



**EUROPEAN  
DREDGING  
ASSOCIATION**

# dredging sustains solutions

ANNUAL REPORT 2007



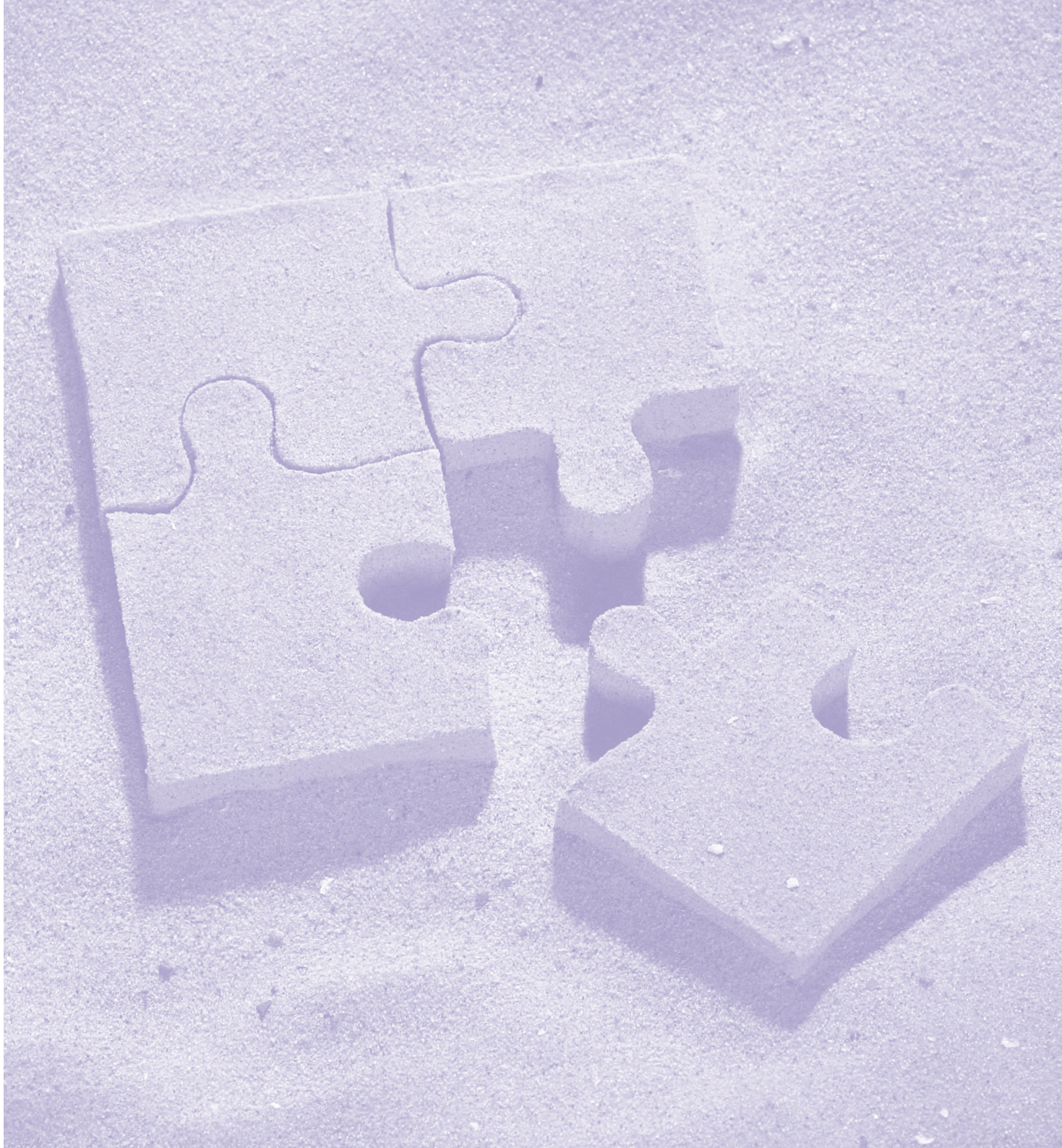
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Executing works with care and precision.

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*“The European dredging industry  
has emerged as the world leader in  
its specific sector”*







# 1000 captains, 1 goal

The aim dredging companies pursue is unequivocal; to accomplish works in a sustainable and an ecologically responsible way. This is achieved with the dedication of among others well educated personnel working on board of our vessels.

The European dredging fleet is in constant competition with fleets from e.g. the Far East. They understand as no one else, that in order to compete with these markets, the dredging vessels must be scrutinised constantly to be able to perform the best in executing their works! Modern fleets and good social conditions are indispensable to achieve this goal.

The research and development departments of our companies fully concentrate on renewing and finetuning their technical equipments, focused among others on reducing fuel consumption during their sand transport activity or on new techniques to safeguard the layers of healthy soil.

The members of European Dredging Association have a share of 70% of the open world dredging market and they are proud of that.



Support one of Europe's  
great success stories

M. Stordiau, chairman

Dear Friends,

The members of EuDA are responsible for one of Europe's great business success stories of recent years. The European dredging industry has emerged as the world leader in its specific sector. Huge investments in new technology and new vessels underpinned this success. Today, EuDA members are responsible for around 70 per cent of all free market dredging activities worldwide. This commanding position may now be at risk.

The matter turns on a single word. Is dredging a "maritime transport" if the dredger is not self-

propelled? For the past decade, dredging has been regarded as "transport" in the context of guidelines relating to state aid rules concerning the labour costs of seafarers. Since two years, the application of the European State Aid Guidelines has been restricted to the trailing suction dredgers only and cutter suction dredgers have been excluded. But one legal advisor in the European Commission is now questioning as well the "transport function" of the trailer dredgers! The consequences for the European dredging industry could be catastrophic. The industry would lose its eligibility for such aid. Its competitive position globally is threatened. The foundation for investment plans, measured in billions of Euros, could be undermined.

Our industry directly employs some 8,000 people, ashore and afloat. It employs indirectly a further 30,000, via supply and service companies. EuDA member companies generate a turnover of at least € 7.5 billion annually. Most importantly, prominent studies have indicated that the spin-off from the activities of European dredging contractors overseas returning to Europe is as high as 90%, due to this industry's remarkably high dependence on European

subcontractors and suppliers. This high positive income flow is of substantial importance to the European region.

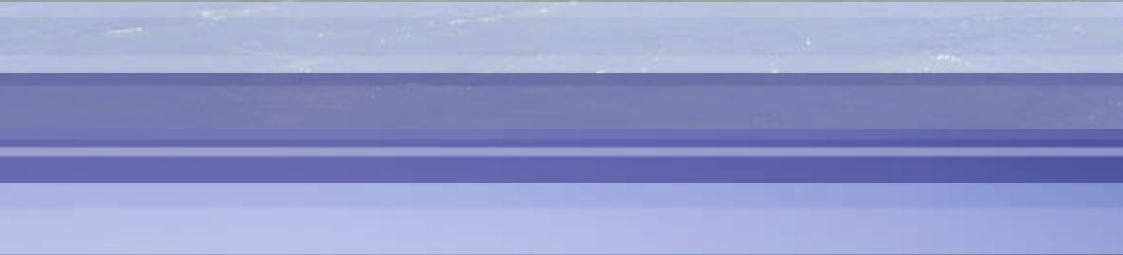
The interpretation of dredging as a "transport" activity (which is exactly what it is – the transport of sand, silt and/or gravel) has allowed EuDA members to comply with the EU's demanding and expensive health, safety and employment legislation and compete successfully with contractors elsewhere in the world, especially in the Far East. In effect, a level playing field in the crucial area of labour costs has been created by the European State Aid Guidelines. And in fact, the European State Aid Guidelines have been an actual cornerstone for the success of the EuDA members in the world. In its absence, our members would be unable to compete with non-European contractors operating under far less costly regulatory regimes. As a result these competitors would continue to advance, at the expense of European contractors, in all regions of the world – including Europe!

The European dredging contractors' key competitors are in the Far East, with China at the forefront.











Chinese dredging groups are regionally-based, fully-sponsored state concerns with a growing appetite for international work. They have already developed a strong, growing presence on the African continent. They have clear ambitions to move into free markets for dredging across the world, whilst continuing to benefit from full state support and a high demand for dredging works in home waters (a largely protected market, almost completely closed to European companies).

It is to be hoped that the European Commission will appreciate that any redefinition of dredging (and allied activities, such as offshore pipe-laying for example!) has the potential to cause immense damage to the competitive status of the European dredging industry. Allied activities such as oil-and-gas-related works, cable-laying, etc. are facing equal problems and should be able to benefit from the Community Guideline as well.

A too fanatic definition of “maritime transport” would be detrimental to the dredging sector.

A cable-laying vessel or a pipe-line laying pontoon is also a “high-tech marine service”, as is as well a high-tech cutter dredger!

During the first quarter of 2008, Matthias Ruete, Director-General for Energy and Transport, issued a request for views on a series of issues concerning the applicability of state aid, including the matters discussed above. EuDA is responding in the clearest possible terms. Nothing should be done, in the name of the European Commission, to undermine one of Europe’s greatest business success stories. We should not give succour to unfair competition. We have the track record, determination and statistics to make our case and we shall do so with vigour.

*With our best regards,  
Marc STORDIAU  
and his colleagues  
of the Board of Directors*









# sustaining a healthy future for the coming generations

Human activities, whether they are on a small or large scale, have a direct impact on natural surroundings. The dredging industry is very conscious of this and takes on the challenge to integrate its activities with the habitats of wildlife and natural organisms.

Each of our projects is preceded by a solid scientific study in which all essential elements are analysed and their relative importance taken into account. Works in vulnerable areas are approached with care and where necessary, bird colonies or areas with other special species will be the subject of compensatory projects. The European dredging companies possess extensive knowledge of the natural environment, having gained many years of experience in executing works in sensitive areas. They are specialised in environmental issues and are assisted and supported by experts such as biologists, physicians, chemists and geologists.

Dredging companies are extremely sensitive to the condition of the project site and take pride and care in executing clean, well-managed assignments.





W. Dirks, chairman of the Environment Committee

## Environmental Affairs

*by Wouter Dirks,  
chairman Environment Committee*

*During the year 2007 the Environment Committee, composed out of Gerard van Raalte (Royal Boskalis Westminster N.V.), Marc Russell (BMAPA), Dirk Poppe (DEME), Erik Mink (Interel Cabinet Stuart) and Wouter Dirks (Van Oord N.V.) met several times. The Committee focuses among others on the progress in the Waste Directive. Not a subject to think lightly about when one thinks of the consequences of 'dredged material' catalogued by European lawmaking as being 'Waste'.*

## Waste Directive

During 2007, the European Parliament voted an important motion that amends the European Commission's proposal for a *Revision of the European Waste Framework Directive*.

Since 2006, EuDA, in cooperation with ESPO (European Sea Ports Organisation), put their hands together in order to amend the European Commission's proposal. After effective lobbying and with the support of some Members of the European Parliament as well with the support of some Member States, the European Parliament voted in its first reading favourably for the *exclusion of dredged material from the scope of the Waste Directive*.

The amendment as accepted by the European Parliament read:

*"The feature scope of the Directive shall not cover natural sediments and silt which do not exhibit hazardous properties"*

This was considered as a promising first step towards the exclusion of dredged material from the Waste Directive and a very positive outcome of the

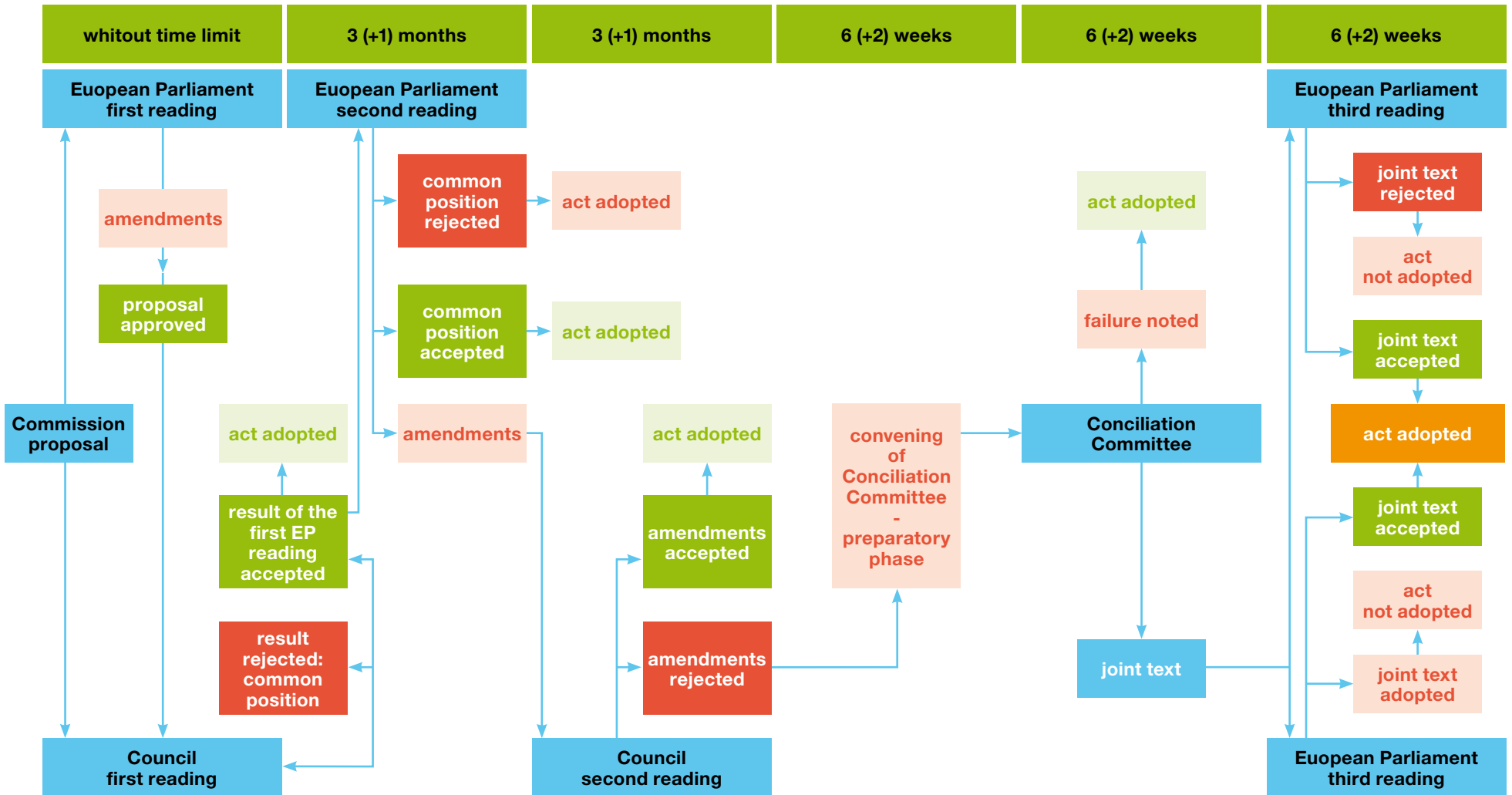


Pontoon with crane filling the 'zandworst' in the foreground with a sand-water mixture transported and produced by the installation on the background.

continue on page 16



Co-decision procedure for Legislation - Scheme







lobbying efforts of ESPO, EuDA and some Member States (mainly Denmark).

In the meantime the Council worked on its position and after an initial reluctance to exclude dredged material from the scope, they tabled a text which seems to be acceptable to many parties.

*“Without prejudice to obligations under other relevant community legislation, sediments relocated inside of surface waters for the purpose of managing waters and waterways or of preventing floods and droughts shall be excluded from the scope of this Directive if it is proved that the sediments are non-hazardous.”*

The text of this amendment, however, does not exclude non hazardous dredged material that is for example being beneficially re-used outside surface waters.

The final amendment of the Waste Directive can only be achieved after the European Parliament and the Council reach agreement on this issue.

EuDA in the meantime continues to lobby for the amendment as accepted by European Parliament in its first reading or propose an amendment to the text accepted by the Council. This process can well run into 2008 for a final agreement.

Daughter Directive Environmental Quality Standards  
This is a daughter directive of the Water Framework Directive and sets quality standards for water bodies. Potentially the quality of surface water bodies may temporarily be influenced by dredging activities. Dredging activities are in general part of the sustainable exploitation of waterways and ports. As the goal of the WFD is to improve the ecological quality of surface and ground waters over a long term, this daughter directive should not be used as a standard for short term fluctuations as may occur as a result of for example a dredging project.

The EuDA Environment Committee has prepared positions and proposed amendments in order to achieve that this daughter directive will set realistic standards for water quality for the long term, taking into account the fluctuations in water quality that both may be natural or inherent to the sustainable use of water bodies.

The Council has reached a ‘political agreement’, and EuDA will be working on new amendments in 2008, that will, if accepted, contribute to a more practical and workable Directive in highly dynamic environments and ports.

The Maritime Policy and Marine Strategy

**Maritime Policy Taskforce transforming Green Paper into the 'Blue Paper' An Integrated Maritime Policy for the European Union.**

Throughout the year 2007, over 400 reactions on the Green Paper were received by the European Commission coming from the different maritime sectors ([www.ec.europa.eu/maritimeaffairs/prior\\_green\\_en.html](http://www.ec.europa.eu/maritimeaffairs/prior_green_en.html)). These contributions were used by the Maritime Policy Taskforce to be able to draft the 'Blue Paper' which shows the end result of a public consultation launched in June 2006 and includes three chapters:

- **an assessment of the public consultation,**
- **a communication proposing the future maritime strategy,**
- **and a work programme under which a certain number of actions would be initiated in the short term.**



*An ocean of opportunity*

*Europe is surrounded by seas and oceans; the Atlantic and Arctic Oceans, the Baltic Sea, the North Sea, the Mediterranean and the Black Sea. The sea is our past, present and future. The European Union needs a comprehensive Integrated Maritime Policy to benefit from the full potential of our seas and oceans.*

*On 10 October 2007, the European Commission presented its vision for an Integrated Maritime Policy for the European Union. The vision document – also called the Blue book – was accompanied by a detailed Action Plan and a report on the results of the broad stakeholder consultation.*





*Dredged material  
ready for re-use!*



Better coordination, greater coherence between activities and policies, and a competitive European industry are the principles that must underpin and provide added economic, social and environmental value to an EU maritime policy.

The European Commission identified a number of potential areas, such as spatial planning, the development of industrial and technological clusters in coastal regions, improvement in the collection of reliable data and made-to-measure financial support for coastal regions.

*Training for seafarers* is also a priority, together with improved knowledge of the marine environment and the development of new technologies, which implies a serious research and development effort.

Maritime transport, the ‘neglected sector’ of the June 2006 Green Paper, is restored to a rank of importance in the future strategy. What is possible for road transport should be possible for maritime transport, notes the European Commission, and it plans to pursue the development of ‘motorways of the sea’, which is simultaneously a way of easing pressure on road transport, in energy and environmental terms.

#### Marine Strategy

The Marine Strategy Directive is the “green leg” of the Maritime Policy. During the course of 2007, the text of the Marine Strategy Directive was agreed upon in second reading. The objective of the agreement is to achieve good environmental status for the European Union’s marine water by 2020.

The creation of ‘European Marine Regions’ and ‘Sub-Regions’ are foreseen in this Directive. It will act as ‘management units’ for its implementation and it forces Member States to cooperate on developing marine strategies for their marine regions. By 2015 measures to ‘achieve or maintain good environmental’ States must be developed in order to enter into operation by 2016, well within in the target date of 2020 set in the agreement.

*Exemptions from the Directive may be granted in the case a Member State can prove that there is no significant risk to the marine environment.*

The EU Marine Strategy Directive complements the Water Framework Directive, which similarly requires surface freshwater bodies such as lakes, rivers and estuaries, to achieve ‘good ecological states’ by 2015.

#### Air Emissions

The Maritime Policy ‘Blue Book’ announces an action to be taken by the European Commission with the goal to develop a policy that leads to reduction of CO<sub>2</sub> emission by the shipping industry.

The developments of policies related to SO<sub>2</sub>, NO<sub>x</sub> and CO<sub>2</sub> emissions of maritime vessels were closely followed. Agreements on CO<sub>2</sub> reduction have been made by the Council and in worldwide context by the ‘Bali’ Agreement. The potential impact for the dredging industry is not clear and needs further assessment and a continued evaluation of policies under development.

*“The objective of the Marine Strategy is to achieve good environmental status for the European Union’s marine water by 2020”*



## Ports Policy

Following the rejection of two draft Directives on Ports Policy, the European Commission started a consultation process with all the stakeholders. EuDA was invited to submit comments on the environmental aspects and responded with a written submission which has been acknowledged by the European Commission. It builds on work earlier done by the Environment Committee.

*“The dredging industry will face particular challenges in the years to come”*

## EuDA's Position on the Maritime Policy and Marine Strategy:


If one takes a step back from the various background documents, policy proposals and questionnaires related to the Maritime Policy, EuDA concludes that the dredging industry will face particular challenges in the years to come on the following counts:

- Pressure to reduce pollution from emissions (sulphur, nitrogen oxides).
- Pressure to reduce green house gas emissions (carbon dioxide).
- Pressure to reduce air pollution in particular in port areas.
- Pressure to dismantle ships in an environmentally and socially acceptable manner.
- Restrictions on dredging and aggregate mining in Marine Protected Areas.

On the other hand the policy will support new development and opportunities:

- Enhanced port development.
- Clarification of restrictive EU environmental legislation.
- Focus on the need for coastal zone development.
- Coastal protection to cope with the effects of climate change.
- Focus on the integration of marine and maritime research needs.





Taking care of water management.  
Vreugderijkerwaard, The Netherlands.



## Annual General Meeting 2007

### Panel Discussion on “Recent Developments in the European Environmental Policies”.

*The perils of the European Union lawmaking process were laid bare during a Panel discussion at the Open Part of the 2007 EuDA Annual General Meeting.*

*“Seeking to do good lawmakers can sometimes create chaos without realising it”*

*“Seeking to do good lawmakers can sometimes create chaos without realising it”, attendees heard.*

#### EU Waste Directive

Over the last year Europe’s dredging industry has been the victim of the so-called “law of unintended consequences”. In this specific case a few lines in the EU Waste Directive, now making its way through the Brussels institutions, threaten to turn well-established industry practices upside down.

At stake is a definition of waste which if left un-amended would include dredged sediment, even if not hazardous or toxic in any way. Once classified such “waste” would need to be disposed off according to a set of rules which would add untold cost to the process of maintaining the depth and width of port approach channels, as well as port expansion plans. Once the proposal had entered the public domain and the alarm had been raised, the next practical problem was to get lawmakers to listen to industry concerns.

#### European Parliament

Mrs. Anne E. Jensen, a MEP from Denmark who took also part in the Open AGM debate, pointed out “that it is necessary to lobby the right person at the right time.” It was in fact only at the last minute that the European Parliament reacted to the ports and dredging industry’s call, mainly owing to



Mrs. Jensen, who has been one of the industry's most consistent supporters.

EuDA: "At the committee stage there were not enough MEP's present to get an amendment passed. It was therefore proposed again at the parliament's plenary session, which was potentially risky given that a greater number of parliamentarians were required to support. On the second occasion, however, it was approved". Given this unpleasant experience, it is not surpris-

ing that the dredging industry is looking at separate legislative proposals as a potential threat as well as a potential opportunity.

Mr. Dirk Sterckx, the Belgian MEP, who chaired the Panel debate, admitted that: "Waste Directive was made for environmental quality but some of the consequences were not taken into account when we made it". The race is now on to amend the directive before it becomes law, and progress has been made. The European Parliament, one of the two institu-

tions with amending powers, has put forward a version which would exclude "natural sediments and silt which do not exhibit hazardous properties." In the course of 2008 this burden will be hopefully solved for the European dredging industry.

The EuDA Environmental Committee, in cooperation with its sister organization ESPO (European Seaports Organisation), worked on this file for the last 2 years.

Participants of the Annual General Meeting 2007, from left to the right - above: Mr. M. Stordiau, Mr. T. Arps, Mr. J. Rohde Nielsen, Mr. R. De Backer, Mr. P. Tison, Mr. F. Verhoeven, Mr. C.J. van de Graaf, Mr. R. Hoenders and Mr. G. Vandewalle. below: Mr. J. van Herwijnen, Mr. B. de Jong, Mr. W. Dirks, Ms. N. Schäfer, Mr. D. Sterckx, Mrs. A. Jensen, repr. D. G. Environment, Mr. T. van Schaik and Mr. S. Hoek.









# clasping hands together

The member companies of the European Dredging Association place great importance on recognizing and rewarding strong performance. We offer room for advancement, a stimulating work environment and the resources to help individuals make the most of their careers. The dredging industry is a great and innovative place to work and emphasises the importance of high standards for its employees. We care for good social and safe conditions on board our vessels.

During the execution of our projects local communities are closely involved. In that way, we, Europeans, show our democratic values. By working together, we build strong relationships and create value for our customers.

Individuals are the indispensable links in our companies!





S. Hoek, chairman of the Social Committee

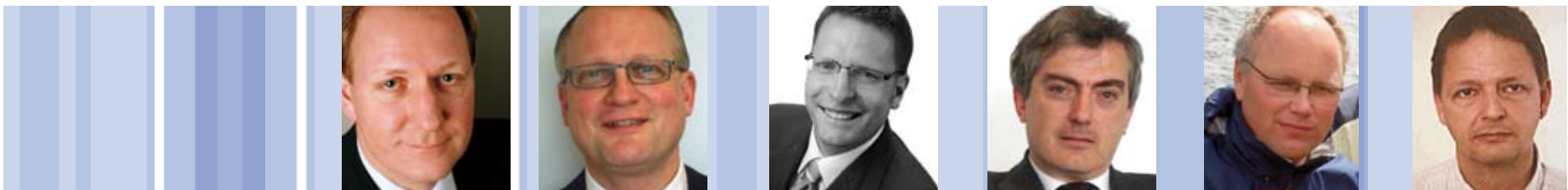
## Social Affairs

*by Simon Hoek, chairman of the Social Committee*

During 2007, the Social Committee put three important issues on the agenda:

- **Consolidated Maritime Labour Convention towards EU regulations**

Discussions started on the implementation of the Consolidated Maritime Labour Convention into EU regulations. EuDA closely followed the discussions between the maritime social partners and input was given to the colleagues of ECSA (European Community Ship-owners' Associations) who are directly involved in the social dialogue.



Members EuDA Social Committee, from left to the right: Mr. T. van Schaik (Van Oord N.V.), Mr. P. Demoor (DEME), Mr. M. Weingartner (Möbius), Mr. Ph. Piron (Jan De Nul N.V.), Mr. R. Veenstra (Royal Boskalis Westminster N.V.) and Mr. B. Toft Franzen (Rohde Nielsen s/a).







- **State Aid for sea transport**

The interpretation by Directorate General TREN of permitting State Aid to sea transport vessels has been largely discussed. This situation, notably that these new guidelines will lead to a worsening of a level playing field, is quite worrying as no longer all the labour costs will be subject to a friendly taxation. The EuDA Board was advised to put this item high on the agenda.

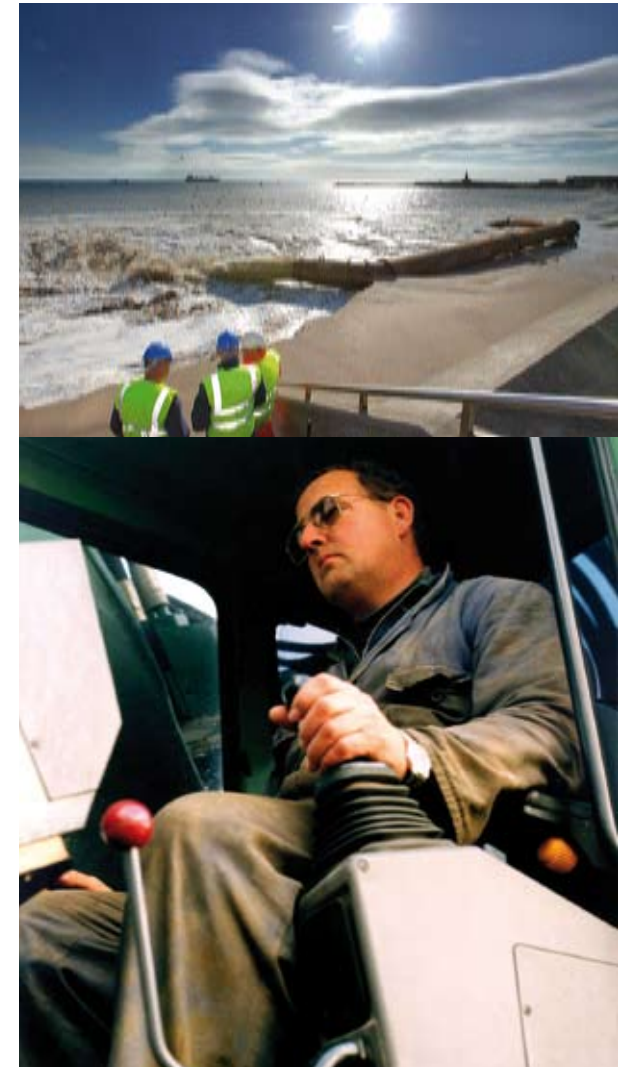
In accordance with pt. 3.2 of the 2004 guidelines (entitled “Labour-related costs”), State aid pertaining to such costs must specifically concern “the maritime transport of materials”. What is more, the State aid in question can only be granted (i) for Community seafarers (ii) working on board seagoing, self-propelled dredgers, registered in a Member State and (iii) carrying out maritime transport at sea for at least 50% of their operational time.

EUDA supports the establishment of a level playing field between the different European dredging companies in terms of State aid for their maritime activities. The primary objective of such level playing field is namely that it is meant to counter competition from vessels registered in third countries which do not take much care to observe social and safety rules in force at international level.

- **Standards for Training Certification and Watch keeping (STCW)**

The third item was related to the international discussions within the IMO about the Standards for Training Certification and Watch keeping (STCW). Since the IMO decided to update the STCW, the Social Committee studied on the consequences of the proposed amendments. Like the previous subjects, also the STCW will ask, for the coming years, the sharp attention of the Committee, monitoring the developments and giving input where necessary. The decision-making processes on world level are quite time consuming. The EuDA Social Committee attentively follows the developments.

*“The decision-making processes on world level are quite time consuming. The EuDA Social Committee attentively follows the developments”*









# looking forward backed-up by experience

The European Dredging Association participated in a European Strategic Innovation Alliance called 'Waterborne'. The waterborne sector developed rapidly over the past century and has become increasingly complex in terms of sub-sectors, technology, systems and in global competition. Although, globalisation and the need for a continued competitiveness bring threats, it equally offers opportunities to be exploited to the fullest extent. Coherent initiatives need to be undertaken for the further development and enhanced competitiveness of the EU maritime and other waterborne related industries.

The European waterborne industry consists of thousands of companies as well as related organisations and bodies including: ship owners, barge owners, shipyards, equipment manufacturers and systems suppliers, classification societies, ports and port services, engineering services and other knowledge providers, which all engage in a wide range of activities.

EuDA's active participation in the Waterborne TP over the past 3 years resulted in a number of research topics of potential value to EuDA members. They are included in the Waterborne Strategic Research Agenda, and in the subsequent Implementation Plan.





A. Bates

## EuDA future within the Waterborne TP

*by Anthony Bates, EuDA representative in the Waterborne Technology Platform*

*The Waterborne TP falls under the more general category of 'Transport', which includes aeronautics.*

*As a direct result of EuDA's active participation in the Waterborne TP over the past 3 years, a number of research topics of potential value to EuDA members are included in the Waterborne Strategic Research Agenda, and in the subsequent Implementation Plan. This would not have happened without EuDA participation in the production process.*

*Achieving these results has required considerable time and effort, because the majority of Waterborne TP members have very different interests and priorities than those of EuDA. However, none of the topics chosen by EuDA are included in the current FP7 Work Programme as a direct result of participation in the Waterborne TP.*



The current content of the 'Seventh Framework Programme for Research and Technological Development' (FP7) was published on 30th November 2007. The overall EU budget for the period 2007 to 2013 is € 50.5 billion. Within this, the budget for Transport (including Aeronautics) is € 4.1 billion. In addition, there is a separate budget for 'Environment' of € 1.8 billion.

The deadline for the submission of research proposals in the current Work Programme is 7th May 2008. The main theme running throughout

Constantly evaluating and finetuning of dredging equipment.







IJsselmeer, The Netherlands  
Under the authority of The Ministry of Transport,  
Public Works and Water Management,  
6 million m<sup>3</sup> of polluted sludge was cleaned  
from Ketelmeer, for which a construction of a  
23 mln. m<sup>3</sup> depot called 'IJsselmeer' was built.

the Work Programme is the progression towards Greener Transport.

The basis of selection of a topic, or topics, in current and future Calls, is not very clear, but will be influenced by various factors including: the quality of presentation, the force of lobbying and the political priorities adopted by the EU Commission.

It has become clear over time that the consensus view within EuDA members to date has favoured the pursuit of environmental research topics, it may well be, therefore, that greater benefit could be achieved by more active participation in the Environment TP. The 'Environment' programme includes the following research areas.

*“If EuDA is silent,  
or passive,  
it is unlikely to benefit”*

### Sustainable Management of Resources

- Conservation and sustainable management of natural and man-made resources and biodiversity
- Management of marine environment

### Environmental Technologies

- Environmental technologies for observation, simulation, prevention, mitigation, adaptation, remediation and restoration of the natural and man-made environment
- Protection, conservation and enhancement of cultural heritage
- Technology assessment, verification and testing

### Earth observation and assessment tools

- Earth and ocean observation systems, monitoring methods for the environment and sustainable development
- Forecasting methods and assessment tools for sustainable development

A number of the topics described above are almost identical to those proposed by EuDA within the Waterborne TP.

Whilst the Transport TP Work Programme contains none of the specific research topics that have been proposed by EuDA, a few topics, if realized, can be expected eventually to have some impact on the dredging industry. These include the following:

#### **SST.2008.1.1.8 New Ship propulsion systems.**

Has potential for long term impact on the design and construction of Trailers, Hoppers and Workboats.

#### **SST.2008.1.3.1 Effects of Climate Change on inland waterways and integrated transport networks.**

This topic is proposed as a pilot study that could eventually be expanded to include ports and harbours.

#### **SST.2008.2.1.6 Rail transport in competitive and co-modal freight logistics - AREA: 7.2.2.2 Maritime and inland waterways transport.**

At first sight, this topic is not of obvious interest to EuDA, but a programme objective is for Short Sea Shipping to achieve a 40% share of intermodal





transport. To achieve this will require the upgrading of many small to medium-size European ports.

**SST.2008.6.6. Integration of Marine and Maritime sciences in Waterborne Transport and support to the European Research Area.** This is an open call with funding under the FP7. Sustainable surface transport budget 2008-RTD-1. It provides an opportunity for collaborative research in various topics, possibly including those areas of environmental science and advanced field measurement that are of potential interest to EuDA.

The Work Programmes, as published, are not rigid documents. The possibility, therefore, remains to include research topics that are of more direct interest to EuDA than those listed above, but which are not included in the published Transport Work Programme. However, to achieve this would require well constructed arguments in favour of inclusion and determined lobbying for support. If EuDA is silent, or passive, it is unlikely to benefit, unless as an incidental consequence of research promoted by others.

It is, therefore, pertinent at this annual review to ask first what is the value to EuDA of the inclusion

of their chosen research topics in the Waterborne Impl Plan and second if there is a better route by which EuDA might achieve its research objectives?

A further question arises: is research of benefit to EuDA members? The answer to this has to be yes. The alternative is to stand still and ultimately, to lose market share. Even within the narrow confines of the EuDA chosen topics in the Implementation Plan, I believe that the satisfactory conclusion of one, or more of these topics, would be of benefit to EuDA members and also to the ports industry.

If accepting that the chosen research topics are of potential benefit, the next question is whether the Waterborne TP is the best route to achievement of the research. This is far from certain. It is possible that 'Environment' may well provide a route more in tune with EuDA's objectives. Furthermore, I am reminded by the Chairman of the EuDA Environmental Committee, Wouter Dirks, that the 'European Research Council', MARTEC, ECOPORTS, and others, may also offer opportunities.

My view is that the substantial effort that has been invested in Waterborne TP to date should not be abandoned. I, therefore, believe that EuDA should

continue to maintain some level of contact with the Waterborne TP, at least sufficient to monitor progress and to keep the chosen research topics on the agenda.

Regardless of the research route, or routes, that might be adopted, at their meeting on 17th December, the EuDA Board has decided to scale down their level of participation in the Waterborne TP. This, therefore, brings to a close any need for me to continue representing EuDA on the Waterborne TP.

For me the past 3 years have been very interesting and I am grateful to EuDA for providing me with the opportunity to participate and to be of service. It is my hope that the past efforts ultimately will bring some benefit to the dredging industry.



***THANKS, Tony!***

*During three years, Anthony Bates has done an excellent job by representing EUDA at the "Waterborne Technology Platform" (ACMARE). It was not an easy task: amongst others for two important reasons:*

- 1) The dredging industry is not yet fully recognised as a "big boy" amongst the shipping giants.*
- 2) It is not obvious to obtain a full consensus amongst the members with respect to the topics of research that are of interest to all of us!*

*But, Tony did it... and he did it well. EUDA received compliments from sister organisations such as ESPO and ECSA about Tony's involvement. Now, Wouter Dirks will take over the "Environmental Section" of these coordination tasks. We wish good luck to Wouter! You found here the final report by Anthony Bates, and his recommendations, about three years of active involvement in the Acmare-working groups. Thanks, Tony*

***Marc STORDIAU,  
Chairman***









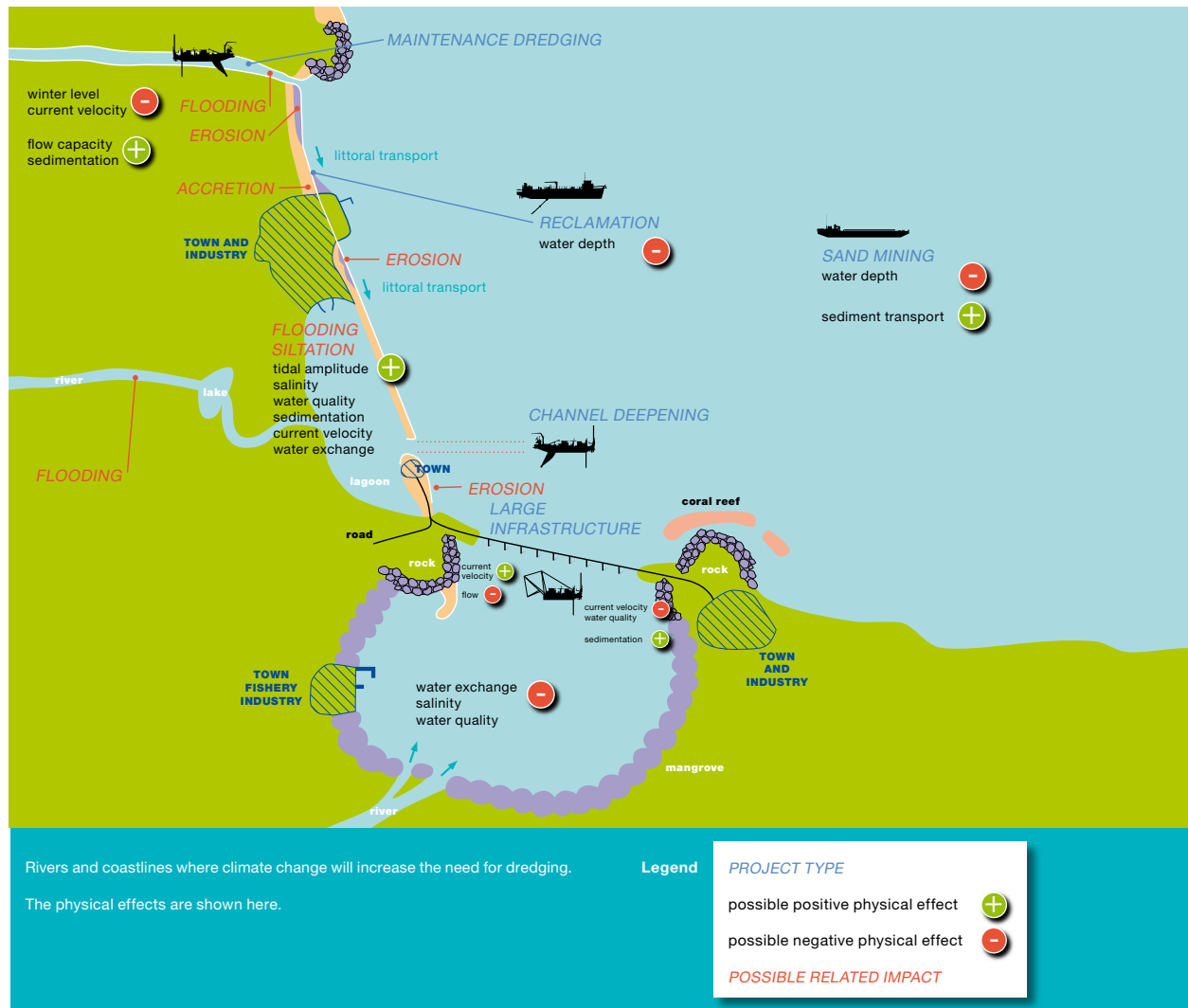


## Climate change - Likely consequences for the dredging industry.

*With kind acknowledgements to Mr. Anders Jensen, member CEDA Environment Committee*

*The geographical focus of activity for the dredging industry is rivers, estuaries, deltas and coastlines with a smooth relief where ship based trade and transport has developed over time. These kinds of low lying landscapes are building up and shaped by sediment and water. The morphology is constantly changing as respond to changes in sediment supply, water flow, wave climate and tidal range. All these parameters are changing faster now due to the accelerating climate change.*

The presence of hard and unmoveable structures like ports, fairways, dykes, bridges etc. makes it almost impossible or at least extremely expensive to let coastlines or rivers find a new equilibrium in response to raising water levels and changes in river discharge. Therefore dredging and landfill will be increasingly demanded in order to protect, not only these structures, but also an increasingly part of the population which will be subject to flooding and coastal erosion.



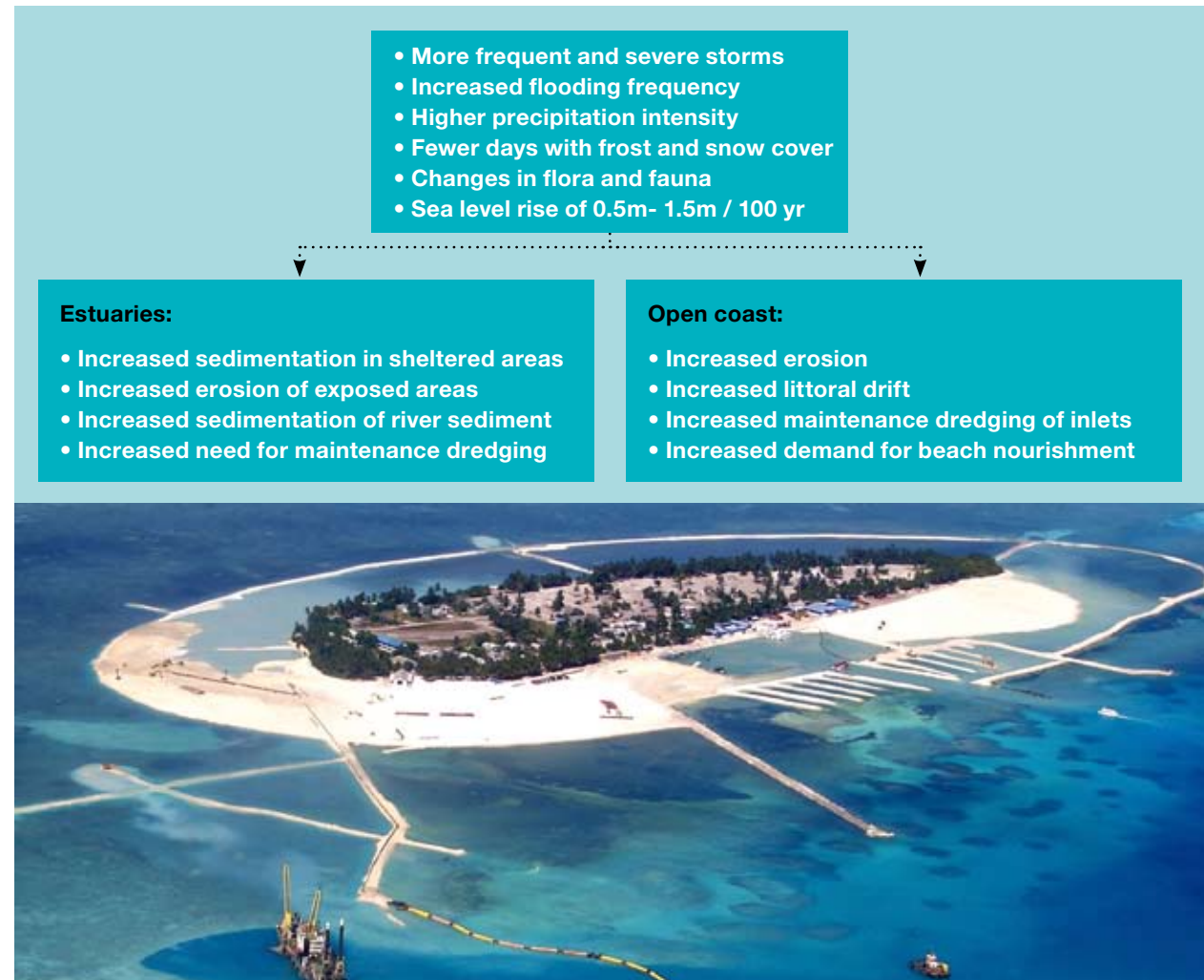
The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 to give policy makers etc. an objective source of information on the cause and the consequences of climate change. IPCC updates and publishes forecasts and projections with regular intervals latest in 2007. The latest forecast predicts that the water level will rise 0.5m to 1.5m within the next 100 years and events with extreme weather will increase over northern Europe together with increase in river runoff due to extreme precipitation in the part of Europe located north of the Alps.

The predicted change in water depths will not only have direct effect on flooding risk, but will also change the range of the tide especially along the coast of the North Sea where the velocity of the tidal wave is a function of the water depth.

Increase in tidal range will increase the effect of tidal pumping of sediment which again will increase the demand for maintenance dredging.

Rivers and coastlines where climate change will increase the need for dredging.

A simplified cause and effect relationship for estuaries and open coasts is shown in the box diagram.







New shipping routes between Europe and Asia via the North Pole basin will open up in the future as the ice cover in the polar basin decreases. Exploration of raw materials and energy in polar areas which were inaccessible a few years ago, will demand new ports and fairways to be built in an a whole new environment where dredgers must be constructed to operate under arctic conditions and far away from any infrastructure and services.

Construction of offshore wind farms has already opened up a new market for the dredging industry. The demand for wind- and other renewable energy is accelerating, and with the almost ideal condi-

tions for offshore wind energy along the North European coast line is the future for dredging vessels specialised in dredging for foundations etc. looking bright.

The conclusion must be that the demand for dredging will increase as a result of the climate changes. The dredging industry will though, along with the other shipping industry, face increasingly tougher demand to reduce emission of green house gases and other pollutants.

Development of new more energy efficient dredging vessels will be needed in order to comply with the future standards.

*“The demand for dredging will increase as a result of the climate changes”*













## BEACHMED

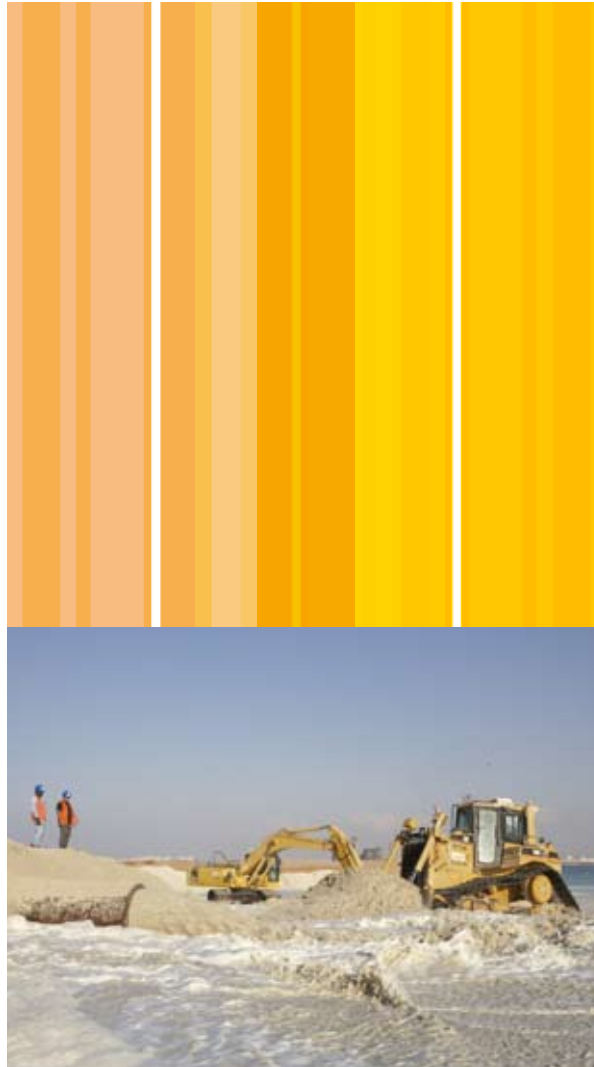
*This project is focused on the creation of an Inter-regional SDI (Spatial Data Infrastructure) among the Mediterranean Regions. This ISDI is thematically oriented towards the coastal zone survey with special regard to the climate change effects and risks.*

*Mr. Paulo Lupino who is the driving force in this new and interesting initiative, can count on EuDA's support and assistance.*

### History

The Beachmed-1 Project was an Interreg IIIB project between regions of Italy, France and Spain. The objective was to get a better understanding of available methods to counter coastal erosion and to define the actual parameters for the participating regions. This covered in particular the availability of suitable sand deposits. EuDA cooperated in this project and contributed its expertise on dredging technology.

The project was concluded in 2004. Since the initial project the Regio Lazio has taken the initiative to continue with interregional cooperation on matters of coastal erosion and coastal management.



The second Interreg IIIC project has been named Beachmed-e and is expected to be concluded in 2008. The number of participants has increased, notably with partners from Greece. The project objectives covered three general objectives:

- 1) Design and construct technical instruments to characterize erosion at European scale and for the sustainable use of resources.**
- 2) Set up suitable instruments to manage the relation between coastal developments and morphologically fragile areas, especially when vulnerable to waves and heavy storms.**
- 3) Set up of normative and organisational instruments to define, regulate and manage coastal defence by all parties involved.**

The reports of phases 1-3 have been made available ([www.beachmed.it](http://www.beachmed.it)) and the final report is expected in 2008.

Coastal management, beach protection, both indispensable for a safe Mediterranean area.





## MEMBERS OF EuDA

BELGIUM

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[www.dredging.com](http://www.dredging.com)

[www.deme.be](http://www.deme.be)



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**Josef Möbius Bau-Aktiengesellschaft**

[www.moebiusbau.de](http://www.moebiusbau.de)



GREAT BRITAIN

**BMAPA**

British Marine Aggregate Producers Association

[www.bmapa.org/](http://www.bmapa.org/)



IRELAND

**Irish Dredging Company**

[www.boskalis.com](http://www.boskalis.com)



Royal  
Boskalis Westminster nv

ITALY

**SIDRA - Società Italiana Dragaggi SpA**

[www.deme.be](http://www.deme.be)



SIDRA  
Dredging, Marine  
& Environmental Contractor

THE NETHERLANDS

**Baggerbedrijf De Boer B.V. / Dutch Dredging B.V.**

[www.dutchdredging.nl](http://www.dutchdredging.nl)



**Royal Boskalis Westminster N.V.**

[www.boskalis.com](http://www.boskalis.com)



**Van den Herik B.V.**

[www.herik.nl](http://www.herik.nl)



**Van Oord N.V.**

[www.vanoord.com](http://www.vanoord.com)



**Van der Kamp B.V**

[www.vanderkampbv.nl](http://www.vanderkampbv.nl)



**VBKO - Vereniging van Waterbouwers in Bagger-, Kust- en Oeverwerken**

[www.vbko.nl](http://www.vbko.nl)



SPAIN

**FPS**

**Flota Projectos Singulares**

[www.flotaps.com](http://www.flotaps.com)









*“The European Dredging Association - EuDA, based in the political heart of Brussels, is an industry grouping of all the leading European dredging companies and their National Federations. 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.”*

*Founded in 1993, the Association serves its members in all kind of requests related to dredging issues, strongly emphasizing on Social and Environmental affairs.*

*These issues are followed and organized by the Secretariat and executed by its specialised working groups existing out of experts from the member companies.”*



**EuDA Secretariat** Agnès de Meester, advisor to the board Isabelle Gourdin, secretary

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