



International Online Conference on

River Mouth Systems and Marginal Seas - Natural drivers and human impacts

5 - 7 December 2022

All times in Central European Time (CET)

Seattle: -9h; Baton Rouge: -7h; India: +4h 30min; China: +7h

Check your local time difference!

Day 1: Monday, 5 December 2022

Opening Session

Chair: Jan Harff

12:00

Welcome addresses

Waldemar Tarczyński, Rector of the University of Szczecin;
Patron of the Conference
and representatives of the conference organizers

12:20

Introduction to the conference

Jan Harff

12:30

Conference Keynote

Holocene, modern and future sediment transport through the mouths of the Pearl and Indus rivers

Peter D. Clift



Scientific Sessions

Session 1

Climate change and River mouth systems

Chair: Peter D. Clift, Marcus Reckermann

- 13:00 **Impact of extreme events on material transfers and ecosystem functioning at the mouth of the Rhone River: floods and storms** (*Session 1 Keynote*)
Catherine Rabouille, B. Lansard, C. Cathalot, F. Toussaint, B. Bombled, O. Aouji, E. Viollier
- 13:20 **Characterization of the biogeochemistry of sediments after flood events in the Rhône River prodelta**
E. Ferreira, C. Rabouille, B. Bombled, E. Regnier, B. Lansard, S. Nmor, M. Manoux, E. Viollier, N. Verpy, L. Papillon, D. Malengros, G. Monvoisin, C. Gauthier, P. Van Beek, M. Souhaut, T. Zambardi
- 13:35 Break**
- 13:50 **Evidences of Sea Level Change from marginal sea areas of Northern East Coast of India**
Subhasis Roychaudhuri, Avik Manna, Bhaskar Mazumder
- 14:05 **Evolution of the Han River Delta Coastline over the last 40 years and beyond**
Xiu Juan Liu, Zi Qian Wei, Albert J. Kettner, Yang Wang, Jia Ji Yi
- 14:20 **Holocene sedimentary distribution and morphological characteristics reworded by East Asian monsoon hydrodynamics in the Mekong River area, South Vietnam shelf**
Xiao Wang, Xinong Xie, Wenyan Zhang
- 14:35 **The Pearl River Estuary system evolution in Late Quaternary: Sea-Level, Climate, Paleogeography change**
Jinpeng Zhang, Yufeng Wang, Shiming Dong, Jianmei Hou, Pingyuan Li, Chixin Chen and Zhen Xia
- 14:50 **Remote sensing monitoring of seawater intrusion in the background of Yellow River Delta erosion**
Wenbo Zhang, Hongyu Li, Xiaohuang Liu
- 15:05 **Fluctuating sedimentation dynamics of the Rewa Group of rocks, Rewa District, Madhya Pradesh**
Sibabrat Nayak, Ajay Shankar Pandey, Hemant Kumar, and Joyesh Bagch
- 15:20 Break**

15:35 **On several hydrological and biogeochemical aspects of the Mekong River delta functioning**
Andrzej Górniak, Tran Xuan Dung, Vo Luong Hong Phuoc

15:50 **Session 1 Open Discussion**
Moderation: Peter D. Clift, Marcus Reckermann

Session 2

Human activities and environmental impacts from the past to the future

Chair: Niels Hovius, Anna B. Kowalska

16:00 **Rivers of the submerged Palaeo-Agulhas Plain, and implications for early human use on this landscape** (*Session 2 Keynote*)
Hayley C. Cawthra

16:20 **Urban Seas as Part of River Mouth Systems – Western Coast U.S. and Canada Examples**
Gary H. Greene, John R. Delaney

16:35 **Causes and effects of engineered river diversion in channel dynamics and deltaic development: A story of the largest distributary of the Mississippi River**
Y. Jun Xu, Bo Wang, Ming Tang

16:50 **End of day 1**

Day 2: Tuesday, 6 December 2022

12:00 **Spatial Distribution and Pollution Characteristics of Heavy Metals in Surface Sediments of Lingshui, Xinying Mangrove and Seagrass Wetlands**
Kaizhe Fu, Long Junqiao, Zhen Zeheng, Ding Weipin, Huang Zanhui

12:15 **Terrestrial carbon storage and its environmental responses in the Yellow River Delta**
Hongyu Li, Dou Wenjun, Xu Zhen, Liu Xiaohuang and Li Renqiang

12:30 **Impacts of morphological change and sea-level rise on stratification in the Pearl River Estuary**
Mengyao Ma, Wenyan Zhang, Wei Chen, Junjie Deng, Corinna Schrum

- 12:45 **Study on Hydrodynamic Characteristics and Environmental Response in Shantou Offshore Area**
Yuezhao Tang , Yang Wang , Enjin Zhao, Jiaji Yi
- 13:00 **The role of natural resources monitoring and investigation system in the economic development and ecological protection of the estuary delta**
Maoqiu Xiong and Xiaohuang Liu
- 13:15 **Variation of sediment flux from the Hanjiang River and the Rongjiang River into the sea and its effect on deposition of Hanjiang River Subaqueous Delta over the recent 60 years**
Yufei Wang, Yang Wang, Xiu Juan Liu
- 13:30 Break**
- 13:45 **The impact of human activities on the estuary of Zhifu Island and its surrounding small watershed based on remote sensing image data analysis**
Kuanle Bao, Hongsong Wang , Kun Yan, Qingzheng Yuan
- 14:00 **The influence of Caofeidian Project on the evolution of deep groove landform in Bohai Sea**
Hongxian Chu, Jiang Wenqin, Feng Yongcai, Yuan Jidong, Chen Yuhai, Feng Binghui
- 14:15 **Influence of regional tectonics, sedimentation and human intervention in smaller seabound river systems: A case study from Subarnarekha River**
Mriganka Ghatak, Srirupa Gupta, Sandeep Thakur
- 14:30 **The Lower Oder and Pomeranian Bay in Archaeological Record**
Michał Adamczyk, Anna B. Kowalska, Krzysztof Kowalski
- 14:45 **The East Gotland Basin (Baltic Sea) as a candidate Global Boundary Stratotype Section and Point for the Anthropocene series**
Jérôme Kaiser, Serena Abel, Helge W. Arz, Andrew B. Cundy, Olaf Dellwig, Pawel Gaca, Gunnar Gerds, Irka Hajdas, Matthias Labrenz, James A. Milton, Matthias Moros, Sebastian Pimpke, Sarah L. Roberts, Neil L. Rose, Simon D. Turner, Maren Voss, Juliana A. Ivar do Sul
- 15:00 Break**
- 15:15 **Indigenous knowledge systems informing an adaptive estuary management: The socio-cultural dynamics of the Sundays River Estuary**
Athabile Xuba
- 15:30 **Living with the river: Strategies of anthropogenic use of the Lower Elbe estuarine floodplain**
Stefan Krabath, Martina Karle

- 15:45 **People and the Sea in Mpondoland: An analysis of Culture, Provisioning and Accessibility to Ocean and Coastal Services**
Bayanda B. Laqwela
- 16:00 **Zooplankton communities in the Lower Saxony Wadden Sea experience strong changes in composition and structure in response to stressors induced by the major river systems and marine hydrographical processes**
A.B. Ndah, L. Roenn, J. Goebel, M. Boersma
- 16:15 **Session 2 Open Discussion**
Moderation: Niels Hovius, Anna B. Kowalska
- 16:25 **Break**
- 16:30 **Virtual excursion to the Oder river mouth system and City of Szczecin**
Anna B. Kowalska
- 16:50 **End of Day 2**

Day 3: Wednesday, 7 December 2022

Session 3

Proxy-records and modern observations

Chair: Gary H. Greene, Xinong Xie

- 12:00 **Tectonic anabranching of River Brahmaputra: implications on survival of cultural and biodiversity hotspots beside world's largest river island Majuli (Session 3 Keynote)**
Bashab N. Mahanta, Mansoom P. Kashyap, Baba M. Mahapatra
- 12:20 **Deterioration in the subaqueous Mekong Delta, Vietnam**
Karl Stattegger, Daniel Unverricht, Witold Szczucinski, Klaus Schwarzer
- 12:35 **Late Holocene Vistula River floods recorded in grain size distributions and diatom assemblages of marine sediments of the Gulf of Gdańsk (Baltic Sea)**
Marta Szcześniak, Mikołaj Kokociński, Robert Jagodziński, Krzysztof Pleskota, Marek Zajączkowski, Witold Szczuciński
- 12:50 **Morphological evolution of bayhead delta within a tide-dominated embayment, case studies at the Lingding Bay, South China Sea**
Junjie Deng, Congrui Chen, Hongze Yu

- 13:05 **Analysis of Quaternary sequence development in the Pearl River Estuary, North South China Sea with single-channel seismic profiles data**
Shiming Dong, Jinpeng Zhang, Yufeng Wang
- 13:20 **Evolution of sedimentary environments and source-to-sink transport processes off the eastern Wanquan Estuary since the Holocene**
Xinjie Wu, Kun Yuanb, Yanwei Songb, Yu Caia, Feng Panc, Zhanrong Guo
- 13:35 Break**
- 13:50 **Three stage paleochannels identification and main resource analysis from Middle Pleistocene in the Western Bohai Sea**
Shuyu Wu, Hongxian Chu, Kuanle Bao
- 14:05 **Fine-grained turbidites in the southern Okinawa Trough and its implication for earthquakes activity over the past 700 years**
Yamin Yang, Lizhong Zhang, Reiwenn Shen, Zhigang Zeng, Xiting Liu
- 14:20 **Grain size characteristics and sedimentary environment response of different sedimentary facies in ZK-XH01 borehole at the entrance of Hanjiang River**
Guanzhong Zeng, Jiaqi Xu, Rui Xia
- 14:35 **A downcore calibration of the TEX_{86}^L temperature proxy for the Baltic Sea**
Anna K. Wittenborn, Helge W. Arz, Thorsten Bauersachs, Cyril Dutheil, Christiane Hassenrück, Klaus Jürgens, Hagen Radtke, Janine Wäge-Recchioni, Jérôme Kaiser
- 14:50 **Postglacial evolution and present stage of the Odra River mouth development (the southern Baltic Sea)**
Andrzej Osadczuk, Ryszard K. Borówka, Krystyna Osadczuk, Andrzej Witkowski, Artur Skowronek, Łukasz Maciąg Małgorzata Latałowa, Kamila Mianowicz, Brygida Wawrzyniak-Wydrowska
- 15:05 **Session 3 Open Discussion**
Moderation: Gary H. Greene, Xinong Xie
- 15:15 **Break**

Session 4
Advanced data management and modeling

Chair: Joanna Dudzińska -Nowak, Federica Foglini

- 15:30 **High-resolution mapping of Underwater Cultural Heritage in shallow coastal areas: case study from the Venice Lagoon** (*Session 4 Keynote*)
F. Madricardo, M. Bassani, G. D'Acunto, A. Calandriello, A. Petrizzo, F. Foglini
- 15:50 **Long-term simulation of the development dynamics of the Vistula delta in the Holocene through the 4F model adjustment**
Jerzy Jan Frydel
- 16:05 **Physical-biogeochemical transformation of DOC in the river-estuary-ocean continuum: a modeling perspective**
Jialing Yao, Jianzhong Ge
- 16:20 **High-resolution seafloor models from Disko Bay, central West Greenland – A pioneer study**
Diana Krawczyk, Chris Yesson, Paul Knutz
- 16:35 **The “Hainan Delta”, Beibu Gulf, South China Sea - model and paleoenvironmental interpretation**
Jakub Miluch, Helge Arz, Ryszard Krzysztof, Hongjun Chen, Joanna Dudzińska-Nowak, Peter Feldens, Jan Harff, Tao Jiang, Jerome Kaiser, Łukasz Maciąg, Andrzej Osadczuk, Krystyna Osadczuk, Michał Tomczak, Andrzej Witkowski, Xie Xionong, Ping Xiong, Jinpeng Zhang, Wenyan Zhang, Eduardo Zorita
- 16:50 **Session 4 Open Discussion**
Moderation: Joanna Dudzińska-Nowak, Federica Foglini
- 17:00 **Closing Discussion and Wrap-Up**
Moderation: Jan Harff
- 17:20 **End of day 3 and farewell**

Conference website:

<https://baltic.earth/rivermouthsystems2022>