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**Tuesday 28 September**

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<td>The fate of benthic fauna at disposal sites. A comparison of sites in German estuaries and embayments.</td>
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<tr>
<td>Leuchs H, Wetzel M A, Büttner H and Koop J H E</td>
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<tr>
<td>Dickerson D, Wolters M, Theriot C and Slay C</td>
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<td>Equipment and operational modifications for hopper dredges to reduce impacts on sea turtles in the southeastern USA.</td>
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<td>Clausner J, Dickerson D, Dasilva A and Banks G</td>
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<td>The morphological, environmental changes and stability of the sea and riverbeds linked with harbour dredging.</td>
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<td>Nair C K, Joseph T and Paimpilil J S</td>
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<td>Sand extraction in the Wadden Sea National Park (northern Germany): environmental impact and recovery.</td>
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<td>Schuchardt B, Scholle J, Dau K and Brandt T</td>
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<td>Ecological perspectives of marine sand extraction in the Netherlands.</td>
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<td>Dalfsen J A van, Phua C, Barretta M and Akker S van den</td>
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<td>Sediment dynamics in the Elbe estuary and the improvement of maintenance.</td>
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<td>A dredging and disposal strategy for managing the Western Scheldt’s morphology and ecology.</td>
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<td>Relocation of dredged material in German waterways - economical, hydrological and ecological aspects.</td>
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### SESSION A2: DREDGING IN SENSITIVE ENVIRONMENTS – PART 1

**Building of the new National Opera House on contaminated sediments in Oslo Harbour, Norway.**  
Sivertsen A, Eggen A, Breedveld G D, Bjordal R and Hauge A

**Turbid views on dredging projects.**  
Klis P A van der and Bogers P

**The environmental impact of Yantian Port Dredging Project - Phase II.**  
Tan X and Fang C

### SESSION B2: TREATMENT OF SEDIMENTS

**Treatment and beneficial use of dredged sediments from Port of Hamburg.**  
Detzner H D and Knies R

**Soil separation method to recycle dredged sand and soil.**  
Mineyosi T

**Effective utilization of sediment contaminated by heavy metals using high-pressure dehydrated purification technology.**  
Shirakawa T

**Large-scale pilot for treatment of contaminated dredged material in The Netherlands.**  
Graaf W de, Steeg H van and Hakstege A L

### SESSION A3: DREDGING IN SENSITIVE ENVIRONMENTS – PART 2

**Dredging near live coral.**  
Bogers P and Gardner J

**Dredging and coral: a decision support system for managing dredging activities in coral reef ecosystems.**  
Bray R N and Clark S

**Winter dredging of the Tracadie Two Rivers Waterway: A unique Canadian environmental window.**  
MacKnight S, Gillis C and Losier D
Environmental risk assessment in dredging and dredged material management: results from the International Navigation Association (PIANC), work group 10.

### SESSION B3: MANAGING SEDIMENTATION

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<td>Schmidt A, Brudy-Zippelius T and Kopmann R</td>
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<td>Environmental aspects of the sediment transfer across the Iffezheim barrage, River Rhine, Germany.</td>
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<td>Köthe H, Vollmer S, Breitung V, Bergfeld T, Schöll F, Krebs F and Landwüst C</td>
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#### Wednesday 29 September – Environmental Day

**Note by the Environmental Day Chair:** The Environment Day Organizing Committee decided to give the opportunity to a number of organizations and individuals who have had major involvement in forming or implementing national and international policies to present their views. The speakers were given the opportunity to publish a paper if they wished. Some have chosen to do so and some have submitted abstracts. Others will provide copies of their paper on the day. However, the emphasis of the Environment Day is that the presentations should be brief and highlight the issues rather than provide a detailed account of the legislation or their project, in order to stimulate discussion of the environmental issues that we all have to deal with.

### SESSION A4: INTRODUCTION TO THE ENVIRONMENT DAY

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<td>Keynote: Balanced environmental objectives and requirements in dredging projects.</td>
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### SESSION A5: GAPS AND REGULATIONS

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<td>Vivian C</td>
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<td>The EU Water Framework Directive - One year on.</td>
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<td>Brooke J</td>
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Environmental windows and the precautionary principle: Does practice make perfect? Clark D

SESSION A6: GAPS AND BRIDGES – CASE STUDIES

Data gaps and their resolution at a Superfund Sediment Site. A6-1
Costello M, Huls H, Hedblom E, Rogers T, and Kesteren W van

Crockett V

How to go about major port developments in estuaries: learning lessons from Dibden. A6-3
Dodd A

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SESSION A8: DREDGED MATERIAL MANAGEMENT

Dredged material management: How to cope with the latest ecological, political and legislative constraints. A8-1
Bergmann H

25 years dredged material policy in Hamburg. A8-2
Netzband A and Werner G

The United States' National Dredging Team's Dredged Material Management Action Agenda for the next decade. A8-3
Vogt C, Holiday B, Kim E and Madden M

Management and handling of contaminated sediments in The Netherlands. A8-4
Laboyrie H P and Hakstege A L

The perspective of the Dutch-German Exchange (DGE) on sediment/dredged material management in Europe. A8-5
Köthe H F and Besten P J den

Factors affecting disposal and reuse of contaminated dredged material. A8-6
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SESSION B4: TRENDS IN DREDGING PRACTICES

A review of capital and maintenance dredging trends in the UK. B4-1
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Singapour: 40 years of dredging in a sensitive environment. B4-2
Sun W and Burt T N

Keeping on the right side of Old Father Thames: Maintaining safe navigable depths in the Thames Estuary. B4-3
Costaras M P and Bray R N

Evaluation of dredging activities in developing countries - overview of the Brazilian ports. B4-4
Torres R and Calliari L

Dredging and dredge disposal and reuse in Ireland - a small island perspective. B4-5
Harrington J R, Sutton S and Lewis A W

The dredging market and environment. B4-6
Yuan Yumin

SESSION C1: DREDGING EQUIPMENT – PART 1

Efficient dredging with the underwater cutting wheel. C1-1
Marburg C

Water injection dredging in estuaries characterised by sandy sediments - Experiences in the Weser estuary. C1-2
Stengel T

Dredging techniques for contaminated sediment. C1-3
Murota Y, Kurumada Y and Moriya N

Controlled submerged deposition of fine grained dredged sediment with various diffuser types. C1-4
Mastbergen D R, Kesteren W G M van and Loman G J A

Removal of a clay layer in a sand and gravel pit covering larger aggregate resources. C1-5
Boor M O, Ouwerkerk M R and Toet V L

Dredging and the disposal of fine sediments in a drinking-water lake. C1-6
Vroege P, Cats M, Stroet R W, Hoofs R T A L and Jeroense M J

SESSION A9: MODELLING AS A PREDICTION TOOL

Water quality evaluation using Hydraulic Dredge Constituent Fate Modeling (HD-CFM), Bayou Rigaud, Louisiana, USA. A9-1
Russo E and Mathies L

Research on the effects of a scheme for sediment removal from the typical braided shoal of the middle Yangtze river. A9-2
Chen Xiao-yun, Gao Kai-chun, Liu Huai-han, Huang Cheng-tao and Lu Ying
Transport, reactions and dynamics of heavy metals in contaminated marine sediments.
Larsen O.

Dredging in sensitive environments - Using smart models to manage costs and impacts.
Fryar R, Botev I, Koskela R and Lee J

SESSION B5: MEASUREMENT

Application of a new international protocol to measurement of sediment release from dredgers.
Land J, Burt T N and Otten H

Real time quantification of relocated sediment using ADCP and OBS measurements.
Aardoom J H and Mol J W

Density versus viscosity - A comparative study of the nautical bottom.
Greiser N, Gamnitzer R, Rupp J and Wurpts R

SESSION C2: DREDGING EQUIPMENT – PART 2

Efficient dredging: The next generation.
Braadbaart J and Mourik M W

Modern design of double wall dredge pumps.
Rother M and Yousef B

Study on effectiveness of compressed air mixture conveyance as an assist method for cutter suction dredger Asia Maru No. 3.
IIda H

Simple self-sinking sand bypass system.
Noguchi H

SESSION A10: REMEDIAL DREDGING

Dredging in environmentally sensitive areas: remediation of the Chemiehaven, a heavily contaminated 'hot spot' in the Port of Rotterdam.
Wit P de

Berg N J

Remediation strategies for contaminated sediments in the Netherlands.
Boer P de and Hakstege A L
## SESSION B6: MANAGING DREDGING PROJECTS

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<td>The computer-aided decision-making system for improving the working efficiency of dredgers.</td>
<td>Tian junfeng, Gu ming, Liu reixiang and Zhu xiaoming</td>
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<td>Small scale dredging is NOT equivalent with small money.</td>
<td>Boodt C, Narold E, Ooms K, Son C van</td>
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<td>Research on sediment dredging for urban eutrophic water body in Nanhu lake I (P.R. China).</td>
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## SESSION C3: DREDGING EQUIPMENT: PART 3

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<td>Floating breakwaters increase operating time for offshore beach nourishment dredging alternatives.</td>
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<td>On the conceptual design of large Cutter Suction Dredgers; Considerations for making choices.</td>
<td>Overhagen J L van, Boor M, Kik A and Kramers C H M</td>
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<td>Seabed intervention with motion compensated grab.</td>
<td>Maliepaard H R and Frumau J C L</td>
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**Friday 1 October**

## SESSION A11: ADVANCES IN DREDGING TECHNOLOGY

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<tr>
<td>The wedge mechanism for cutting of water saturated sand at large cutting angles.</td>
<td>Miedema S A and Frijters D D J</td>
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Pipe size effect on hydraulic transport of Jumoonjin sand - Experiments in dredging test loop.
Lee M S, Matousek V, Chung C K and Lee Y N

Self excitation of concentration fluctuations in dredge pipelines.
Talmon A M

The development of a concept for accurate and efficient dredging at great water depths.
Verheul O, Vercruysse P M and Miedema S A

Study on the feasibility of an active draghead for rock dredging.
Sloot S F, Vlasblom W J and Gool V C van

SESSION B7: CONFINED DISPOSAL FACILITIES

Reclamation of dredged material and the end use of existing disposal facilities.
Berger G and Hakstege A L

Assessment of the suitability of the CDF option for the management of harbour sediment: an Italian case study.
Mugnai C, Macchia S, Mela F, Ferrari S, Pilato F and Pellegrini D

Influence of sediment characteristics on methane formation by dredged sediments.
Gebert J, Gröngröft A, Maaß B and Köthe H

Long-term control of the effectiveness of the surface sealing system on the harbor sediment disposal site Hamburg-Francop.
Gröngröft A, Tresselt K, Berger K, Harms C and Maaß B

Plan for CDF 'Hollandsch Diep'.
Sluijs W van der, Hakstege A L and Teulings L

The Ketelmeer: highly sophisticated remedial dredging.
Hardeman H F, Herberg W van der and Spelt K

SESSION C4: SELECTED CASE STUDIES

Design and construction of an underwater bund built on dredged material in the Doeldock.
De Preter H and Vandycke S

Environmental monitoring of a dredging project Safer Fairways to Port of Gothenburg.
Nipius K G

An introduction to the construction processes of the land reclamation works of Yangshan deepwater port Phase-I project.
Liu Reyuan, Liu Huafeng, Tao Runli and Shi Feng
Land reclamation for the Airbus A380 site on extremely soft soils in the 'Mühlener Loch' within the River Elbe (Hamburg, Germany).
Reiner J and Stadie R

1.8 million m³ beach nourishment project in Sri Lanka.
Scheffer H-J, Perera H N R, Ender K and Fröhle P

Port 2000 - The extension of Le Havre Port in the Seine Estuary
Environmental engineering accompanying and guiding the marine works.
Scherrer P, Galichon P, Hamm L, Tancré E, Bosschem E and Vandenbroeck J

POSTER PAPERS

The research and manufacture of wear and corrosion resistance accessories of slurry pump for dredge.
Yuan Senlin and Liu Xiaofeng

New type of trailing suction hopper dredger with oil recovery equipment ‘Hakusan’.
Noda N and Yamaguchi H

An Advanced Anti-Pollution Vessel 'KAIKI’.
Okamoto H, Yabumoto N, Yano S and Yamama N

Components for dredging developments in gate valves.
Claassen L and Geer J v d

Application of the technique of using sand-filled sacks in artificial lake Project.
Zhuang Huajin and Liao XianMing

Remediation of Tri-butyltin (TBT) contaminated sediments by means of a thermal treatment.
Goethals L, Janssens I and Ide G

Novosol® process : Sediment stabilisation and valorisation.
Cauzzi N, Clément B, Kahale N and Depelsenaire G

Direct assessment of dredging impact in sensitive environments using Particle Tracking Technology.
Black K S, Athey S, Wilson P and Evans D

Sediments contaminated with TBT : challenges, solutions & case study.
De Becker G and Eulaerts O

Establishment of Dredging Technology Chair at Hohai University.
Ni F

Mobile dewatering of dredged sediments: a case study from Belfast.
Pensaert S

Development of a strategy for maintenance dredging and relocation under the restrictions of a national park.
Manzenrieder H, Spingat F and Manzenrieder C