



**EUDA WORKSHOP ON
SUSTAINABLE DREDGING APPROACHES TO
CLIMATE CHANGE ADAPTATION**
Solutions from the European Dredging Community
TUESDAY 12TH MAY 2015, – COPENHAGEN

In today's policy discussions, Climate Change Adaptation (CCA) is about controlling the consequences of the rising temperature of the Earth due to excessive anthropogenic emissions of Greenhouse Gases in the atmosphere. CCA strategies aim at mitigating the climate change consequences on vulnerable areas and building up their resilience.

The main threats from climate change include sea level rise, increased temperature of the seawater surface, changes in (seasonal) precipitation and hence river flow, increased frequency of extreme events (floods, draughts, storms, surges), ... there are some certainties in which direction the challenges go but there are also uncertainties on how to deal with those. Uncertainty can be reduced by building new knowledge and by developing new 'adaptable' approaches, such as adaptive management and monitoring.

With 80% of the largest population centres located along the coasts, the potential for climate change related (natural) disasters is significant on both human populations and marine, estuarine and fluvial ecosystems. The need for action to protect vulnerable areas and increase their resilience is real and urgent: first the planning, then its execution.

Dredging knowledge, technology and know-how are indispensable instruments that offer varied solutions for the adaptation to climate change in vulnerable coastal and inland areas. For instance, dredging know-how contributed greatly to the design and construction of the '10,000 year storm' defences for the port of Rotterdam. Other examples include the beach parks Køge Bay and Amager in Denmark which combine flood protection with 'engineered nature' in the form of lagoons, and high quality artificial beaches. Sustainable approaches and philosophies such as "Working with Nature" and 'Building with Nature', which aim at harnessing the forces of nature, both in physical and biological terms, are increasingly integrated into project design and execution offering innovative, sustainable solutions.

The proposed session aims at presenting the views of academics, policy makers and practitioners. After introducing the session's objectives, presentations will cover sustainable concepts and examples for planning and executing of CCA projects in coastal, estuarine and fluvial systems to transform the threats from climate change into opportunities for humans and nature.

Indicative Questions for the Panel Discussion:

- ☞ *How can the ecosystem's approach be economically applied in CCA measures in coastal, estuarine and fluvial environments?*
- ☞ *How can forces of nature be effectively put to use in shaping CCA measures?*
- ☞ *Are win-win-win solutions with positive economical, societal and ecological impacts possible?*

SUSTAINABLE DREDGING APPROACHES TO CLIMATE CHANGE ADAPTATION

SOLUTIONS FROM THE EUROPEAN DREDGING COMMUNITY WORKSHOP PROGRAMME

16.30 Welcome

Introduction to the Workshop & Programme Overview

by Workshop Chairman Mr **Polite Laboyrie**, CEDA Chairman

Setting the scene:

16.35 Academic point of view

CCA Challenges, possible impacts and implications for the dredgers

by Prof. Dr. **Jürgen Kropp**, PIK

- ☞ What are the main known threats from CC to the coasts (ecosystems, infrastructures) ?
- ☞ Could forces of nature be used in shaping CCA measures? How ?
- ☞ Would the ecosystem's approach be applicable in CCA measures for coastal, estuarine and fluvial environments?

Q&A

16.55 European Commission's point of view

European strategy, policies and actions

by Mrs **Birgit De Boissezon**, HoU Sustainable Management of Natural Resources (DG RTD)

- ☞ What is the current European Strategy with regards to CCA ?
- ☞ Is CCA integrated in Maritime Spatial Planning – Integrated Coastal Management? How
- ☞ What are the main actions and instruments to adapt infrastructures to CC ?

Q&A

Project owners

17.15 National Government point of view

National strategy, policies and actions

by Mr **Pieter de Boer**, Rijkswaterstaat (RWS)

- ☞ What are the main known threats to the Dutch coasts and rivers ?
- ☞ What are the measures you are considering ? taking ?
- ☞ Are forces of nature (Building with Nature) used in the CCA measures?
- ☞ Can the ecosystem's approach be (economically) applied in CCA measures in coastal, estuarine and fluvial environments?
- ☞ Are win-win-win solutions with positive economical, societal and ecological impacts possible?

Q&A

17.35 Ports point of view

Corporate strategy and actions

by Mr Vincent Malfère, Port of Le Havre

- ☞ *How are Environmental issues prioritised ?*
- ☞ *How high a priority is CCA ? Why ?*
 - ☞ *What are the main known threats/risks to Port of Le Havre ?*
 - ☞ *What are the considered / taken protection/adaptation/prevention measures?*
- ☞ *Are forces of nature (Working with Nature) used in the CCA measures?*
- ☞ *Can the ecosystem's approach be (economically) applied in CCA measures in coastal, estuarine and fluvial environments?*
- ☞ *Are win-win-win solutions with positive economical, societal and ecological impacts possible?*

Q&A

Contractors

17.55 Dredgers' point of view

by Mr Bernard Malherbe, JDN, and Mr Paris Sansoglou, EuDA

- ☞ *Are forces of nature used in the CCA measures?*
- ☞ *Can the ecosystem's approach be (economically) applied in CCA measures in coastal, estuarine and fluvial environments?*
- ☞ *Are win-win-win solutions with positive economical, societal and ecological impacts possible?*
- ☞ *The Case of the Belgian Coast (Flanders Bays)*

Q&A

18.15 Open discussion & conclusions

18.30 Closing of the Session

SPEAKERS

WORKSHOP MODERATOR:



Mr Polite Laboyrie is Director Europe and the Americas at Witteveen+Bos Consulting Engineers. *Mr Polite Laboyrie is also Chairman of the Environment Commission of the Central Dredging Association (CEDA). He graduated as a civil engineer from the Technical University of Delft in 1986. His first job was for the Port of Rotterdam after that he has been Head of the Hydraulic and Environmental engineering department at the Dutch Ministry of Infrastructure and Environment. He has been involved in many Infrastructural works around the world related to Water management, Flood protection and Dredging.*



SETTING THE SCENE: ACADEMIC POINT OF VIEW



Prof. Dr. Jürgen P. Kropp is Deputy Chair of the Research Area for Climate Impacts and Vulnerabilities and Head of the Research Area for Climate Change and Development at the Potsdam Institute for Climate Impact Research (PIK)

Prof. Dr. Jürgen P. Kropp is also Professor for 'Climate Change and Sustainability' at University of Potsdam (Dept. Earth & Environmental Sciences). He holds a degree in Chemistry and Physics as well as a PhD in Theoretical Physics from the University of Oldenburg. He spent most of his career in the research and academic world, starting as Research Associate then Senior Researcher at the Potsdam Institute for Climate Impact Research, as Senior Scientist at Justus-Liebig University of Giessen (Inst. Theoretical Physics), as Postdoctoral Fellow at the University of Oldenburg (Inst. for Chemistry and Biology of the Environment), as Research Analyst for the German Advisory Council on Global Change to the Federal Government. He has been Lecturer at Humboldt University Berlin (Dept. of Geography), visiting Professor at Mahidol University, Bangkok/Thailand (Institute for Resource Studies). He is a well-known international expert on Climate Change and Sustainability issues, appointed by the Council of Europe and the European Commission, and by the governments of Kazakhstan and Pakistan. He is also a contributing author to several scientific journals. He was project leader of several international joint projects, funded by the Federal Government, the European Commission or international development. In 2012, together with KD Müller (Potsdam Film University), he won the 'Clean Tech Media Award' for the Climate Media Factory Project. In 2006, he won the Amber Tree Award for the European joint project ASTRA (Developing Policies & Adaptation Strategies to Climate Change in the Baltic Sea Region) for its foresighted vision.



SETTING THE SCENE: EUROPEAN COMMISSION'S POINT OF VIEW



Mrs Birgit de Boissezon is Senior Head of Unit at the European Commission, managing the Unit for 'Sustainable Management of Natural Resources', DG Research & Innovation.

With the support of Horizon 2020 (EU's framework programme for research and innovation), this DG RTD Unit defines and implements the objectives and priorities for nature-based solutions which increase economic, social and environmental resilience and improve risk management, to re-nature cities, adapt to climate change, restore biodiversity and ecosystems, and valorise cultural heritage. Earlier, Mrs Birgit de Boissezon held various positions in the European Commission related to strategy and policy, planning and evaluation of EU research framework programmes (FPs). Before entering the Commission, she was research counsellor at the Danish Permanent Representation to the EU in Brussels for three years and worked for six years in the Danish Ministry of Research in charge of FP coordination at national level and of dissemination and use of S/T results. As biologist by training, the career started in the French dairy branch organisation CNIEL/CIDIL in Paris, as responsible for its Information and Documentation Centre.



PROJECT OWNERS: NATIONAL GOVERNMENT POINT OF VIEW



Mr Pieter de Boer is a senior advisor in water management and dredging at the Department for Infrastructure of the Ministry of Transport and Water Management.

Mr Pieter de Boer is working at Rijkswaterstaat since 1998. For Rijkswaterstaat he was involved in a relative large number of Dredging and Marine construction projects. He participates in international networks. Pieter is member of the CEDA Environmental Commission and of the Steering Group of SedNet. He has a strong field experience including Confined Disposal Facilities for Dredged Material, several dredging projects (maintenance, remediation), field investigations and research projects on sediment risk assessment. He advises the Ministry of Infrastructure and Environment on the development of legislation with relevance for Dredging and Marine Construction: he was involved in the implementation into Dutch Law of the EU Landfill Directive and EU Framework Directives for Water and Waste. Since 2007, he is involved in the Dutch programme 'Room for the River' to increase safety against flooding alongside the river Rhine where his specific interest was the risk management for dredging. Starting in 2009 Pieter and partners promoted Eco-Engineering (connecting ecology with technology) as a concept, compatible with 'Building with Nature', for a more integrated approach of Dredging and Marine construction projects.



PROJECT OWNERS: PORTS POINT OF VIEW



Mr Vincent Malfère is since 2012 Deputy Executive Director of Port of Le Havre Authority and Member of the Management Board of Grand Port Maritime du Havre.

Mr Vincent Malfère graduated as Civil Engineer from Ecole Polytechnique of Palaiseau (France) in 2002.

Until October 2012, he was Deputy Secretary General to Regional Affairs in the Prefecture of the Brittany region. He was especially in charge of infrastructure work, energy, regional development. He controlled all finance packages (State-Region Project Contracts, European Funds), investment issues and, more generally speaking, the technical and environmental stakes related to main transport infrastructure. In continuity with various stays abroad (World Bank in Washington DC, University in Barcelona), he successively occupied the posts of Head of the Maritime Department at the Departmental Directorate of Equipment in the Vendée region (2002/2005), and then, Head of the Department of Civil Works at the Reunion Island (2005/2008), where he especially directed the project management of the first leg of the "Tamarins Road" (National Civil Engineering Prize in 2008), and then Technical Advisor to the Secretary of State for the French Territories Overseas, especially in charge of transport and energy issues (2008/2009).



CONTRACTORS: DREDGERS' POINT OF VIEW



Bernard Malherbe is Project Manager of Flanders Bays 2100.

Bernard Malherbe graduated as marine geologist at the University of Leuven (KULeuven, 1975) and as geological engineer at the Polytechnic Institute ENSG (Nancy, France, 1980). He started his career as marine geological engineer at the Contractor's JV Zeebouw Zeezand in charge of the extension of the port of Zeebrugge (B). He joined the consulting –engineering company Haecon (dredging, coastal protection, port developments, surveys, ...), where he was employed as business development manager. Since 2004 he is employed by dredging and reclamation contractor Jan De Nul as project-development director. He is a member of the Managing Board of the project iLand.



POSSIBLE SOURCES OF FINANCING



Paris Sansoglou is Secretary General of the European Dredging Association (EuDA).

Mr Paris Sansoglou holds a degree of Commercial Engineer from the Solvay Business School in Brussels that he has complemented with degrees in Environmental Studies (ULB), Business Informatics (VUB) and Financial Analysis (CIAF) (member of the European and the Belgian Associations of Financial Analysts ABAF-BVFA). His professional experience is varied and includes research (on sustainable development), statistics (Business Statistics), knowledge management, economical, environmental & financial consulting activities (at Ernst & Young). He has spent most of his career on the 'European' scene working in the Commission (Eurostat) then in trade associations (representing the European manufacturers of synthetic fibres, the European shipbuilders and now the European dredgers). Mr Sansoglou developed a strong kinship with the sea and maritime affairs when he worked for the Community of European Shipyards' Associations (CESA), where he was managing for the shipbuilders and shiprepairers a portfolio of strategic activities including research (coordination of several projects in FP5 & FP6), technical & environmental issues (CCNR, Commission & IMO related), as well as statistical, trade and market issues. He ran the secretariat of the European Technology Platform WATERBORNE from 2005 to 2009. Mr Sansoglou joined the European Dredging Association in April 2009 as Secretary General to represent with Mr Marc Stordiau, EuDA Chairman, the interests of the European Dredgers at the European Institutions.



JOINT ORGANISERS



European Dredging Association, www.european-dredging.eu.

Having celebrated 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.

Dredging activities are not well known by the wider public, but as a matter of fact, the European dredging companies, members of EuDA, are world market leaders with about 80% share of the worldwide open dredging market and a turnover of 8.3bn Euro in 2013. Although 70% of operations take place outside Europe, 90% of the returns flow back to Europe.

EuDA serves its members in all kinds of requests related to dredging issues, strongly emphasising Social, Trade and Environmental affairs. EuDA’s policy goals aim at the creation fair and equitable conditions for competition, the respect of applicable national, European and international rules and regulations as well as the safe, effective and responsible operation of its fleet of dredgers.



Central Dredging Association

Central Dredging Association, www.dredging.org:

The Central Dredging Association (CEDA) is an internationally recognised independent professional association operating in Africa, Europe and the Middle-East. It is an easy-to-access leading platform for the exchange of knowledge and an authoritative reference point for impartial technical information. Strongly recommending working with nature, CEDA actively strives to contribute towards sustainable development. CEDA members are corporations, professionals and stakeholders involved in a diversity of activities related to dredging and marine construction. CEDA is part of the World Organisation of Dredging Associations (WODA) and is responsible for Africa, Europe and the Middle East.