

CEDA Dredging Days 2021

Sustainable Dredging and Innovation

The science. The practice. The business.

28-29 September 2021

A Virtual Conference

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WELCOME

The Central Dredging Association (CEDA) Technical and Organising Committees are pleased to share the virtual Dredging Days 2021 programme with you.

The format may have changed, for this year's conference, but it still promises to be the best use of two days for dredging professionals in the CEDA region. CEDA is working with virtual event veteran, Outsourced Events, to make sure that Dredging Days 2021 offers everything that participants would expect from the event.

Here are some specially selected highlights that we think you will like.

A few programme highlights

Dredging Days 2021 has a strong focus on 'Sustainable Dredging and Innovation – The science. The practice. The business'. The digital revolution already impacts how we run our businesses and this conference will highlight the dredging innovations that are leading industry change. As well as discussing new technologies, sessions will also cover the way the dredging industry does business. Everything will be viewed through the lens of sustainable best practice with an eye on the future.

The conference will open with a keynote session on 'The impact of the digital revolution on the dredging industry'. It will tap into the bright minds of Bob de Wit, Professor of Strategic Leadership at Nyerode Business University, and Cees van Rhee, Professor of Dredging Engineering at Delft University of Technology, as they share their insights into how the dredging industry might look in the future.

In addition to presentations on the latest innovations, designed to address technical challenges, such as modelling and measuring hydraulic transport, fine sediment dynamics as well as equipment and technology, participants will hear:

- **How organisations are overcoming costs, legislation and technical challenges, and working towards sustainable development by mainstreaming beneficial sediment use.**
- **About energy transition in the industry, including insights from national strategies and international targets, and possible technical solutions.**
- **How best to set environmental turbidity limits with a balance between protecting the environment and still allowing for dredging in a cost-effective way.**
- **How organisations are building bridges, between dredging and financial institutions, to successfully fund sustainable projects.**
- **How young dredging professionals are challenging CEOs to future-proof the industry.**

In a highly interactive closing session, with the help of an expert panel, our keynote speakers will draw on the discussions, presentations and polls, over the two days. Participants will explore and identify viable, actionable options for preparing their business for the turbulent transitions forecast in the opening session.

During Dredging Days 2021, participants will be able to make appointments and network, during breaks, in the coffee lounges and chat rooms. There will also be plenty of opportunities to visit the virtual exhibition and speak directly to company representatives in their booths.

The virtual nature of the conference means that we can look forward to welcoming participants from all over the CEDA region and beyond. Also, with our special offer for young dredging professionals, in your organisation, we hope to see many new and familiar faces at Dredging Days 2021.

In the following pages you can find full details of the conference programme and how to register, plus details of how to introduce a young professional to CEDA Dredging Days.

We look forward to seeing you there.

TECHNICAL AND PROGRAMME COMMITTEE

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 Luk Verstraelen, DEME, Belgium
 Thomas Vijverberg, Royal Boskalis Westminster, the Netherlands
 Jort van Wijk, IHC IQIP, the Netherlands
 Mark Winkelman, Damen Dredging Equipment, the Netherlands

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 Andre Kik, Amsterdam Shipyards B.V., the Netherlands
 Cees van Rhee, Delft University of Technology, the Netherlands
 Frederik Roose, Ministry of the Flemish Community - Maritime Access Division, Belgium
 Wilhelm de Roth, Dutch Dredging, representing Young CEDA, the Netherlands
 Deborah Rowe, Sheba Marketing, UK
 Mike van der Vijver, MindMeeting, the Netherlands
 Jort van Wijk, IHC IQIP, the Netherlands

The CEDA Dredging Days 2021 Technical and Programme Committee reserves the right to adjust or change the programme if necessary.



PROGRAMME



Presentation of scientific paper

DAY 1: Tuesday, 28 September 2021

08:30 – 09:15 Early bird networking

Bring your coffee and engage with your fellow early birds

09:15 – 09:20 Opening the Conference

CEDA President: Polite Laboyrie, Witteveen+Bos, the Netherlands

09:20 – 09:30 Welcome to the Conference

Conference Chair: Prof. Cees van Rhee, Delft University of Technology, the Netherlands

09:30 – 11:00 OPENING KEYNOTE SESSION

Moderator: Jort van Wijk, IHC IQIP, the Netherlands

We live on the eve of a societal revolution. The main source of economic value creation is no longer industrial production, but digital technologies such as Big Data, blockchain, Internet of Things, 3-D Printing and Artificial Intelligence. We have left the industrial society and entered a digital society. Periods between societies have always been turbulent and the coming years will be no different. A number of issues will dominate the corporate agenda, such as democracy and the new societal structure, harmony with nature, and shareholder capitalism. The digital revolution will impact the dredging industry and this conference will consider how we can lead the change.

09:30

Keynote 1: The impact of the digital revolution on the dredging industry

Prof. Bob de Wit, Nyenrode Business University, the Netherlands

10:00

Keynote 2: Current and future market drivers for the dredging industry

Prof. Cees van Rhee, Delft University of Technology, the Netherlands

10:15

Conversation with Prof. Bob de Wit and Prof. Cees van Rhee

10:40

Live Q&A

11:00 – 11:30 Break: Exhibition, discussion rooms, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

11:30 – 12:30 SESSION 2: Developments in modelling and measuring hydraulic transport

Moderator: Johan Pennekamp, Deltares, the Netherlands

11:30

**The relevance of time domain effects for the design and stability of hydraulic transport pipelines**

De Hoog E, Royal IHC/Delft University of Technology, the Netherlands; Talmon AM, Deltares/Delft University of Technology, the Netherlands; van Rhee C, Delft University of Technology, the Netherlands

11:50

**Numerical modelling of particle driven density currents on gentle slopes**

Goeree JC and Wijnands JTM, Royal IHC, the Netherlands; Osterchrist HU, IHC America, USA; van Rhee C, Delft University of Technology, the Netherlands

12:10

Assessing non-nuclear production instrumentation: ERT technology as the new standard for dredging

Bosman F, Damen, the Netherlands; Williams M, CEMEX, UK; Primrose K and Wei K, Industrial Tomography Systems, UK; Boer A, Krohne, the Netherlands

12:30 – 13:00 Sponsored Lunch & Learn

Interactive roundtable: TBC

12:30 – 13:30 Lunch break: Exhibition, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

13:30 – 14:50 SESSION 3: Beneficial sediment use – overcoming cost, legislation and technique challenges towards sustainable development

Moderators: Thomas Vijverberg, Royal Boskalis Westminster, the Netherlands; Marc Kindermann, Hamburg Port Authority, Germany

This session, presented by CEDA, PIANC and SedNet, will discuss the importance of Beneficial Sediment Use (BU) in the current context of sustainable development. A general introduction will give an overview of the current status of BU internationally with an update of the ongoing activities within the working groups, with focus on enablers for mainstreaming BU. There will be three parallel group discussions and a plenary wrap-up. Three problem owners will invite the audience to brainstorm solutions for a specific case study. Each case study will focus on a key element to enable mainstreaming of BU: technique, cost and finance, contamination and legislation.

13:30

Beneficial Use (BU) concept and chances

Luca Sittoni, Deltares/CEDA/PIANC, the Netherlands

13:50

Working on case studies in 3 groups

Case 1: Technique – Case leader: Marco Wensveen, Port of Rotterdam/SedNet/CEDA, the Netherlands
Case 2: Cost and finance – Case leader: Victor Magar, Ramboll/PIANC, US
Case 3: Contamination and legislation – Case leader: Arjan Wijdeveld, Deltares/CEDA/SedNet, the Netherlands

14:20

Presentation of working group findings

14:45

Conclusions

14:50 – 15:15 Break: Exhibition, discussion rooms, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

15:15 – 16:00 SESSION 4: Assessing environmental turbidity limits

Convenor: Klavs Bundgaard, Niras, Denmark

Moderator: Marc Huygens, DEME Group, Belgium

Dredging is often essential for the maintenance and development of ports, harbours and waterways to allow for safe navigation, remediation and flood management. The process, which relocates large volumes of sediment, can be accompanied by the release of suspended sediments into the water column. Excessive suspended sediment concentration has an impact on water transparency and may cause the degradation of water quality and marine ecosystems.

Mitigating these impacts is usually managed by limiting the amount of suspended sediments released at the dredging sites or entering sensitive areas. For dredging projects around the world, many different limit definitions and corresponding turbidity monitoring methods have been applied.

This session will outline and discuss the procedures for setting environmental turbidity limits, based on CEDA's information paper '*Assessing environmental turbidity limits*', and the lessons learned since its publication.

Panel discussion


Panellists including: Klavs Bundgaard, Niras, Denmark • Lucie Evaux, Van Oord, the Netherlands • Alessandra Feola, ISPRA, Italy • Sanne Niemann, FEMO, Denmark

16:00 – 17:05 SESSION 5: Latest in dredging equipment and technology

Moderator: Dirk Roukema, Blue Pelican Associates, the Netherlands

16:00 **Reduction of cutter spillage**
Yousef B, Dredge Yard, the Netherlands

16:15 **Numerical design and development of high efficiency centrifugal dredge pumps**
Sapkota S, Winkelman M and van Duursen E.V, Damen Dredging Equipment, the Netherlands

16:30  **A functional architecture for autonomous hopper dredgers**
Van Stappen J and Osnabrugge J, Royal IHC, the Netherlands

16:50 **Designing towards sustainable small and medium sized dredgers**
Sens R, Damen Shipyards Gorinchem, the Netherlands

17:05 – 17:15 WRAP UP Day 1

Conference Chair: Prof. Cees van Rhee, Delft University of Technology, the Netherlands

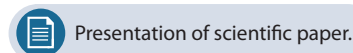
17:15 – 17:30 Break

Grab a cup of coffee, or a glass of wine, and join us for the Fireside Chat (TBC)

17:30 – 18:00 Sponsored Fireside Chat (TBC)

A fireside chat is an engaging, informal, yet structured, interview between a moderator and a guest. It's an excellent opportunity to uncover thoughts, stories and ideas.

PROGRAMME



DAY 2: Wednesday, 29 September 2021

08:30 – 09:20 Early bird networking

Bring your coffee and engage with your fellow early birds

09:20 – 09:30 Welcome to Day 2

Conference Chair: Prof. Cees van Rhee, Delft University of Technology, the Netherlands

09:30 – 11:30 SESSION 6: Energy transition in the dredging industry

Convenor and Moderator: Paul Vercrujisse, DEME Group, Belgium

The Paris Agreement objective to limit global warming initiated national, interregional and global, targets to reduce greenhouse gases. Given these targets there is a renewed focus on energy efficiency, and the energy supply is shifting towards renewables. This energy transition impacts many industries including dredging. This session will provide insights from national strategies, international reduction targets and potential technical solutions.

09:30

Keynote 1: Energy transition in the maritime sector – global and EU perspective

Speaker: Dagmar Nelissen, CE Delft, the Netherlands

09:50

Keynote 2: Roadmap towards climate neutral and circular coastline and fairway maintenance

Harry Zondag, Rijkswaterstaat, the Netherlands

10:10

Poll time

10:25



Energy transition and emission compliance options for dredging vessels

Mestemaker BTW, Gonçalves Castro MB and van der Blom EC, Royal IHC, the Netherlands

10:45

Panel Discussion – starting with reflection on poll results

Panellists: Dagmar Nelissen, CE Delft • Harry Zondag, Rijkswaterstaat • Benny Mestemaker, IHC • Robert de Bruin, Van Oord, the Netherlands

11:30 – 12:00 Break: Exhibition, discussion rooms, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

12:00 – 12:45 SESSION 7: Young CEDA ask a CEO

Moderators: Mark Petri, TenneT TSO, the Netherlands and Arjan Rietveld, Teledyne Marine, the Netherlands

In a special session organised by Young CEDA, we will be asking key dredging leaders about their views on the challenges the industry faces. Young CEDA members, many of whom will become industry leaders in their own right, will be asking probing questions which are likely to focus on topics including the impacts of climate change, energy transition, and the future of dredging.

12:00

Introduction

Mark Petri, TenneT TSO, the Netherlands

12:05

Q&A with CEOs

Peter Berdowski, Boskalis, the Netherlands, Kees van de Graaf, Baggerbedrijf de Boer B.V./ Dutch Dredging, the Netherlands, Annemieke Nijhof, Deltares, the Netherlands

12:43

Closing of session

Mark Petri, TenneT TSO, the Netherlands

12:45 – 13:15 Sponsored Lunch & Learn

Interactive roundtable: TBC

12:45 – 13:45 Lunch break: Exhibition, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

13:45 – 14:15 SESSION 8: Young CEDA Flash Talks

Moderator: Wilhelm Roth, Baggerbedrijf de Boer/Dutch Dredging

Four fast-paced short presentations by young professionals.

Speakers: Arjan Rietveld, Teledyne, the Netherlands, Floris van Rees, Deltares, the Netherlands, Peter de Vris, HaskoningDHV, the Netherlands, TBC, Zero Emission Hub, the Netherlands

Presentations include: Energy islands, Peter de Vris, HaskoningDHV, the Netherlands

More presentation titles to follow soon.

14:15 – 15:15 SESSION 9: Fine sediment dynamics

Moderator: Jort van Wijk, IHC IQIP, the Netherlands

14:15

**Modelling dynamic plume behaviour**

Gundlach J, Visscher J and Schlurmann T, Ludwig-Franzius-Institute for Hydraulic, Estuarine and Coastal Engineering, Germany; Zorndt A, Federal Waterways Engineering and Research Institute (BAW), Germany

14:35

**Rheology of clay rich soft sediments: from fluid to geo-mechanics**

Meshkati E, Luger D and Bezuijen A, Deltares, the Netherlands; Talmon A, Deltares/Delft University of Technology, the Netherlands

14:55

**Evaluation of Houska thixotropic model for quantification of shear and time dependency of different mud types**

Talmon AM, Deltares/Delft University of Technology, the Netherlands, Meshkati E, Deltares, the Netherlands; Lelieveld T and Goda APK, Delft University of Technology, the Netherlands

15:15 – 15:25 IADC Young Authors' Award

Presenting the award: René Kolman, International Association of Dredging Companies (IADC)

15:25 – 16:00 Break: Exhibition, discussion rooms, coffee lounges, networking

Take some time to network with your peers and visit our exhibitors

16:00 – 16:45 SESSION 10: Financing sustainable Marine and Freshwater Infrastructure: building the bridge between the dredging field and private investors

Convenor and Moderator: Sien Kok, Deltares, the Netherlands

At the backdrop of the global investment gap in Marine and Freshwater Infrastructure, a sector in which the dredging sector plays a central role, there is increasing interest in attracting more private investment. On the other hand, the private sector is increasingly ambitious to redirect investments away from fossil fuels towards sustainable projects. This session will continue building the bridge between the players in the dredging field and the private investment industry, to increase the investability of sustainable projects.

16:00

Introduction

Sien Kok, Deltares, the Netherlands

16:05

Presentation of the report 'Financing Sustainable Marine and Freshwater Infrastructure' (CEDA, IADC, Vital Ports, in partnership with B Capital Partners and Swiss Re)

Arjan Hijdra, Vital Ports, the Netherlands

16:15

Panel discussion

Panellists including: Paolo Alemanni, B Capital Partners, Switzerland • Torsten Thiele, Institute for Advanced Sustainability Studies, Germany • Lotte Vandekeybus, DEME, Belgium

16:35

Q&A

16:43

Closing of session

Sien Kok, Deltares, the Netherlands

Updates are posted regularly on
www.cedaconferences.org/dredgingdays2021



16:45 – 17:30 CLOSING SESSION: Fast forward – How to prepare your business for turbulent transitions

Moderator: Jort van Wijk, IHC IQIP, the Netherlands

Technology is advancing at a phenomenal speed. Corporations are becoming more powerful than governments. Climate change and the energy transition are demanding action on a global scale. These are turbulent times... but turbulence always precedes a revolution.

The dredging industry has an important role to play in coping with the different challenges, but how will we ride the changes to ensure our businesses are both sustainable and profitable? How will you, as a dredging professional, prepare your business for an uncertain future?

In the highly interactive closing session of Dredging Days 2021, our panel of experts will help us to explore the opportunities for our industry in these times of turbulent change. Participants will be able to join in with a number of polls on future plans and perceptions of the changing landscape. The panel will reflect on the polls, and discussions which have happened over the two days, and help us make sense of where dredging is going as an industry.

Join our panel in this closing session, as they sum up on the key topics from the conference, and hear their thoughts on the vital part that dredging has to play in the digital revolution.

Panellists:

Prof. Bob de Wit, Nyenrode Business University, the Netherlands

Prof. Cees van Rhee, Delft University of Technology, the Netherlands

17:30 – 17:40 Closing of the Conference

Conference Chair: Prof. Cees van Rhee, Delft University of Technology, the Netherlands

17:40 – 18:10 CEDA Annual General Meeting**18:10 – 19:30 Bring your wine and engage with delegates, exhibitors, sponsors**

Grab a cup of coffee, or a glass of wine, and engage with delegates, exhibitors and sponsors to close the event



HOW TO REGISTER

Registration fees (excl. Dutch VAT (21%))

Members of CEDA, EADA or WEDA	€ 250
CEDA Corporate Member Employees	€ 250
Non-members	€ 325
Speakers	€ 200
PhD students	€ 160
Students*	€ 00

Book your place now

www.cedaconferences.org/dredgingdays2021

Queries

If you require further information or support regarding your registration, please call the Dredging Days Registration Team, Outsourced Events, T: 00 44 330 460 6007 or E: CEDA@outsourcedevents.com.

CEDA Corporate Member Employees

Book your place and sign up one young professional (under 30 years old) for free.

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*Students

To qualify for a student rate (member or non-member) your primary 'occupation' must be that of student and you must not be in any full-time paid employment. To count as a full-time student, your course must:

- be at least one calendar or academic year and at least 24 weeks out of the year, and
- normally involve at least 21 hours of study, tuition or work experience, per week during term time.