

12th International SedNet Conference (online) - from 28 June to 2 July 2021

“Sediment Challenges and Opportunities due to Climate Change and Sustainable Development”

in partnership with BRGM and the Hauts-de-France Region



Simultaneous event with I2SM 7th International Symposium on Sediment Management

Final Programme

	MONDAY 28 JUNE 2021
18.00-19.30	ICEBREAKER (has been CANCELLED)
	Day 1: TUESDAY 29 JUNE 2021
	WELCOME SESSION (JOINT SESSION WITH I2SM)
10.00	Welcome to SedNet and I2SM conferences, Lille 2021 Marc Eisma, chairman SedNet / Port of Rotterdam, NL
10.05	Welcome to I2SM and SedNet conferences, Lille 2021 Nor-Edine Abriak, I2SM, France
10.10	Welcome to SedNet and I2SM conferences, by General Director of IMT Lille Douai, President of ECOSED 4.0 Alain Schmitt, I2SM-IMT France
10.15	Welcome to SedNet and I2SM conferences, by BRGM Patrick Charbonnier, BRGM, France
10.25	SedNet – the European Sediment Network Marc Eisma, chairman SedNet / Port of Rotterdam, NL
10.35	SedNet, introduction to the 2021 Conference programme Bruno Lemièrre, vice-chairman SedNet / BRGM, France
10.45	I2SM 2021, introduction to the Conference programme Nor-Edine Abriak, I2SM, France
11.05	Exploring opportunities and challenges during 10 years of sediment management William Coulet, Exo Environmental director, UK

11.35	Circular Economy Emmanuelle Maire, European Commission, DG Environment		
12.05	LUNCHBREAK		
	ROOM 1		ROOM 2
	CIRCULAR ECONOMY		SEDIMENT ASSESSMENT AND MANAGEMENT - CONCEPTS AND POLICIES
13.30	Welcome and introduction By session chair: Bruno Lemière, BRGM, France Co-chair: Arjan Wijdeveld, Deltares, NL	13.30	Welcome and introduction By session chair: Elena Romano, ISPRA, Italy Co-chair: Susanne Heise, Hamburg University of Applied Sciences, Germany
13.35	Keynote presentation: Beneficial Sediment Use and Nature-Based Solutions: opportunities for sustainable and circular developments Luca Sittoni, Ecoshape / Deltares, NL	13.40	Keynote presentation: Disproportionate or unavoidable - which costs are reasonable? - Socio-economic approach to find and finance the most cost-effective combination of measures in the international Elbe river basin Ilka Carls, Ministry of Environment, Climate, Energy and Agriculture, Germany and Judith Sprenger, Hamburg Port Authority, Germany
14.00	Assessing circularity of inland dredging activities: a new tool for the Dutch Water Authorities to pave the way towards a circular economy of dredged sediments Eldert Besseling, NETICS - The Sediment Engineers, NL	14.00	First Flemish Sediment Management Concept of the River Basin Districts of Scheldt & Meuse – 2022-2027 Edward Van Keer, Flemish Government, Belgium
14.15	Recycling of river sediments to produce raw materials for construction sector – Upscaling of mineral processing techniques to supply a large batch of sediment Mathieu Henry, Centre Terre et Pierre, Belgium	14.15	Acknowledging the Fragility of Sediment-Starved Deltas Mathias Kondolf, University of California Berkeley, USA
14.30	BREAK	14.30	BREAK
14.45	On-site analyses as a decision support tool for dredging and sustainable sediment management Bruno Lemière, BRGM, France	14.45	Reuse of sediments – Policy framework in Flanders Dirk Dedecker, OVAM - Public Waste Agency of Flanders, Belgium
15.00	Morphological changes and organic's removal by electrokinetic remediation of a dredged marine sediment Marta Castellote, Institute of Construction Science Eduardo Torroja (IETcc-CSIC), Spain	15.00	Exploring the remediation of contaminated sediments Wim Clymans, VITO, Flemish Institute for Technological Research, Belgium
15.15	Recovery and environmental recycling of sediments: CNR-IRET Pisa experience Cristina Macci, CNR-IRET, Italy	15.15	Focus on Contaminated Sediment Management in Sweden Yvonne Ohlsson, Swedish Geotechnical Institute, Sweden

15.30	BREAK	15.30	BREAK
15.45	<p>Mass stabilization processing of impounded sediments in dam removals promoting ecological river restoration and upland beneficial use</p> <p>Eric Stern, Tipping Point Resources Group, LLC, USA</p>	15.45	<p>Prioritization of valorization scenarios for sediment deposits management – VALSE project</p> <p>Olivier Bour, Ineris, France</p>
16.00	<p>Economic Modelling and Assessment of the Economic Benefits of Beneficial Use of Dredged Sediment</p> <p>Joe Harrington, Munster Technological University, Ireland</p>	16.00	<p>Intensive historical evaluation and sampling campaigns to validate potential sediment contamination hotspots related with (former) risk activities)</p> <p>Dorien Gorteman, Arcadis, Belgium</p>
16.15	<p>Cleanup of Rivers and Harbors: The Uncertain Promise of Circular Economy</p> <p>Philip Spadaro, TIG Environmental, USA</p>	16.15	<p>Assessing Sediment Status in Europe: Frameworks, Standards and Approaches, an Expanded Review</p> <p>Sabine Apitz, SEA Environmental Decisions Ltd., UK</p>
16.30	BREAK	16.30	BREAK
16.45	<p>Horizontal permeable reactive Barriers for contaminated Sediments in marine Environments</p> <p>Stefan Niewerth, HUESKER Synthetic GmbH, Germany</p>	16.45	<p>Comparing conventional and integrated sediment-quality assessment of three North Sea region waterways</p> <p>Sonja Faetsch, Hamburg University of Applied Sciences, Germany</p>
17.00	<p>Developing pattern in Prunus laurocerasus grown on sediment enriched substrates (LIFE SUBSED 17 ENV/IT/000347)</p> <p>Stefania Nin, CREA, Research Centre for Vegetables and Ornamental Crops, Italy</p>	17.00	<p>Action Level Review for dredge material management</p> <p>Claire Mason, Cefas, UK</p>
17.15	<p>Posterflashes ‘Circular Economy’ <i>(per poster a 3 minute presentation)</i></p> <p>The applicability of river sediment for the production of clay bricks</p> <p>Vilma Ducman, Slovenian National Building and Civil Engineering Institute, Slovenia</p> <p>Calcined clays from dredging as cement constituent – impact of fluvial sediments from the Scheldt basin (Belgium, France) on composite cement hydration</p> <p>Ruben Snellings, VITO, Belgium</p> <p>GEOWALL® technology as the key for unlocking the value of dredged sediments by reuse in civil structures and infrastructure</p> <p>Hugo Ekkelenkamp, NETICS - The Sediment Engineers, NL</p> <p>Reactivity of calcined river sediments</p> <p>Katja Traven, Slovenian National Building and Civil Engineering Institute, Slovenia</p>	17.15	<p>Poster flashes ‘Sediment assessment and management - concepts and policies’ <i>(per poster a 3 minute presentation)</i></p> <p>Towards electrochemical measurements in the field of labile Cu, Pb and Zn in sedimentary particles</p> <p>Gabriel Billon, University Lille, France</p> <p>Integration of the erosion and sediment transport model WaTEM/SeDEM in the nutrient emission model NEMO used to support river nutrient management in Flanders</p> <p>Daan Renders, Fluves, Belgium</p> <p>Impact of organic matter on rheological behavior of fine-grained sediment</p> <p>Ahmad Shakeel, Delft University of Technology, NL</p> <p>Assessment of the chemical quality of sediments in the maritime port of Réunion</p> <p>Julie Droit, Cerema, France</p>

17.30	BREAK	17.30	BREAK
17.45	<p>Posterflashes 'Circular Economy' - continued (per poster a 3 minute presentation)</p> <p>Remediation of contaminated sediments by mineral additives and thermal processing Agnieszka Baran, University of Agriculture in Krakow, Poland</p> <p>A molecular dynamics study about water adsorption in expansive clays Wenlong Chen, Cranfield University, UK</p>	17.45	<p>Poster flashes 'Sediment assessment and management - concepts and policies' - continued (per poster a 3 minute presentation)</p> <p>Rare earth elements detection in dredging sediments: ICP-MS versus pXRF Gabriel Billon, University Lille, France</p> <p>Novel washing agents for efficient sediment remediation; selection, comparison and optimization study Ana Robba, University of Ljubljana, Slovenia</p> <p>Controls on the effect of organic matter decay on sediment rheological properties Florian Zander, Delft University of Technology, NL</p>
18.00	End day 1		
Day 2: WEDNESDAY 30 JUNE 2021			
	ROOM 1		ROOM 2
	CIRCULAR ECONOMY - continued		SEDIMENT ASSESSMENT AND MANAGEMENT - CONCEPTS AND POLICIES - continued
09.00	<p>Welcome and introduction By session chair: Arjan Wijdeveld, Deltares, NL</p> <p>Co-chair: Julia Gebert, Delft University of Technology, NL</p>	09.00	<p>Welcome and introduction By session chair: Susanne Heise, Hamburg University of Applied Sciences, Germany</p> <p>Co-chair: Elena Romano, ISPRA, Italy</p>
09.10	<p>Keynote presentation: Sustainability Conceptual Site Model (SustCSM) and the Project Cycle: Linking Management, Restoration, Re-Use and Resilience in a Changing World Sabine Apitz, SEA Environmental Decisions Ltd., UK</p>	09.10	<p>The Sediment Quality Index - Integrative classification and assessment system Ilka Carls, Ministry of Environment, Climate, Energy and Agriculture, Germany</p>
09.30	<p>Dredged sediments as a plant-growing substrate: Potential source of nutrients Laura Ferrans, Linnaeus University, Sweden</p>	09.30	<p>Statistical procedures for checking compliance with rules of conformity in the course of disposal of dredged material in the German Bight Uwe Hentschke, Federal Institute of Hydrology, Germany</p>

09.45	Discussion	09.45	Use of rare earth elements and optical cable to quantify the sedimentation from different sediment sources in Port of Rotterdam Arjan Wijdeveld, Deltares, NL
10.15	BREAK	10.00	BREAK
	IMPACTS OF DISTURBED SEDIMENT CONTINUA AND MITIGATION MEASURES?	10.15	Development of a software tool to analyse the effect of soil management scenarios on soil erosion and sediment transport in Flanders Sacha Gobeyn, Fluves, Belgium
10.35	Welcome and introduction By session chair: Katherine Cronin, Deltares, NL	10.30	A large-scale laboratory column experiment to evaluate the effectiveness of capping fiberbank sediments in reducing contaminant transport Anna-Karin Dahlberg, Swedish University of Agricultural Sciences, Sweden
10.45	Cross-border sediment relocation pilot to prevent sediment disbalance in the Scheldt estuary Eline van Malderen, Flemish Government, Belgium	10.45	Comparative analysis of radionuclide and potentially toxic element accumulation in sediments from the Northern Bulgarian Black Sea coast Lyuben Dobrev, Institute of Oceanology - Bulgarian Academy of Sciences
11.00	Testing water injection dredging for regular port maintenance Alex Kirichek, Delft University of Technology / Deltares, NL	11.00	BREAK
11.15	Discussion	11.15	Spatiotemporal characterization and evaluation of petroleum hydrocarbons in small craft harbour sediments in Nova Scotia, Canada Myriam Mora, Dalhousie University, Canada
		11.30-11.45	Age dating of recent tidal sediments by means of Cesium 137 and micropollutants Pavel Ondruch, Federal Institute for Hydrology, Germany
12.00	LUNCHBREAK	12.00	LUNCHBREAK
	(RE)USING SEDIMENT TO CREATE, KEEP OR RESTORE HABITATS		SEDIMENT ASSESSMENT AND MANAGEMENT - CONCEPTS AND POLICIES - continued
13.00	Welcome and introduction By session chair: Edward Van Keer, Flemish Government, Belgium	13.00	Poster flashes 'Sediment assessment and management - concepts and policies' <i>(per poster a 3 minute presentation)</i> Original, rapid and in situ colorimetric method for Acid Volatile Sulfide determination in sediment using a smartphone camera Ludovic Lesven, Université Lille 1, France

			<p>Demonstrate and evaluate innovative sediment reuse solutions for flood and erosion protection - XRF quick scan of sediment composition Valérie Laperche, BRGM, France</p> <p>Fluid mud monitoring using optical fibers combined with DAS and DTS Menno Buisman, Delft University of Technology / Port of Rotterdam Authority, NL</p> <p>Ba concentrations and availability in floodplain sediments Valérie Cappuyns, KU Leuven, Belgium</p> <p>Using of growing medium based on bottom sediment as a source of nutrients and an agent for improving soil properties Agnieszka Baran, University of Agriculture in Krakow, Poland</p>
13.05	<p>10 years of experience with a new disposal strategy in the Westerschelde: a multi-criteria decision making ride, bumpy but moving forward Bart De Maerschack, Flemish Hydraulics Research, Belgium</p>	13.15	SHORT BREAK
13.20	<p>Scheldt Sediment based groyne project Fort Sint Filips: modelling, construction and monitoring Michaël De Beukelaer-Dossche, Flemish Waterways plc, Belgium</p>	13.20	Discussion
13.35	<p>Annual dynamics of river bed clogging in a second order stream forms hyporheic community patterns Heide Stein, University of Koblenz-Landau, Germany</p>		
13.50	BREAK	13.50	BREAK
			SEDIMENTS IN COASTAL-MARINE MANAGEMENT AND EU STRATEGIES
14.05	<p>Double dykes and transitional polders as ecosystem-based solution in the Dutch southwestern delta Jim van Belzen, NIOZ, NL</p>	14.05	<p>Welcome and introduction By session chair: Jos Brils, Deltares, NL</p>
14.20	<p>Desalination of dredged sediments for circular reuse: two Eems-Dollard cases Maria Barciela Rial, HAN University of Applied Sciences, NL</p>	14.15	<p>Keynote presentation: Sustainable sediment management in coastal infrastructures through the innovative ejectors plant technology Marco Pellegrini, University of Bologna, Italy</p>
14.35	<p>Reactive mat on river bed catches groundwater contaminants and replaces sediment Tobias Praamstra, TAUW, NL</p>	14.35	<p>Bio-Engineering for Sediment Management And Removal of Turbidity Technologies: introduction, need, and research - implementation gap Miguel de Lucas Pardo, Deltares, NL, and Renaat De Sutter, Haedes, Belgium</p>

14.50	BREAK	14.50	Determination of radionuclides and elements' concentration in bottom sediment samples taken from the Azerbaijan sector of the Caspian Sea Famil Humbatov, Institute of Radiation Problems, ANAS / University of Architecture and Construction, Azerbaijan
15.05	Discussion	15.05	BREAK
		15.20	Posterflashes 'Sediments in Coastal-Marine Management and EU Strategies' <i>(per poster a 3 minute presentation)</i> Distribution of Heavy Metals in Core Sediment at the Montenegrin coast Danijela Joksimović, University of Montenegro Multiple Stress Factors affecting Sediments in the Estuaries of Elbe and Odra Safia El Toum, Hamburg University of Applied Science, Germany Quality assessment in wild strawberry fruit and basil leaf from plants cultivated on dredged remediated sediment (LIFE SUBSED 17 ENV/IT/000347) Stefania Nin, CREA, Research Centre for Vegetables and Ornamental Crops, Italy
15.35	End of session	15.35	Discussion
16.00	Networking and poster session		
18.00	End day 2		
Day 3: THURSDAY 1 July 2021			
14.00-17.00	<p>Videos sites, pilots, technologies: Large scale or field realisations around sediments beneficial use, habitat and river improvement and restoration</p> <ul style="list-style-type: none"> • SURICATES pilot Port of Rotterdam - overview • Dredging works on the Caledonian Canal • Reuse of dredged canal sediments at Laggan • USAR - Brightlingsea Harbour • Building with Nature – Creating, implementing and upscaling Nature-based Solutions • De Kleirijperij - Clay Ripening Pilot • Marconi Kwelder Delfzijl pilot • VALSE - From dredging to the realisation of a cycle path using sediments • LIFE SURE: Sediment uptake and remediation on an ecological basis • SURICATES - Ixsane continuous dehydration pilot unit in operation • CTP - VALSE - Dry deagglomeration of dredging sediment • Wet size classification of dredging sediments (SOLINDUS) • GeoBlock Technology - An alternative to concrete • What is Sediment Sampling? • Deltares test flume • Environment Canada - Randle Reef Contaminated Sediment Remediation Project • Environment Canada - Peninsula Harbour Sediment Remediation Project 		

Day 4: FRIDAY 2 July 2021			
ROOM 1		ROOM 2	
	HOW TO DEAL WITH EMERGING SUBSTANCES / PFAS / MICROPLASTICS		CLIMATE CHANGE AND SEDIMENTS: DIRECT AND INDIRECT CONSEQUENCES AND OPPORTUNITIES
09.00	Welcome and introduction By session chair: Jasmina Obhodas, Ruder Boškovic Institute, Croatia Co-chair: Carmen Carmen Casado Martinez, Ecotox Centre Eawag-EPFL, Switzerland	09.00	Welcome and introduction By session chair: Cristina Lira, University of Lisbon, Portugal Co-chair: Marta Castellote, Institute of Construction Science Eduardo Torroja (IETcc-CSIC), Spain
09.10	Keynote presentation: Sediment quality assessment framework for PFAS: results from a preparatory study and regulatory implications Carmen Casado Martinez, Ecotox Centre Eawag-EPFL, Switzerland	09.10	Keynote presentation: Case study of the possible future impacts of climate change on sediment yield for a semi-arid catchment in South Africa Jeanine Vonkeman, Stellenbosch University, South Africa
09.30	Landscaping with PFAS contaminated Soil and thin permeable Barriers Stefan Niewerth, HUESKER Synthetic GmbH, Germany	09.30	Impact of climate changes on sediment delivery and deposition in a dammed reservoir Ewa Szalinska, AGH University of Science and Technology, Poland
09.45	Contaminants of emerging concern reuse of sediment Ruth Cartuyvels, Witteveen+Bos, Belgium	09.45	The role of sediments in regulating the Earth's climate Andrija Vinković, Ruder Boskovic Institute, Croatia
10.00	BREAK	10.00	BREAK
10.15	Dealing with microplastics pollution in sediments – technologies for prevention and remediation Jens Laugesen, Det Norske Veritas (DNV), Norway	10.15	Beneficial use of river sediments as topsoil for passive carbon capture and storage during land restoration and energy crop production – A Net Zero management option? Richard Lord, University of Strathclyde, UK
10.30	Can we use theoretical approaches from natural sediment to describe the transport behaviour of microplastics? Kryss Waldschläger, Wageningen University and Research, NL	10.30	Seasonal changes in the suspended sediment concentration and bathymetry of the NWW, the impact of low and high river discharge on sediment transport and sedimentation Arjan Wijdeveld, Deltares, NL
10.45	“SPlash! - Stop to plastic in H2O!” An EU Project to investigate the port environment: results on microlitter contamination in seawater, sediment, and biotic samples Anna Reboa, University of Genoa – DISTAV, Italy	10.45	Effect of alternating redox conditions on organic matter decay in sediments Julia Gebert, Delft University of Technology, NL
11.00	BREAK	11.00	BREAK

11.15	<p>Distribution and characterization of microplastics in the marine sediments from the Montenegrin coast Neda Bošković, University of Montenegro</p>	11.15	<p>Posterflashes 'Climate change and sediments: direct and indirect consequences and opportunities' <i>(per poster a 3 minute presentation)</i></p> <p>Changes of sediment flux of secondary branches at pan-Arctic deltas Elena Dolgoplova, Russian Academy of Sciences, Russia</p> <p>Extreme gas production from fibrous sediments - a potential overlooked greenhouse gas source Alizée Lehoux, Uppsala University, Sweden</p>
11.30	<p>Posterflashes 'How to deal with emerging substances / PFAS / Microplastics' <i>(per poster a 3 minute presentation)</i></p> <p>Chronic impacts of REE in a benthopelagic food web Chantal van Drimmelen, Hamburg University of Applied Science / University of the West of Scotland, Germany/UK</p> <p>3D Computer Tomography for Microplastics Analysis Jasmina Obhodas, Ruder Boškovic Institute, Croatia</p>	11.30	Discussion
11.40	Discussion		
12.00	LUNCHBREAK	12.00	LUNCHBREAK
13.00	NETWORKING AND POSTER SESSION		
14.30	<p>CLOSING SESSION</p> <p>Session chair: Marc Eisma, Port of Rotterdam / chair SedNet</p> <ul style="list-style-type: none"> - Wrap-up of conference sessions - Winner Poster prize 		
15.00	End of conference		