational measures to reduce the CO₂ emissions from inland navigation



Main conclusions

- Operational measures have big CO₂ reduction potential
- Taking into account shallow water effects are crucial
- Awareness of potential is low, but increasing
- CO₂ reduction is part of education; the use of simulators will increase awareness
- 3 presentations have added value to each other
- No discussion if results are reached: saving fuel is reduction of CO₂ emission