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Federal Ministry of Education and Research

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United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

200 JAHRE SENCKENBERG SEIT 1817

PROGRAMM

A floating classroom

Satellite Event, location: Senckenberg Museum and RV Sonne

18th November 2021 | 4:30 pm to 7:00 pm (CEST)

Deep-sea science in Action towards a clean ocean

Welcome to our satellite activity!

Waste, chemicals, noise, overfishing, and climate change are damaging the oceans. The deep sea, the largest habitat on our planet, is now also at risk. The United Nations (UN) has therefore proclaimed the “UN Decade of Marine Research for Sustainable Development” until 2030 and named seven goals under the motto “The Science We Need for the Ocean We Want”. One of the goals is “a clean ocean”. We want to take you with us and introduce you to our science and the people doing it and with whom we are collaborating. Doing so, we invite you to a digital visit on RV Sonne in the middle of the North Atlantic Ocean during the ongoing IceDivA2 expedition (SO286) and interact directly with our experts on the vessel, digitally worldwide on ZOOM as well as inside the Green Lecture Hall:

Part 1 16:30h	Welcome, Introduction and deep-sea science talk	On Stage Sli.Do
Part 2 17:00h	Projects and Deep Sea Science in Action IceAGE – The Project, Countdown tob e life with RV Sonne, iAtlantic, PLASTISEA, Hotmic	live streaming from RV Sonne, pre-recorded films, ZOOM Room
Part 3 17:30h	DOSI panel discussion non Interactive Moment Sli.Do	pre-recorded films, ZOOM Room Sli.Do
Part 4 18:00h	On stage reactions and films (MUC) Goals, Target and Timelines and contributions to the UN ocean decade	live streaming from RV Sonne, pre-recorded films, ZOOM Room
Part 5 18:15h	Marine Dialogue between audience and the reserach vessel, Q&A	live streaming from RV Sonne, pre-recorded films, ZOOM Room
Part 6 18:55 - 19:00h	Farewell	On Stage, pre-recorded film

iAtlantic INTEGRATED ASSESSMENT OF ATLANTIC MARINE ECOSYSTEMS IN SPACE AND TIME

CHALLENGER 150 A DECADE TO STUDY DEEP SEA LIFE

DOSI DEEP-OCEAN STEWARDSHIP INITIATIVE

People and roles in “A floating classroom”

Moderators

Julia Sigwart

Julia is a professor and curator at the Senckenberg Museum and Research Institute, where she is in charge of molluscs. She is also a member of the DOSI advisory board and many other international marine conservation expert groups.

Hendrik Denkhaus

Hendrik is a member of the scientific staff at the education department of the Senckenberg Nature Museum Frankfurt. His main task is on the use of digital tools for museum education and science communication.

Panelists in the Senckenberg Museum

Torben Riehl – role: Marine Research and Taxonomy

Torben has been a junior research group leader at the Senckenberg Research Institute Frankfurt since 2017. His work is dedicated to species discovery at great ocean depths and explaining deep-sea biodiversity. Following on from his post-doctoral research projects at the Centre for Natural History Hamburg and Ghent University, Belgium, his current position links research with science communication.

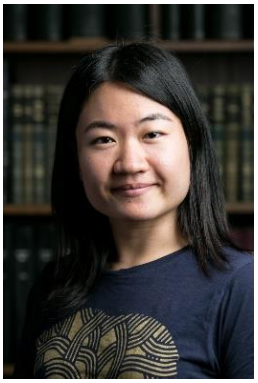
Hanieh Saeedi – role: biodiversity data

Hanieh is the Biodiversity Information Coordinator at Senckenberg museum responsible for strategic further development of biodiversity informatics, coordinating digitization of Senckenberg‘s collections, participation in the design and programming of biodiversity databases, and leading projects related to Data Management policy. She is also the deep-sea data manager in Ocean Biodiversity Information System (OBIS) as well as a member of German UN-decade committee.

Panelists via ZOOM

Nélia C. Mestre – role: DOSI (Deep Ocean Stewardship Initiative)

Nélia is assistant researcher at the Centre for Marine and Environmental Research (CIMA) of the University of Algarve, Portugal. She is developing work related to marine ecotoxicology, with special emphasis on the environmental threats to fauna by deep-sea mining, and other human activities in the deep sea. She is co-lead of the Working Group on Pollution and Debris of the Deep Ocean Stewardship Initiative (DOSI) (https://www.dosi-project.org/topics/pollution/).



Alice (Xia) Zhu – role: DOSI

Alice is a PhD student at the University of Toronto studying the sources, transport, and fate of plastic pollution in the environment. Specifically, Alice is researching how much plastic pollution resides on the ocean floor and in other accumulation zones within the marine environment. Alice is also a member of the Universtiy of Toronto Trash Team and is heavily involved in public outreach around reducing plastic litter and waste.

Shamik Dasgupta – role: DOSI

Shamik is a marine geochemist and Associate Professor in the Institute of Deep Sea Science and Engineering, Chinese Academy of Sciences. His latest research has explored persistent organic pollutants in the Mariana Trench sediments, distribution and characterization of marine litter dumps in the submarine canyons of the South China Sea, and how deep seafloor plastics act as a source and sink of micro-pollutants in the ocean. He also co-leads the Deep Ocean Stewardship Initiative (DOSI) Pollution and Debris Working Group.

Martin Wagner – role: DOSI

Martin is a biologist interested in studying what plastics and other synthetic agents (e.g., endocrine disrupting chemicals) do to human and ecosystem health. For that he uses state-of-the-art in vitro and in vivo bioassays to characterize the total toxicity of complex samples (e.g., plastic leachates). He also applies non-target chemical analysis to identify novel toxic compounds. His work aims at contributing to a more holistic understanding human and environmental exposomes.

Erik Borchert – role: PLASTISEA

Erik is an environmental microbiologist working at the research unit Marine Symbioses at the GEOMAR Helmholtz Centre for Ocean Research Kiel. Erik is working in the BMBF funded project PLASTISEA lead by GEOMAR. He investigates microbial community composition on marine plastic debris and identifies novel plastic degrading enzymes for biotechnological advances. The focus of his work lies in multiomic analysis, therefore in the combinatorial bioinformatic analysis of different genetic material, from an individual bacterium to whole mixed consortia.

Aaron Beck – role: Hotmic

Aaron is a senior scientist in the Water Column Biogeochemistry group at the GEOMAR Helmholtz Centre for Ocean Research Kiel. Aaron leads the JPI Oceans project HOTMIC coordinated by GEOMAR. His research investigates biogeochemical cycling that controls the flux of anthropogenic substances such as plastics from surface to deep ocean and from shelf margins to the open ocean.

Kerry Howell – role: Challenger 150

Kerry is Professor of Deep-Sea Ecology at Plymouth University, UK. Her research is focused on mapping benthic biological communities to support sustainable management of the deep ocean, and integrating habitat maps into marine spatial planning processes, including marine protected area network design. She is currently co-lead of the Challenger 150 Programme, a 10-year global program of deep-sea science for the Ocean Decade

Sli.Do interactive moments

Marie Heidenreich – Sli.Do questions and polls

Marie works as a science journalist with Project Management Juelich (PTJ) and writes about marine and climate research. She is an advocate for interactive and highly immersive science communication where users get to deep-dive into a visually captivating and interactive story.

People on Board of RV Sonne (live stream/ZOOM)

Saskia Brix – role: chief scientist, iAtlantic, Challenger 150

Saskia is the chief scientist of the current expedition and project lead of IceAGE (www.iceage-project.org, Icelandic marine Animals: Genetics and Ecology) and IceDivA (Icelandic marine Animals meets Diversity of the deep Atlantic Ocean). Since 2007 she is working at Senckenberg´s marine location "Senckenberg am Meer" department "German Center for Marine Biodiversity Research (DZMB)" in cooperation with the University of Hamburg.

Pedro Martinez Arbizu – role: head of department DZMB, project IceDivA

Pedro is the head of the German Center for Marine Biodiversity Research at Senckenberg am Meer in Wilhelmshaven. He is interested in describing and understanding biodiversity patterns in the oceans using morphological and molecular methods and wants to develop tools for efficient monitoring of marine communities and its resilience to anthropogenic stressors.

Alexander Kieneke – role: project IceDivA

Alex is a researcher from the "German Center for Marine Biodiversity Research", Senckenberg am Meer, Wilhelmshaven, Germany. His research focuses the genetic and morphological diversity of certain groups of the so-called meiofauna, microscopic animals that live on and inside of marine sediments. During the IceDivA expeditions, he is responsible for the multiple corer, a gear that collects sediment samples from the deep sea that include this fascinating microcosm.

James Taylor – role: co-chief scientist, iAtlantic fellow, project IceAGE/IceDivA

James is the co-chief scientist of IceDivA2, iAtlantic fellow, and a Post-Doctoral researcher from the German Center for Marine Biodiversity Research, Senckenberg am Meer, Hamburg, Germany. He specialises in deep-sea benthic ecology and community analysis through video and image material. Recently his focus has been on hydrothermal vent communities off the coast of Iceland, including the discovery and description of new vent fields located on the Reykjanes Ridge.

Elham Kamyab – role: iAtlantic fellow, project IceDivA

Elham is a Post-doctoral researcher from the German Center for Marine Biodiversity Research, Senckenberg am Meer, Wilhelmshaven, Germany. She contributes in completing the map of biodiversity of deep-sea meiofauna using new molecular techniques (i.e. eDNA analysis and meta-barcoding). Elham has a multi-disciplinary background of applying metabolomics in studying stress responses of marine organisms as well as exploring the novel bioactive compounds.

Jenny Neuhaus – role: iAtlantic fellow, project IceDivA

Jenny is currently doing her PhD at the German Centre for Marine Biodiversity Research (DZMB, Senckenberg am Meer) in Hamburg. She is delighted to be part of the IceDivA2 expedition team on board the RV Sonne and looks forward to shedding light on the mysteries of the deep Atlantic Ocean, creating a better understanding of the animal diversity to be found there.

Mia Schumacher – role: iAtlantic fellow, project IceAGE/IceDivA

Mia is a research scientist and iAtlantic fellow from GEOMAR Helmholz Centre for Ocean Research Kiel, Germany. She primarily works with bathymetry data, actively mapping the sea-floor during multiple cruises, including those of IceAGE and IceDivA. She has a passion for protecting vulnerable marine areas.

Denisse Galarza-Verkovitch– role: master student PLASTISEA project

Denisse is a Biological Oceanography Master student at GEOMAR involved in the PLASTISEA project. Right now, she is working on her Master's thesis, which aims to unmask marine bacteria that can degrade plastic. One of her major goals is to contribute to a cleaner, more sustainable ocean.

Katrin Linse – role: project IceDivA

Katrin works for the British Antarctic Survey and is a marine biologist with 25 years' research experience in the biodiversity, phylogeography and evolution of Antarctic and deep-sea benthic invertebrates. She participated in 16 ship-based expeditions to Antarctica and the North Atlantic. During her expeditions she discovered new species and habitats, including black smokers in the Southern Ocean and hydrothermal vents hydrothermal vents around Iceland.

Barcode Links

The interactive map

SENCKENBERG world of biodiversity

Sli.Do polls

SENCKENBERG world of biodiversity

SENCKENBERG world of biodiversity

Click to answer…

…and put in your questions!