SEAtwins Symposium

Programme | 2–5 November 2026

Aalborg University Copenhagen · Training on 5 November at ICES Headquarters

Draft programme · 29 October 2026

Research presentations, discussion and practical training on social-ecological systems and digital twins of the ocean. All times are local to Copenhagen.

Programme at a glance

Time	Programme
Mon 2 Nov 1.008 (Auditorium)	**Opening and research sessions -** Aalborg University Copenhagen *13:00–16:50 · Welcome, keynote and Sessions 1A and 1B*
17:15–18:30 1.001 (Conference room)	Welcome reception and poster session - Aalborg University Copenhagen
18:30	Networking dinner · Onsite - Aalborg University Copenhagen
Tue 3 Nov 1.008 (Auditorium)	**Research sessions and keynotes -** Aalborg University Copenhagen *09:00–17:00 · Sessions 2A, 2B, 3A and 3B*
Wed 4 Nov 1.008 (Auditorium)	**Research sessions and symposium conclusions -** Aalborg University Copenhagen *09:00–12:15 · Sessions 4A and 4B, panel and closing*
13:00–17:00 1.001 (Conference room)	Training at Aalborg University Copenhagen *A.* SEADITO insights on co-developing social-ecological models and systems *(Anne Sigrid Haugset, Erasmia Kastanidi, Ida Maria Bonnevie, Lai Tin-Yu)* *B. Exploring SURIMI data (Patrycja Antosz)*
Thu 5 Nov	**Training at ICES Headquarters** *09:00–12:00* · SES Modelling (*Ragnar Árnason, Piotr Zaborowski*)

Participation and practical information

Proposed format: 15-minute contributions include 12 minutes for the presentation and three minutes for questions. Speakers with 25- or 30-minute slots should agree their presentation and discussion split with the chair.

Monday 2 November

Day 1 · Aalborg University Copenhagen

Time	Programme
13:00–13:15	**Welcome remarks** *Harald Hasler-Sheetal (ICES) and Aalborg University Copenhagen*
13:15–13:40	**Keynote 1** *Dmitry Frank-Kamenetsky, HELCOM · HELCOM DATA - Practical examples of data use for regional ocean governance*
13:40–14:55	**Session 1A · Marine pressures, infrastructure and management** *Chair: Henning Sten Hansen*
13:40–14:10	The SURIMI model GUI *Patrycja Antosz*
14:10–14:25	A Python Notebook for SCAIRM (Spatial Cumulative Assessment of Impact Risk for Management) application in the context of offshore wind energy *Renan Gonçalves Menezes*
14:25–14:40	Beyond the MPA Paradigm: Are Offshore Wind Farms Just Marine Protected Areas? *Anna Aikaterini Malmidou*
14:40–14:55	Mapping Marine Infrastructure from Space: Object Detection using Satellite Radar Data for Ocean Monitoring and Management *Marco Ottinger*
14:55–15:35	**Coffee and networking**
15:35–16:50	**Session 1B · Ecosystem assessment, restoration and visualisation** *Chair: Biswajit Basu*
15:35–15:50	Simulating the impact of oil spills on the fishery socio-ecological Thracian Sea system *Georgios Sylaios*
15:50–16:05	Social-ecological drivers of coastal macrophyte restoration: a participatory fuzzy cognitive mapping approach for decision-support *Giulia Bellon*
16:05–16:20	Validating expert-based marine ecosystem services assessment and mapping *Miia Farstad*
16:20–16:35	4D geovisualization of marine litter particles for digital twins of the ocean *Saana Järvinen*
16:35–16:50	Towards Socio-Ecological Data Integration in Digital Twins of the Ecosystem: The TerraTwin Approach *Konstantina Papchristopoulou*
16:50–17:15	**Break**
17:15–18:30	**Welcome reception and poster session**
18:30	**Networking dinner** *Onsite*

Tuesday 3 November

Day 2 · Morning · Aalborg University Copenhagen

Time	Programme
09:00–09:25	**Keynote 2** *Victoria Persson, Mercator Ocean* · ***Connecting Oceans, Connecting People: The European Digital Twin Ocean Beyond Data***
09:25–10:35	**Session 2A · Understanding social-ecological systems** *Chair: Patrycja Antosz*
09:25–09:40	Transformation of the Northeastern Saronic Gulf Waterfront (1940–2025): Coastal Urbanization and Socio-environmental Changes *Chara Kyriakidou*
09:40–09:55	Incorporating social-cultural perspectives and clarifying internal and external change in the DAPSI(W)R(M) framework *Ida Maria Bonnevie*
09:55–10:10	Assessment of Social Ecological Systems through Numerical Simulation in the German Bight *Matthias Berg*
10:10–10:35	The SURIMI Generic Framework for Model Coupling *Timo Szczepanska*
10:35–10:50	**Coffee and networking**
10:50–12:00	**Session 2B · Trust, applications and decision support** *Chair: Lara Veylit*
10:50–11:15	Transferability of the Digital Twins as trust mechanism *Piotr Zaborowski*
11:15–11:30	A storm-induced coastal hazards assessment of the Greek sandy beaches based on climate projections *Dimitra Malliouri*
11:30–11:45	Modular tools for social-ecological studies in digital twins of the ocean – towards evaluation of SEADITO Explorer *Pyry Kettunen*
11:45–12:00	Strengthening the Science-Policy Interface through Digital Twin Competence Development: Lessons from SEADOTs and SEATWINS *Harald Hasler-Sheetal and Alondra Sofia Rodriguez*
12:00–13:00	**Networking Lunch**

Tuesday 3 November

Day 2 · Afternoon · Aalborg University Copenhagen

Time	Programme
13:00–13:25	**Keynote 3** *Mikael Seehusen Kruchov van Deurs* · ***Fish in Danish coastal waters: Widespread concern among fishers and society, but limited data***
13:25–14:40	**Session 3A · DTO architecture, data and interoperability** *Biswajit Basu*
13:25–13:55	Federated architecture of AI-Driven Digital Twins of the Ocean and Inland Waters with Data Space connections supporting Biodiversity and Socio-Ecological data and models *Arne Berre*
13:55–14:10	Designing and developing multi-purpose web map viewer for marine datasets of EDITO platform *Anssi Jussila*
14:10–14:25	Empowering Digital Twins: FAIR Data Access Platform for Aquatic Geospatial Data *Pekka Latvala*
14:25–14:40	From concepts to deploying social-ecological spatial decision-support components to EDITO *Mikko Rönneberg*
14:40–15:15	**Coffee and networking**
15:15–17:00	**Session 3B · Social-ecological modelling for decision support** *Kate Crosman*
15:15–15:45	Towards a Social-Ecological Regional Digital Twin for Monitoring Transport Infrastructure Impacts on Kenyan Mangrove Ecosystems Using Multi-Source Earth Observation Data *Richard Mwangi*
15:45–16:00	Incorporating social-ecological data into digital ocean twins using the Social Ecological Systems Framework *Lara Veylit*
16:00–16:15	From Use Cases to Decision Support: Socio-Ecological Modelling Across EcoTwin Marine and Coastal Demonstrators *Fearghal O'Donncha*
16:15–16:30	Fish, fishers, or ecosystems? Evaluating management trade-offs in the Israeli EEZ *Ioannis Keramidas*
16:30–16:45	The Price of a Warming Sea: Quantifying the Socioeconomic Cascades of Climate Change and Biological Invasions on Israel's Seafood Value Chain *Eyal Ofir*
16:45–17:00	Beyond the Catch: Linking fisheries, society and marine spatial planning through network modelling *Manish Kanojia*

Wednesday 4 November

Day 3 · Aalborg University Copenhagen

Time	Programme
09:00–10:00	**Session 4A · Multiple uses, economic impacts and ecosystem integration** *Patrycja Antosz*
09:00–09:30	Multiple use of Marine Ecosystems: From Social-ecological systems (SESs) to Digital Ocean Twins (DOTs) *Ragnar Arnason*
09:30–09:45	Predicting Cyanobacterial Blooms in the Baltic Sea: A Deep Learning Approach for Operational Marine Management *Magali Gonçalves*
09:45–10:00	Integrating Fishing Fleet Behaviour into Digital Twin Ocean Approaches: An Agent-Based Modelling Approach *Emilie Lindkvist*
10:00–10:15	**Coffee break**
10:15–11:15	**Session 4B · Spatial planning, complexity and vulnerability** *Lara Veylit*
10:15–10:45	Adding the future dimension into MSP by applying a spatio-temporal cumulative impact assessment tool *Henning Sten Hansen*
10:45–11:00	When complexity is away, MICE will play *Kostantina Michailidou*
11:00–11:15	A Pan-European Marine Socio-Ecological Vulnerability Assessment for DTO: frameworks, data and demonstrator *Daniel Depellegrin*
11:15–12:00	**Panel · From Digital Twins of the Ocean to decisions** *Opening remarks from Neil Holdsworth; ICES, Head of Data and Information · Panellists: Lara Veylit, Biswajit Basu, Patrycja Antosz, Henning Sten Hansen, Neil Holdsworth; Moderator: Kate Crosman*
12:00–12:15	**Symposium conclusions and next steps** Remarks from Henning Sten Hansen
12:15–13:00	**Networking lunch**
13:00–17:00	**Training sessions** *See training information*

Training and posters

Wednesday 4 and Thursday 5 November

Training programme

Time	Programme
Wed 4 Nov	**Aalborg University Copenhagen**
13:00–17:00	Training sessions A. SEADITO insights on co-developing social-ecological models and systems *(Anne Sigrid Haugset, Erasmia Kastanidi, Ida Maria Bonnevie, Lai Tin-Yu)* B. Exploring SURIMI data *(Patrycja Antosz)*
Thu 5 Nov	**ICES Headquarters**
09:00–12:00	Training session C. SES Modelling (*Ragnar Árnason, Piotr Zaborowski*)
12:00–13:00	**Lunch**

Thursday's training takes place at ICES Secretariat.

Address: H. C. Andersens Boulevard 44–46, DK-1553 Copenhagen V, Denmark

Meeting room: Atlantic

Floor: 4th floor

Arrival instructions

Please arrive 15 minutes before the course starts (08:45) to allow time to set up. Upon arrival, you can enter the ICES Secretariat through the revolving doors or the side entrance (by raining the doorbell). Please check in at the reception desk, where you will be asked for your name and provided with an access key to the building. Once you have checked in, you can take the elevator or stairs to the 4th floor, where the training will take place in the Atlantic meeting room.

Poster session

Monday 2 November · 17:15–18:30 · Welcome reception with poster session

ArcFish - Digital Twin for Arctic fisheries · Marie Maar

From Knowledge to Implementation: Governance and Social Leverage Points for Nature-Based Solutions Adoption in the Saronikos Gulf · Vyron Moraitis

Assessing Nature-Based Solutions in Hybrid Blue-Grey Marine Infrastructures Through Digital Twins · Francisco Nicolás Yepes

The Ocean We Want (OWW) International Survey: Perspectives from Eight Countries on Ocean Perceptions, Values, and Human–Ocean Relationships · Juri Hori

A Multi-Stage Methodology for Assessing EMODnet Missing Biodiversity Data and Modelling Risks in the European Digital Twin Ocean Framework · Matteo Chiarini

Flexsem in EDITO · Ange Pacifique Ishimwe

Wadden Sea Ecosystem Model Output as a Service (Wad-EMOaaS): High-Resolution Biogeochemical Coupling for Coastal Digital Twins · Christos Giannopoulos

The Socio-Ecological Intelligence Twin (SEIT): An AI-Driven Multi-Layer Digital Twin Framework for Predictive Marine Governance, Ecosystem Resilience and Sustainable Blue Economy Decision Support · Eric Njeru

Regional difference in the structure of human well-being related to ecosystem services and anxiety specific to ria coasts · Jun Shoji

Governing Complexity: Investigating the Socio-Ecological Dimension of the EU's DTO · Jahan Hadidi