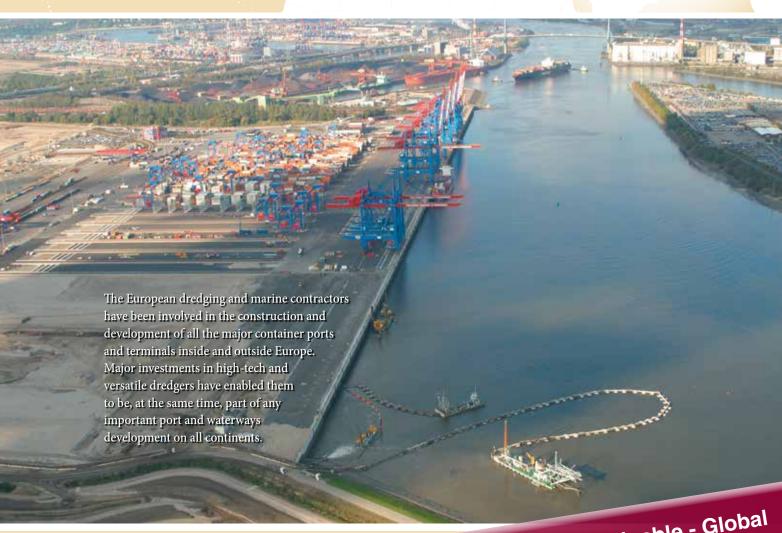
The European Dredging Industry: **A Maritime Success Story**

Dredging is vital to the construction and maintenance of maritime infrastructure, which our economic prosperity and social well-being depend on.





Dredging means transporting: san

Dredging is the maritime transportation of natural materials from one part of the water environment to another by specialised dredging vessels. In fact, in a usual dredging cycle, self-propelled trailing suction hopper dredgers, barges and other ships spend the majority of their time sailing back and forth between excavation sites and placement sites, transporting materials between the port and the borrow site; sailing between borrow sites; and sailing from sites where material has been extracted to unloading or placement sites.







Trade

Urban development

Dredging vessels support

- Port infrastructure development;
- Land reclamation for commerce, residences and recreation;
- Energy enterprises including oil and gas exploration and delivery and offshore wind farms;
- Environmental remediation of brownfields and safe storage of contaminated materials;
- On every continent, in every corner of the world, European dredgers have ploughed the waterways of oceans, rivers and estuaries, carrying vital materials to improve the world's infrastructure.

The European Dredging Industry is an integral part of the European Maritime Community

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.

European Dredgers contribute to a sound environment

Without dredging, waterborne transportation, supertankers, jumbo cargo ships as well as cruise ships would be impossible. Waterborne transport has been proven to be more environmentally friendly than any other transport modes.

Fighting Climate Change: with sand and rock the European dredgers protect Europe's coastlines

European dredging vessels, jumbo and mega trailers, transport sand from far out at sea to replenish beaches on the lengthy coastlines of Europe and place rock to rebuild coastal defenses and dunes washed out by erosion and threatened by such consequences of climate change as the rising of the sea levels.

Dredging vessels deliver and lay pipelines to bring offshore gas and oil to Europe and beyond

Growing global demands for energy are part of modern industrial reality. European dredging companies make it possible to reach oil and gas sites at sea, even in some of the most forbidding climates known on earth. They also build artificial islands for drilling oil & gas, offering an innovative alternative solution to oil rigs.

Above photos from left to right:

Trade: Aerial view of construction of London Gateway container terminal, UK.

Urban development: Land reclamation of Palm Island in Dubai, UAE.

Environment: Sediment treatment and storage AMORAS-project in the port of Antwerp, Belgium.

Tourism: Extension of the cruise terminal of Freeport, Bahamas.

Coastal protection: *Innovative coastal protection project Zandmotor in the Netherlands.* Energy sector: *Landfall of gas pipeline Nord Stream between Germany and Russia.*

d, rock, gravel, silt, subsea structures.



The European Dredging Industry is an essential part of the Maritime Cluster that has created Europe's excellent reputation for maritime infrastructure construction.



"THE MARITIME CLUSTER OF EUROPEAN EXCELLENCE"

European dredging companies are part of an historical maritime tradition developed over centuries as seagoing nations.

This "business cluster" includes specialist contractors, in-house training facilities based on high-tech dredging and navigation simulators, consulting and advisory offices, specialised shipyards, technical institutes and universities, diversified suppliers and public port authorities and ministries. Working together these organisations support and stimulate each other – they increase productivity of the companies in the cluster.

They drive innovations and they stimulate new business in the field.

Together they keep Europe in the forefront of the maritime industry.

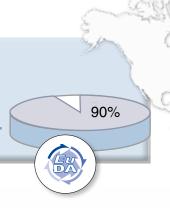
A typical example is the "Building with Nature" approach, that was developed to integrate Nature, and its forces, into the project design, in order to integrate the project into Nature.

"No Dredging, No Shipping, No Global Trade"

Facts & Figures: The Dredging Indust

Turnover

European dredging companies lead the world: European dredging companies have a 90% market share of dredging in worldwide open markets (2012).



Annual maritime turnover of the European dredging companies (2012): € 7.5 billion (more than doubled since 2000).

Despite the downturn in the global economy since 2008, considerable innovation and investments have enabled EUDA companies to show a steady growth rate.

Total annual turnover for dredging worldwide (2012): € 11.3 billion.

Fleet

European dredging contractors own and operate 49% of the global Trailing Suction Hopper dredgers fleet, including some of the largest and most technologically advanced vessels.

European Dredging Fleets:

98% of European trailing suction hopper dredgers

have an IMO registration and a seagoing class certificate.



European dredging contractors own and operate 40% of the global Cutter Suction dredgers fleet, including some of the largest and most technologically advanced vessels.



1/3 of dredging vessels are European flagged; they do 2/3 of the world's dredging work.

"Long distance maritime transport of dredged material has made possible projects in Hong Kong, Singapore and Panama, as well as the expansion of European ports, such as Rotterdam, Antwerp, Le Havre or Hamburg, enhancing their global competitiveness."

ry is an Economic Engine for Europe.



Investments

European investments by European dredging companies from 2008-2012: € 7 billion.

European innovation has created new markets: **2.5% of turnover is re-invested** in Research & Development.

Employment

Direct employment: **25,000 people**, with the four largest European dredging companies alone doubling their workforces in recent years.

Indirect employment: **48,300 people** including suppliers, shipbuilders and consulting engineers.



All dredging personnel are well-trained and highly skilled professionals, with more than 40% having Bachelors and 18% Masters Degrees.

Locations

70% of all operations by European dredging companies take place outside Europe, yet almost **90%** of return flows back to Europe.

European dredging vessels can dredge to depths of 155 metres

"Studies made at the Institute of Transport and Maritime Management, University of Antwerp, indicate that the direct spin-off from the overseas activities of the European dredging contractors to Europe is as high as 90%. This results from the industry's high dependency on European subcontractors and suppliers".

What European Dredgers Want: A

Fair trade without barriers will prevent distorted competition and allow access for all to global markets.

Where we work: The successful tracks of the European dredging industry are visible everywhere on Earth

- Construction and extension of the Suez Canal and the Panama Canal (1);
- Land reclamation for the airports of Chek Lap Kok (Hong Kong), Changi (Singapore), Sydney (Australia), Taipa (Macao),
 Doha (Qatar) (2);
- Land reclamation for all the recently developed artificial islands in the Gulf (Palm Islands, The World, Port Rasheed (Dubai),
 Al Marjan islands (Ras Al Khaimah), Al Raha Beach (Abu Dhabi), Pearl Qatar (3);
- Construction of large-scale container ports in Abu Dhabi, Hong Kong, Germany, France, UK, Malaysia, Singapore, Netherlands, Belgium and elsewhere (4);
- Construction of LNG ports in Qatar, Mexico, Peru, Belgium, Netherlands and Australia; pipeline laying in the North Sea and Russsia, construction of energy islands in the UAE and Saudi Arabia (5);
- Construction of the world's largest far-shore wind farms off Belgian, Dutch, UK and Scandinavian coasts (6);
- Historical coastal protection works in the Benelux (Delta Plan, Sigma Plan) and worldwide (Australia, Europe, Asia) (7);
- Construction of the ports of Tanger (Morocco), Richards Bay, Durban (South Africa), Mangalore, Mumbai and Dhamra (India),
 Suape and Sepetiba (Brazil), Duqm (Oman) (8).



How we do it: Fair play, fair wages, fair contracts

Companies outside of Europe praise us, emulate us and copy us

Abroad the European dredging companies are a model for other nations and favourite service suppliers as well. European dredgers are there when needed: in Hong Kong, Dubai, Australia, Panama. Whenever the development of maritime infrastructure is at stake, the expertise of European dredging contractors is highly sollicited.

European dredgers are fiercely competitive

European dredging contractors welcome competition – fair and straightforward. Stiff competition contributes to innovation; it sharpens our prices; it ensures the best possible maritime solutions. European dredging contractors always fully comply with environmental safety and labour regulations.

Level Playing Field & Access to Markets without Barriers.

Unfair practices by foreign competitors distort competition

Development aid to Africa should not result in a reduction of competition (tied aid). Copying and use of technology developed through expensive research in Europe, without any payment of IPR, has devastating effects on European R&D investment decisions. Blatantly ignoring environmental and safety standards gives a huge cost advantage to foreign dredging companies that offer low-quality, harmful products and services. Distorted competition is an impediment to healthy growth.

At home in Europe, the contributions of European dredging companies to the world economy are sometimes forgotten

European dredging companies are contributors to the high quality of life on the European continent. We are an essential part of the economic, social and environmental fabric of the European Union. The European dredging industry generates hundreds of thousands of jobs, helps provide a cleaner environment, protects European coastlines from the threats of climate changes.

To maintain our competitive edge, the European Dredging Industry needs recognition and support from the European Community

The European dredging industry designs and develops unique high-tech equipment. Constant innovation guarantees excellent performance when building new ports and harbours, or maintaining existing ones, or helping Europe to adapt to climate change. The majority of significant technical and environmental improvements stem from the hard work, in-depth research and engineering efforts on the drawing tables of European dredging contractors.

"Unfair competition practices are like coastal erosion: markets are eroded and lost at a steady pace; left untackled in the long term, they can wear out even the most resilient of companies."

The European Dredging Industry asks that European and non-European companies abide by the same rules and regulations worldwide:

- All companies should follow the same international norms and standards including environmental ones;
- Fiscal policies should be fair and consistent;
- Labour regulations should be fair, consistent and socially responsible;
- World markets should be open and accessible on the basis of reciprocity;
- Fair access to funding for international infrastructure projects should be available to all parties.

Without a doubt, European dredging companies are the world leaders in the construction of maritime infrastructure and land reclamation. Working together, we can ensure it remains so.

MEMBERS OF EuDA

Belgium

DEME Building Materials NV (DBM) Dredging International N.V. Fédération du Dragage Belge A.S.B.L. Jan De Nul nv N.V. Baggerwerken Decloedt & Zoon

Cyprus

BKW Dredging & Contracting Ltd. Boskalis Westminster Middle East Ltd. Boskalis Westminster Marine (Cyprus) Ltd. Van Oord Middle East Ltd.

Denmark

Rohde Nielsen A/S

Estonia

Terramare Eesti OU

Finland

Terramare Oy

France

Atlantique Dragage Sarl Société de Dragage International 'SDI' SA Sodranord SARL Sodraco International S.A.S.

Germany

Brewaba Wasserbaugesellschaft Bremen mbH
Detlef Hegemann GmbH Nassbaggerei
Heinrich Hirdes G.m.b.H.
Jan De Nul Nassbaggerei und Wasserbau GmbH
Nordsee Nassbagger-und Tiefbau GmbH
Strabag Wasserbau GmbH
Vereinigung der Nassbaggerunternehmungen E.V.

Gibraltar

Van Oord (Gibraltar) Ltd.

Ireland

Irish Dredging Company Ltd. Van Oord Ireland Ltd

Italy

Boskalis Italia Srl Dravo SA Jan De Nul (Italia) SpA Societa Italiana Dragaggi SpA 'SIDRA'

Latvia

Baltic Marine Contractors SIA

Luxembourg

European Dredging Company S.A. Dredging and Maritime Management S.A. Dredging International (Luxemburg) S.A.

Netherlands

Baggerbedrijf De Boer B.V. / Dutch Dredging B.V. Baggermaatschappij Boskalis B.V. Boskalis B.V. Boskalis International B.V. Boskalis Offshore by Boskalis Westminster B.V. de Vries & van de Wiel B.V. Dredging and Contracting Rotterdam B.V. Mijnster zand- en grinthandel bv Paans & Zonen B.V. Tideway B.V. Van den Herik B.V. Van der Kamp B.V. Van Oord ACZ Marine Contractors by Van Oord Nederland by Van Oord ny Van Oord Offshore by

Portugal

Dragapor Dragagens de Portugal S.A. Dravo SA

Vereniging van Waterbouwers Water Injection Dredging by

Spain

Dravo SA Sociedad Española de Dragados S.A.

Sweden

Boskalis Sweden AB

UK

Boskalis Westminster Ltd.
British Marine Aggregate Producers Association (BMAPA)
Dredging International (UK) Ltd.
Jan De Nul (U.K.) Ltd.
Rock Fall Company Ltd.
Van Oord UK Ltd.

ABOUT EuDA

Celebrating its 20th Anniversary in 2013, the European Dredging Association ("EuDA") was founded in 1993 as a non-profit industry organisation for European dredging companies and related organisations to interface with the various European Union's ("EU") Institutions and also some International Organizations (such as IMO, HELCOM or ILO). EuDA members employ approximately 25,000 European employees directly "on land and on board of the vessels" and more than 48,300 people indirectly (through the suppliers and services companies). The combined fleet of EuDA's members counts approximately 750 seaworthy EU-flagged vessels.

The Association serves its members in all kinds of requests related to dredging issues, presently strongly emphasising Social and Environmental affairs. These issues are coordinated by the Secretariat and executed by its specialised

working groups composed of experts from the member companies. The Association will pursue its goals by endorsing policies to create fair and equitable conditions for competition; commits to respecting applicable national, European and international rules and regulations; commits to operating its fleet safely, effectively and responsibly.

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