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POSITION PAPER ON EMISSION REDUCTION OF GREENHOUSE GASES BY THE EUROPEAN DREDGING SECTOR

Summary Position

- Dredging is the maritime transportation of natural materials from one part of the water environment to another by specialised dredging vessels.
- The European Dredging Industry is operating a large fleet of dredging ships worldwide in order to construct and maintain ports and waterways, to execute coastal protection, land reclamation and environmental remediation projects. The European Dredging Industry is an essential part of the Maritime Cluster that has created Europe's excellent reputation for maritime infrastructure construction. .
- The European Dredging Industry is prepared to contribute its share to the current and future efforts to reduce the emission of greenhouse gases (GHG), in particular CO₂.
- The particulars of the dredging operations and dredging equipment need special consideration in development of any regulation to reduce GHG emissions by the Dredging Sector.
- The European Dredging Industry supports the introduction of fair, effective and equitable market-based instruments (MBI) that should be applied on a global basis and is in favour of developing a GHG levy fund under IMO as proposed by Denmark.
- The particulars of the Dredging Industry may necessitate the application of regional or national regimes which could be different from the international approach.
- The European Dredging Industry is fully committed to further innovation of its technology an optimisation of its operations.
- The Dredging Sector collected specific baseline data in order to measure its future performance: CO₂ emissions of the world seagoing dredging fleet have been estimated at 6.3 Mton for 2008. The emissions of the European Dredging Industry (EuDA members) in 2008 was about 3.6 Mton, this represents about 0.3% of the total emissions of global shipping.

1. The European Dredging Industry

The European Dredging Industry is an integral part of the European Maritime Community: the European Dredging Industry is not only part of the maritime transport industry but is also serving the maritime transport infrastructure. European Dredgers are the natural allies of the European shipping industry and Port Authorities. Port authorities in Europe and abroad know that:

No dredging means no harbours, no ports, no access channels.

Ultimately it means no economic development and no global trade.



The European Dredging Industry is operating a large fleet of dredging ships worldwide which is deployed to construct and maintain ports and waterways, to execute coastal protection, land reclamation and environmental remediation projects.

The European Dredging Industry is world leader in the dredging and reclamation market: European dredging companies have a 66% market share of dredging in worldwide (open and closed) markets. In 2008, European dredging companies had a turnover of more than € 6.8 billion and employed directly over 25,000 highly educated, highly trained and skilled people, maintaining as well more than 48,000 indirect jobs. Dredging is an important export product for Europe: 70% of all operations by European dredging companies take place outside Europe, yet almost 90% of return flows back to Europe

Dredging projects all over the world are constructed under rapidly increasing environmental requirements to which the European Dredging Industry is responding by offering specialised equipment and environmentally sound execution methods.

2. The European Dredging Industry and CO₂ emissions

International shipping is already, by far, the most carbon efficient mode of commercial transport. The capacity and efficiency of international shipping can only be increased by developing the maritime and energy infrastructure for the future generation energy efficient ships. The Dredging Industry will play an important role in realizing tomorrow's maritime infrastructure.

World economic growth, concentration of the world's population in coastal areas and the need to adapt to sea level rise are expected to result in an increased demand for dredging projects in the coming decades.

It is not expected that substitutes for fossil fuel will be available for an energy transition of the Dredging Sector in the near future.

The CO₂ emission of the European Dredging Industry in 2008 was 3.6 million ton which equals approximately 0.3% of the total International Shipping CO₂ emission.

The European Dredging Industry has improved significantly over the last 15 years in realising more energy efficient operations by up-scaling equipment and installing modern engines and energy management systems on board of dredging ships.



3. The European Dredging Industry and future reduction of CO₂ emissions

The Dredging Industry is committed to make a contribution to the reduction of Greenhouse Gases (GHG) by further improving on energy efficiency, regardless of the expected future growth of the industry and the progress already made on making dredging ships more energy efficient.

Regulation to reduce GHG emissions by the shipping industry, including dredging ships, should be developed and implemented globally by IMO. Regulation should:

1. Effectively reduce CO₂ emissions
2. Be binding and include all flag states
3. Be cost effective
4. Not distort competition
5. Be based on sustainable development without restricting trade and growth
6. Be goal-based and not prescribe particular methods
7. Stimulate technical research and development in the entire maritime sector
8. Take into account new technology.
9. Be practical, transparent, free of fraud and easy to administer

The discussion in IMO has concentrated mainly on development of a system of energy efficiency design indexing (EEDI), Energy Efficiency Operational Indicators (EEOI) and a template for a Ship Energy Efficiency Management Plan (SEEMP) for use by all ships. In MEPC 59 (July 2009) a first step has been made by deciding that the EEDI, EEOI and SEEMP will be included in the regulation as instruments. Whether and under which conditions the EEDI, EEOI and SEEMP will be compulsory is not yet clear.

Each dredging project has a different scope and is carried out under specific conditions and technical requirements. This has resulted in a worldwide fleet of dredging ships with very diverse specifications. The combination of unrepeatable project conditions and very diverse equipment specifications make it impossible to transpose efficiency indices and indicators for regular shipping to dredging operations. Compulsory energy efficiency design and operational indices are therefore not suitable to stimulate fuel reduction of dredging vessels. Dredging equipment is too specialised to be designed on the basis of generally applicable indices. A compulsory index would result in compromising ship designs which score well on the EEDI but are effectively less efficient in operations.

The position of EuDA is that only an economic instrument can be efficient in creating an extra incentive to accelerate energy savings. Unfortunately MEPC has not made progress on discussing the content of a future economic regulatory instrument for the shipping sector. In MEPC 59 a road map was agreed towards an IMO proposal in July 2001 (MEPC62) for a global economic instrument.



In the process towards MEPC62 EuDA supports the GHG fund proposal as put forward in MEPC59 by Denmark (MEPC 59/4/5). The proposal respects the IMO principle of “no more favourable treatment” when the revenue is collected and could respect the “common but differentiated principle” of the UNFCCC, when the revenue is distributed. All ships above 400 GT in international trade will pay GHG contributions at a given cost per ton of fuel bunkered. The GHG Fund will be established as a separate legal entity responsible for collecting and distributing these revenues. The revenues will be used for climate change purposes i.e. adaptation and mitigation but also shipping related R&D.

In order to have regulation been developed and implemented by IMO, which is the only institution recognised by all nations and shipping organisations, the upcoming UNFCCC meeting in Copenhagen should endorse the IMO proposal to proceed according the road map as was agreed in MEPC59.

The European Dredging Sector is aware of the fact that the GHG fund proposal by Denmark covers maritime transport for international trade and is potentially not covering dredging projects which are normally bound to operations within single states.

Further thought should be given to the development of local or regional economic instruments that provide incentives to reduce GHG emission to specialised sectors such as the Dredging Industry, should these specialised sectors not be covered by future agreements under IMO. These local or regional instruments should not distort competition, be based on sustainable development without restricting growth, be goal-based and not prescribe particular technical methods, stimulate technical innovation and be practical, transparent, free of fraud and easy to administer.

4. Figures

EuDA has collected the actual fuel consumption figures of the dredging fleet operated in 2008 by EuDA members.

The EuDA CO₂ emission figures can be compared against the estimated total emissions of the maritime sector and the emissions of the world dredging fleet.

Table 1 presents the estimated emission of the Maritime sector under IMO regime.

Table 1.

Entire maritime sector	CO2 emission
	ton
Estimate IMO 2007, (source: Second IMO GHG Study 2009) MEPC 59/4/7	1,046,000,000
	100% of world Maritime CO2 emissions



Table 2 presents the emissions of the Dredging Sector. A global estimate is made by EuDA/IADC on the basis of the 2008 IADC plant list “Dredgers of the World”. This list also contains small dredging equipment that is not ocean going and not IMO registered.

The emissions by EuDA members are based on actual fuel consumption figures as reported by the individual EuDA members. The emissions by the world dredging fleet have been obtained by extrapolation and estimation of the average degree of deployment of the world dredging capacity in 2008.

Table 2.

All dredging equipment. (based on IADC 2008, database "Dredgers of the World")	Installed Power	Fuel Consumption	CO2 emission
	kW	ton	ton
Global operations EuDa members (all equipment - 2008)	1,640,000	1,160,000	3,660,000
European operations EuDA members (all equipment - 2008)	470,000	300,000	950,000
World fleet, EuDA / IADC estimate (1171 vessels - 2008)	5,400,000	2,500,000	7,700,000
	0.74%	of world Maritime CO2 emission	

Table 3 presents the emission figures for that part of the EuDA fleet that is IMO registered.

Table 3.

Sea going dredging equipment. (all dredging equipment with IMO registration in IADC 2008 database "Dredgers of the World")	Installed Power	Fuel Consumption	CO2 emission
	kW	ton	ton
Global operations EuDa members (2008)	1,510,000	1,090,000	3,440,000
European operations EuDA members (2008)	420,000	280,000	880,000
World fleet, EuDA / IADC estimate (637 vessels - 2008)	4,140,000	1,990,000	6,300,000
	0.60%	of world Maritime CO2 emission	