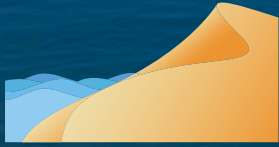


BCR24



BUILDING COASTAL RESILIENCE

28.29
OCT PORTO
2024

CONFERENCE PROGRAMME

28 OCTOBER

08:30–09:00 CONFERENCE REGISTRATION

09:00–09:30 WELCOME AND OPENING SESSION

Francisco Taveira Pinto
BCR24 Conference Chair, Director of the Civil Engineering Department of FEUP

Paulo Rosa Santos
President of BCR24 Scientific Commission, Head of the Hydraulics, Water Resources and Environment Division

José Pimenta Machado
President of the Portuguese Environmental Agency (to be confirmed)

Dries Bonte
Coordinator of Dune Front project, Head of UGent - Spatial Ecology and Evolution group

09:30–10:00 KEYNOTE 1

NBS FOR COASTAL PROTECTION AND THE EU BIODIVERSITY STRATEGY FOR 2030:
OPPORTUNITIES AND CHALLENGES

Dries Bonte

10:00–11:15 SAND-VEGETATION INTERACTION 1

Chair: Pieter Rauwoens and Sierd de Vries

MONITORING AND ANALYSIS OF SURFACE ELEVATION AND VEGETATION
DEVELOPMENTS OF THE ZANDMOTOR LANDSCAPE

Romy Hulskamp, Sierd de Vries, Maria Pregnolato,
and Daan Hulsekemper

THE ROLE OF SPATIAL DISTRIBUTION OF EMBRYONIC DUNES WITHIN AN
EXPANDING DUNE SYSTEM

Paul M.J. Berghuis, Johan van de Koppel, Angeles G. Mayor, Valérie C. Reijers,
Max Rietkerk, and Tjisse van der Heide

EVALUATION OF DUNE EROSION NUMERICAL MODELLING IN THE PRESENCE
OF BELOWGROUND BIOMASS

Constantin Schweiger, Oliver Lojek, Lukas Ahrenbeck, Viktoria Kosmalla,
Björn Mehrrens, David Schürenkamp, and Nils Goseberg

A PROCESS-BASED MODEL FOR SIMULATING DUNE RESTORATION ACROSS SCALES:
COUPLING VEGETATION, ENVIRONMENTAL DRIVERS, AND AEOLIAN TRANSPORT

Frederik Van Daele and Dries Bonte

11:15–11:45 COFFEE BREAK

11:45—13:00

NATURE BASE SOLUTIONS 1

Chair: Oliver Lojek and Petra Goessen

ON THE CONCEPTUALIZATION OF A PREDICTIVE DIGITAL TWIN OF A HYBRID DUNE-DIKE NATURE-BASED SOLUTION

Galiforni-Silva, F., de Vries, S., Hallin, C., Huisman, B. J. A., Maarse, M., van Rees, F. F., Reniers and A.J.H.M.

ADVANCES IN THE CHARACTERIZATION OF FLOW ENERGY ATTENUATION PROVIDED BY SALTMARSHES USING THEIR STANDING BIOMASS

Maria Maza, Isabel Gallego, Fernando Lopez-Arias, and Javier L. Lara

ASSESSING THE IMPACT OF ALGAE FIELD ON COASTAL OVERTOPPING THROUGH NUMERICAL MODELLING

Raylton Bendô, Alberto Forcelius, Filipe Miranda, Diogo Mendes, Diogo Fonseca, Tiago Fazeres-Ferradosa, Ivana Bosnic, Paulo Rosa Santos, and Francisco Taveira Pinto

PRELIMINARY ASSESSMENT OF A HYBRID NATURE-BASED SOLUTION FOR COASTAL RISK REDUCTION

Gonçalo Bártoło Vaz, Maria Francisca Sarmento, Luciana das Neves, Paulo Rosa Santos, and Francisco Taveira Pinto

13:00—14:30

LUNCH

14:30—16:15

COASTAL RESILIENCE

Chair: Francisco Taveira Pinto and Wietse van de Lageweg

IDENTIFYING COASTAL PROCESSES ON THE VRGADA ISLAND (CROATIA) FOR FUTURE COASTAL RESILIENCE ASSESSMENT

Kristina Pikelj and Frane Marković

SCALING UP NATURE BASED SOLUTIONS TO BE INTEGRATED IN A COHERENT SUSTAINABLE COASTAL ZONE MANAGEMENT.

Marc Huygens, Piet Haerens, Bernard Malherbe, and Kristof Eggermont

BUILDING COASTAL RESILIENCE IN PORTUGUESE URBAN COASTLINE THROUGH MANAGED RETREAT

Manuela Oliveira and Veloso Gomes

THE NEXT PROJECT ENGINEER SHOULD BE AN ECOLOGIST!

Petra Goessen

16:15—16:45

COFFEE BREAK

16:45—18:00 **SAND-VEGETATION INTERACTION 2**

Chair: Valérie Reijers and Constantin Schweiger

[AMAZING AMMOPHILA - A PLANT'S PERSPECTIVE ON SANDY COASTAL SYSTEMS](#)

VC Reijers, C Lammers, S Höfer, E Lansu, PMJ Berghuis, F van Rees, CN van de Ven, and T van der Heide

[STUDYING PLANT ECOLOGICAL NICHES AND PLANT-SAND FEEDBACKS IN COASTAL DUNES AS FUNDAMENTS FOR DUNE-FOR-DIKE NATURE-BASED SOLUTIONS](#)

Charlotte Taelman, Maaïke Dhondt, Femke Batsleer, Sam Provoost, Jan Van Uytvanck, and Dries Bonte

[COMPARISON OF AMMOPHILA ARINARIA ROOT SYSTEM DEVELOPMENT USING DIFFERENT PLANTING TRIALS](#)

Oliver Lojek, Lukas Ahrenbeck, Viktoria Kosmalla, Björn Mehrrens, Constantin Schweiger, David Schürenkamp, and Nils Goseberg

[SCALE-DEPENDENT INTERSPECIFIC INTERACTIONS BETWEEN DUNE BUILDING GRASSES](#)

Carlijn Lammers, Valérie C. Reijers, Tjisse van der Heide

18:00 **END OF DAY 1**

20:00 **CONFERENCE DINNER**

29 OCTOBER

09:30–10:00 KEYNOTE 2

MODELLING AND PREDICTION OF ECO-PHYSICAL DEVELOPMENT OF COASTAL LANDSCAPES
Sierd de Vries

10:00–11:15 NATURE BASE SOLUTIONS 2

Chair: Boris Schröder and Tiago Ferradosa

HOW VEGETATION GROWTH INFLUENCES COASTAL DUNE FORMATION?

Glenn Strypsteen, Sierd de Vries, Bart van Westen, Dries Bonte, Jan-Markus Homberger, Caroline Hallin, and Pieter Rauwoens

ECOLOGICAL BOUNDARY CONDITIONS FOR DUNES AS COASTAL PROTECTION SOLUTIONS ACROSS EUROPE

Maxime Dahirel, Bruno Castelle, and Dries Bonte

CREATING A NATURE-BASED DUNEFIELD WITH MARRAM GRASS AND BRUSHWOOD FENCES

Derijckere, Strypsteen, and Rauwoens

NATURE-INSPIRED DESIGN (NID) WITH TUBE-BUILDING POLYCHAETE (LANICE CONCHILEGA): OPTIMISING SUBSTRATES FOR LARVAL TRAPPING AND ADULT AGGREGATION TO BOOST COASTAL RESILIENCE

Mazharul Islam, Tom Moens, Wieter Boone, Kinnie De Beule, Ine Moolaert, Leandro Ponsoni, Christian Schwarz, Erik Toorman, and Gert Van Hoey

11:15–11:45 COFFEE BREAK

11:45–13:00 NATURE BASE SOLUTIONS 3

Chair: Luciana das Neves and Sebastian Dan

DUNE IN FRONT OF DIKE - SUCCESSFUL IMPLEMENTATION OF NATURE-BASED SOLUTIONS IN BELGIUM

Sebastian Dan, Anne-Lise Montreuil, Toon Verwaest

NATURE BASED SOLUTIONS: COASTBUSTERS AND BANKBUSTERS PROOF OF CONCEPT PILOT PROJECTS FOR ECOSYSTEM-BASED FLOOD MANAGEMENT

Marc Huygens, Tomas Sterckx, Vicky Stratigaki, and Ruben Geldhof

EXPLORING THE LSTM MODEL FOR PREDICTING SAND VOLUME DYNAMICS IN THE DOURO ESTUARY

Mahmoud Abouhalima, Paulo Rosa-Santos, Luciana das Neves, and Francisco Taveira-Pinto

DEVELOPING A RATING SYSTEM TO EVALUATE THE SUSTAINABILITY OF DUNE-DIKE HYBRID NATURE-BASED SOLUTIONS

Yasmina Shields, Kim Van Tittelboom, Nele De Belie

13:00–14:30 LUNCH

14:30—16:15

BIOGEOMORPHOLOGY AND MORPHODYNAMICS

Chair: Jill Slinger and Filipe Galiforni Silva

BIOGEOMORPHOLOGICAL ROLE OF THE POSIDONIA OCEANICA BANQUETTES ON CROATIAN BEACHES

Kristina Pikelj

IMPACT OF BIRD GUANO ON VEGETATION AND MORPHODYNAMICS ON SANDY ISLANDS

F.F. van Rees, L.L. Govers, P. Guseva, M. Zwarts, C. Tuijnman, T. Rudde, B.G. Ruessink, K.C.J. Camphuysen, V.C. Reijers

GROUNDWATER MODELLING FOR COMBATING SALTWATER INTRUSION AND ENHANCING COASTAL RESILIENCE IN ENGINEERED DUNE SYSTEMS

J. Beerlandt and P. Rauwoens

AEOLIAN DUNE DYNAMICS AT KOP VAN SCHOUWEN N2000 AREA

S. Balode, and W. van de Lageweg

16:15—16:45

COFFEE BREAK

16:45—18:00

PITCH PRESENTATIONS AND VISIT TO THE HYDRAULICS LABORATORY OF FEUP

Chair: Paulo Rosa Santos

EFFECTS OF DITCHING ON SALT MARSH VULNERABILITY IN THE NORTHEASTERN USA

Julie Walker, Erin Peck, Kate Ackerman, Alice Besterman, Joel Carr, Tim Cook, Maureen Correll, Linda Deegan, Mitchell J. Eaton, Zafer Defne, Neil Ganju, Mitch Hartley, Scott Jackson, Rachel Jakuba, Katherine Ruskin, Michelle Staudinger, Bartholomew Wilson, Jonathan Woodruff, and Brian Yellen

DUNE VEGETATION DEVELOPMENT ON ALTERNATIVE SEDIMENTS AND ITS POTENTIAL FOR THE DESIGN OF DUNE-DIKE NATURE-BASED SOLUTIONS (PITCH PRESENTATION)

Maaïke Dhondt, Charlotte Taelman, and Dries Bonte

CLIMATIC CHANGES, PLANT PERSISTENCE AND THEIR IMPORTANCE FOR REGIME SHIFTS IN COASTAL DUNE STABILITY AND RESILIENCE (PITCH PRESENTATION)

Charlotte Taelman, Samantha De Gottal, Maaïke Dhondt, Femke Batsleer, Sam Provoost, Jan Van Uytvanck, and Dries Bonte

BRIEF PRESENTATION AND VISIT TO THE HYDRAULICS LABORATORY OF FEUP

18:00

END OF CONFERENCE

INSTITUTIONAL SUPPORT OF:



DEPARTAMENTO DE ENGENHARIA CIVIL

