

GEHAB 2022

Marine Geological & Habitat Mapping - Venice, Italy



San Servolo Island, 16th-20th May 2022

PROGRAM

Golden Sponsors



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Monday 16th May 2022 – Workshop
“Ocean mapping in the Anthropocene: new technologies and Artificial Intelligence (AI) tools”

- 9.30 Welcome and introduction
- 09:40 Francisco Gutiérrez (GeoAcustics Ltd., U.K.)
THE POTENTIAL OF ARTIFICIAL INTELLIGENCE IN PHASE-MEASURING BATHYMETRIC SONAR. PRACTICAL DEMONSTRATION WITH HISTORICAL DATA.
- 10:15 Knut Hartmann, Kim Knauer and Constantin Sandu (EOMAP)
SHALLOW WATER BATHYMETRY FOR EVERYONE – HANDS ON WORKSHOP ON THE NEW SDB ONLINE SOLUTION AND SCIENCE BACKGROUND. PRACTICAL DEMONSTRATION (PLEASE BE READY WITH YOUR LAPTOP AND A GIS SOFTWARE)
- 11:00 Coffee Break**
- 11:30 KONGSBERG (title to be defined)
PRESENTATION AND REAL TIME DEMONSTRATION ON BOARD LITUS VESSEL
- 12:15 Dear Iason-Zois (GEOMAR)
THE EFFECT OF SPATIAL AUTOCORRELATION IN MACHINE LEARNING-BASED MODELING OF DEEP-SEA POLYMETALLIC NODULES SPATIAL DISTRIBUTION (PRACTICAL EXERCISES, MATERIAL WILL BE SENT IN ADVANCE)
- 13:00 Lunch**
- 14:00 MARINE IMAGE ANALYSIS: FROM MANUAL IMAGE ANNOTATION TO MARINE COMPUTER VISION, FROM THERE TO MARINE DATA SCIENCE
- 14:45 R2Sonic - to be confirmed
- 15:30 Coffee Break**
- 16:00 Federica Fogliani (CNR-ISMAR), Antonio Petrizzo (CNR-ISMAR) and Fulvio Marelli (Space42)
RELIANCE PROJECT - INNOVATIVE AND INTERCONNECTED SERVICES TO SUPPORT THE MANAGEMENT OF THE RESEARCH LIFECYCLE WITHIN THE MARINE COMMUNITY. PRACTICAL DEMONSTRATION AND “HANDS ON EXERCISES ON”
- 17:00 Discussions and Conclusions
- 17:30 END**

Tuesday 17th May 2022

WELCOME

- 8:30 Registration Open
9:10 Opening Remarks
9:30 **Key note** by H. Gary Greene and Vaughn Barrie
BENEFITS OF HABITAT MAPPING IN AN URBAN SEA – THE NE PACIFIC MARGINAL SALISH SEA
9:50 Gold Sponsor Welcome: Kongsberg

Session 1

Shelf and Deep Sea habitats

Chair: P. Harris and M. Dolan

- 9:55 G.R. Cochrane, A. Cole, M. Sherrier, S. Hallahan, A. Roca-Lezra, R. Kvittek
BENTHIC HABITAT IN CALIFORNIA STATE WATERS OFFSHORE OF MORRO BAY
- 10:10 L.H De Clippele, J. Gafeira, V.A.I. Huvenne, S.A. Ragnarsson, S.H. Ólafsdóttir, T. Kutti, J.A.A. Perez, P. Sumida, D. Sowers, J.M. Roberts
MAPPING AND MORPHOLOGICALLY CHARACTERIZING COLD-WATER CORAL MOUNDS ACROSS THE ATLANTIC OCEAN
- 10:25 J.C.L.G. Fonseca, P. Vannucchi, D. Iacopini, D. Maestrelli, H. Vital, Y.R. Perez
SEABED MAPPING USING 3D SEISMIC DATA TO INVESTIGATE CONTINENTAL SLOPE MORPHOLOGY AT THE BRAZIL EQUATORIAL MARGIN
- 10:40 M. Kanari, M. Tom, M. Rubin Blum, B. Herut, A. Giladi, O. Bialik, A. Meilijson, A. Neuman, G. Antler, Y. Makovsky
DEEP SEA HABITAT MAPPING AND CHARACTERIZATION OF A SEEPAGE COMPLEX USING MULTIBEAM DATA, AUV AND ROV SURVEYS AT THE PALMAHIM DISTURBANCE, ISRAEL
- 10:55 Break (with demonstration by Kongsberg)**
- 11:40 T.R.R. Pearman, P.E. Brewin, F. Skeljo, P. Brickle
MAPPING VULNERABLE MARINE ECOSYSTEMS IN THE SOUTH-WEST ATLANTIC DEEP-SEA
- 11:55 M. Schumacher, V. A.I. Huvenne, C. Devey, P. Martínez Arbizu, A. Biastoch, S. Meinecke
THE ATLANTIC MARINE LANDSCAPE: A BASIN-WIDE CLUSTER ANALYSIS OF NEAR-SEAFLOOR PHYSICO-CHEMICAL CONDITIONS
- 12:10 D.J.B. Swanborn, V.A.I. Huvenne, S.J. Pittman, A.D. Rogers, M.L. Taylor, L.C. Woodall
MAPPING SEASCAPE SPATIAL HETEROGENEITY AS DRIVER OF SEAMOUNT-ASSOCIATED FISH - A CASE STUDY FROM THE SOUTHWEST INDIAN RIDGE SEAMOUNTS
- 12:25 F. Foglini, J.A. Trotter, M. Taviani, C. Mazzoli, A. Remia, M. McCulloch, P. Montagna
HABITAT MAPPING OF SOUTHWESTERN AUSTRALIAN SUBMARINE CANYON SYSTEMS
- 12:30 Lunch**

Light talk

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| 14:00 | K.T. Bigham, A.A. Rowden, D.A. Bowden, D. Leduc
BENTHIC COMMUNITY RESILIENCE TO HABITAT ALTERATION CAUSED BY AN EARTHQUAKE-TRIGGERED TURBIDITY FLOW IN KAIKŌURA CANYON, AOTEAROA NEW ZEALAND" | Virtual talk |
| 14:15 | M. Jeffers, H.C. Bostock, D. Gürer, R.J. Beaman
INTERMEDIATE AND DEEP WATER MASSES AND CIRCULATION IN THE TASMAN AND CORAL SEAS USING CTD AND MULTIBEAM DATA FROM R/V FALKOR VOYAGES 2020-21 | Virtual talk |
| 14:30 | T. Kwasnitschka, K. Koeser, A. Bernstetter
INCREASING SITUATIONAL AWARENESS IN SEAFLOOR RESEARCH FROM SURVEYING TO VISUALIZATION—AN UPDATE OF THREE PROJECTS | Virtual talk |
| 14:45 | V.P. Mahale, P. Dewangan, B. Chakraborty
BACKSCATTER IMAGERY REVEALS FEATURE RICH CONTINENTAL SLOPES OF CENTRAL WESTERN CONTINENTAL MARGIN OF INDIA | |
| 15:00 | M.A. Lisniowski, V. Harlamov, V H.R. Lopes, E.P. Frazão, A. A. Neto
MAPPING POTENTIAL MARINE HABITATS ON THE RIO GRANDE RISE | Light talk |

Session 2

Coastal and shallow water habitats

Chair: F. Madricardo, A. Kotilainen

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| 15:05 | J. Berglund, M. L. Rasmussen, C. Paz Von Friesen, M. Åkerholm, S. Huber, L. B. Hansen, P-O. Moksnes
NATIONWIDE MONITORING OF SUBMERGED AQUATIC VEGETATION IN SWEDEN USING A COMBINATION OF DRONE AND SATELLITE IMAGERY | |
| 15:20 | M.C. Espriella, V. Lecours
OPTIMIZING THE OBSERVATION SCALE FOR COASTAL HABITAT MAPPING | |

15.35 Break

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| 16:00 | L. Fallati, A. Savini, A. Giulia Varzi, V. Bracchi, P. Bazzicalupo, A. Rosso, M. Muzzupappa, D. Basso
3D UNDERWATER PHOTOGRAMMETRIC INVESTIGATION OF PECULIAR COLUMNAR CORALLIGENOUS BIOCONSTRUCTIONS OFFSHORE MARZAMEMI (SOUTHEASTERN SICILY, IONIAN SEA) | |
| 16:15 | S. Joshi
INTEGRATING SEDIMENT DYNAMICS INTO HABITAT MAPPING APPROACHES USING SEDIMENT MOBILITY INDICES AND SEABED CLASSIFICATION IN GALWAY BAY, IRELAND | |
| 16:30 | M.A.H. Muhamad, R. Che Hasan, N. Md. Said, J. L. S. Ooi
SEAGRASS MAPPING USING SPECIES DISTRIBUTION MODELING AND MULTIBEAM ECHOSOUNDER AROUND REDANG ARCHIPELAGO | |
| 16:45 | H. Vital, A.C. Bastos, J.M.L. Dominguez, T.C.M. Araujo
ADVANCES IN THE STUDY OF GEOHABITATS ON THE BRAZILIAN CONTINENTAL SHELF: IMPORTANCE OF INCT AMB TROPIC | |
| 17:00 | L. Jemily, N. Mhammdi, A. Raki, A. Trakadas, Z. Al-Hamdani, J. B. Jensen, L. Huff | Virtual talk |

MORPHOLOGY AND MIGRATION CHARACTERISTICS OF ESTUARINE BEDFORMS:
CASE OF BOUREGREG ESTUARY, MOROCCO

- 17:15 C. Roelfsema, M. Lyons, K. Markey, C. Say, E. Kovacs, E. Kennedy, S. Phinn, N. Murray, H. Fox, B. Bambic, P. Gerstner, M. Skone, G. Asner
INNOVATIONS ON GLOBAL CORAL REEF GEOMORPHIC AND BENTHIC HABITAT
MAPS: THE ALLEN CORAL ATLAS Virtual talk
- 17:30 L. Janowski, R. Wroblewski, M. Rucinska, A. Kubowicz-Grajewska, P. Tysiac
UTILIZATION OF HIGH-RESOLUTION AIRBORNE LIDAR BATHYMETRY FOR
AUTOMATIC MAPPING OF SHALLOW SEAFLOOR, A CASE STUDY FROM THE
SOUTHERN BALTIC Virtual Light talk
- 17:35 K. Robert, K. Charmley, R. Command, K. Baker, F. de Leo
SPATIO-TEMPORAL MAPPING AND MONITORING OF A SUB-ARCTIC INLET Virtual Light talk
- 17:40 D. S. Galvez, G. M. Scarpa, A. Petrizzo, F. Braga, I. Guarneri, T. Lahami,
L. Zaggia, A. Berton, F. Madricardo. INTEGRATION OF MULTI-BEAM AND
UAV DATA TO MONITOR MORPHOLOGICAL CHANGES IN TIDAL SALT MARSHES
OF THE VENICE LAGOON Light talk
- 17:45 **END**

Wednesday 18th May 2022

Session 3

Submerged landscapes and cultural heritage

Chair: F. Foglini, G. Green

- 09:00 F. Madricardo, M. Bassani, G. D'Acunto, A. Calandriello, A. Petrizzo, I. Guarneri, D. Galvez, A. Kruss, J. Lowag, F. Foglini
UNDERWATER CULTURAL HERITAGE HIGH-RESOLUTION MAPPING: CASE
STUDY FROM THE VENICE LAGOON
- 09:15 H.C. Cawthra, I.E. Esteban, J. Pargeter, E.C. Fisher
ANCIENT LAND-SEA CONNECTIONS IN M'PONDOLAND, ON THE SOUTH
AFRICAN WILD COAST Virtual talk

Session 4

The Anthropocene and the effect of human footprint on marine habitats

Chair: F. Foglini, G. Green

- 9:30 **Key note** by F. Trincardi
MAPPING THE GLOBAL SEAFLOOR DETECTING HUMAN IMPACTS ON IT
- 9:50 P.T. Harris and T. Maes
FATE OF PLASTIC POLLUTION IN BENTHIC MARINE ENVIRONMENTS – A MASS BALANCE
APPROACH

- 10:05 A.T. Kotilainen, M.M. Kotilainen, S. Jokinen, J.J. Virtasalo, A.M. Kaskela
COASTAL ESTUARIES—BALTIC SEA HABITAT TYPES UNDER THREAT
- 10:20 M.A. Young, K. Critchell, A.D. Miller, E.A. Treml, M. Sams, R. Cavalho, D. Ierodiaconou
MAPPING THE IMPACTS OF MULTIPLE STRESSORS ON THE DECLINES IN KELPS ALONG THE GREAT SOUTHERN REEF, AUSTRALIA Virtual
- 10:35 A.J. Atchia, V. Lecours, A.E. Braswell, A.H. Altieri
USING GEOGRAPHIC OBJECT-BASED IMAGE ANALYSIS AND SPECTRAL INDICES TO MAP CHANGES IN COASTAL HABITAT HEALTH FOLLOWING AN OIL SPILL IN MAURITIUS
- 10:50 L. Fulton, C.J. Brown, J. McIntyre, A. Smith, T. Walke
EVALUATING THE BENEFITS OF SIDE SCAN SONAR AS A DETECTION METHOD FOR ABANDONED, LOST, OR OTHERWISE DISCARDED FISHING GEAR
- 11:05 S. Terracciano, F. De Giosa, C. Donadio, G. Mastronuzzi, A. Rizzo, G. Scardino, G. Scicchitano
MAPPING THE ANTHROPOGENIC IMPACT ON SEAFLOOR IN THE TARANTO AREA (SOUTHERN ITALY) Light talk
- 11:10 **Break**

Session 5 **New approaches from coast to deep water habitat mapping**
(part A) Chair: C. Brown, V. Lecours

- 11:30 C. Fusca, L. Fallati, A. Savini, C. Argentino, B. Ferrè, G. Panieri
CLASSIFICATION OF ARCTIC SEAFLOOR BASED ON OBJECT-BASED IMAGE ANALYSIS (OBIA) TECHNIQUES
- 11:45 L.M.C de Oliveira, A. Lim, L.A. Conti, A.J. Wheeler
3D PHOTOGRAMMETRIC CLASSIFICATION OF COLD-WATER CORAL REEFS WITH MACHINE LEARNING – PRELIMINARY RESULTS FROM PIDDINGTON MOUND, NE ATLANTIC
- 12:00 R.V. Garone, T.I. Birkenes Lønmo, F. Tichy, M. Diesing, T. Thrones, A. Schimel, L. Løvstakken
DEEP LEARNING FOR SEAFLOOR SEDIMENT MAPPING: A PRELIMINARY INVESTIGATION USING U-NET Virtual light
- 12:05 R. Arosio, B. Hopley, A. J. Wheeler^{1,3}, A. Lim, F. Sacchetti, L. A. Conti, T. Furey
FULLY CONVOLUTIONAL NEURAL NETWORKS APPLIED TO MARINE GEOMORPHOLOGY MAPPING ON THE IRISH CONTINENTAL SHELF DELIVER SATISFACTORY RESULTS FOR A MODEST EFFORT
- 12:20 E. Alevizos, A. Makris, V. C. Nicodemou, I. Oikonomidis, A. Roussos, D. D. Alexakis.
A DEEP LEARNING APPROACH FOR SHALLOW SEAFLOOR MAPPING USING DRONE-BASED IMAGERY – INSIGHTS FROM ACTYS PROJECT
- 12:35 Lunch**
- 13:30 P. Feldens, J.S. von Deimling, P. Held, L. Bramanti, F. Espino, F. Otero-Ferrer
ACOUSTIC FINGERPRINT OF THE BLACK CORAL ANTHIAPATELLA WOLLASTONI IN MULTIBEAM ECHO SOUNDER DATA Virtual talk
- 13:45 I.Z. Gazis, J. Greinert
THE EFFECT OF SPATIAL AUTOCORRELATION IN MACHINE LEARNING-BASED MODELING OF DEEP-SEA POLYMETALLIC NODULES SPATIAL DISTRIBUTION

- 14:00 O. Pizarro, J. Shields, G. Wakeham, B. Leighton, J. Lee, G. D’Urso, S. Williams, R. Fitch
SCALABLE BENTHIC CHARACTERIZATION USING MULTIPLE BOTTOM-FOLLOWING IMAGING DRIFTERS Virtual talk
- 14:15 J. Shields, O. Pizarro, S.B. Williams Virtual talk
FEATURE SPACE EXPLORATION FOR PLANNING INITIAL BENTHIC AUV SURVEYS
- 14:30 V. Lecours, A. Oxtan
OPTIMIZING ENSEMBLE MODELS TO IDENTIFY SUITABLE HABITAT OF COLD-WATER CORAL SPECIES IN THE NORTHERN GULF OF MEXICO
- 14:45 B. Misiuk, C.J. Brown, V. Ferrini, S.C. Lowe, T. Trappenberg
COMPARING MANUAL AND AUTOMATED FEATURE ENGINEERING APPROACHES FOR MAPPING SEABED SEDIMENTS IN THE BAY OF FUNDY, CANADA
- 15:00 R. Nanson, D. Dove, R. Arosio, J. Guinan, L.R. Bjarnadóttir
ADVANCEMENT OF A TWO-PART SEABED GEOMORPHOLOGY MAPPING SCHEME FOR MULTIDISCIPLINARY APPLICATIONS: PART 2 - GEOMORPHOLOGY
- 15:15 M. Roche, T. van Dijk, C. Mesdag, X. Lurton, L. Berger, R. Fezzani, P. Fietzek, S. Gastauer, S. Simmons, D. Parsons, M.K. Breteler
THE BACKSCATTER IN FLUME PROJECT (BSiF): MEASUREMENTS OF SEDIMENT BACKSCATTER IN A FLUME – PRELIMINARY EXPERIMENT RESULTS AND PROSPECTIVE"
- 15.30 Break**

Session 5 (part B) New approaches from coast to deep water habitat mapping
Chair: L. R. Bjarnadottir, M. Roche

- 16.00 J.S. von Deimling, P. Held, J. Friedrich, C. Straßburger
FROM INTERPOLATED SURFACES TO 3D POINT CLOUD ANALYTICS FOR BETTER HABITAT MAPPING
- 16:15 M. Troup, D. Barclay, C. Brown, E. Bushev, K. Davies, A. Comeau, R. Davis
CLASSIFYING SURFICIAL SEDIMENT USING A GLIDER-MOUNTED SINGLE-BEAM SONAR
- 16:30 M. Di Stefano
A LAYBACK MODEL FOR GEOREFERENCING UNDERWATER IMAGERY FROM A TOWED CAMERA SYSTEM
- 16:45 A.R. Ilich, B. Misiuk, V. Lecours, S.A. Murawski
DEMONSTRATING THE UTILITY OF THE MULTISCALEDTM PACKAGE FOR SEAFLOOR HABITAT MAPPING
- 17:00 M.F.J. Dolan, R.E. Ross, G. Gonzalez-Mirelis, P. Buhl-Mortensen
LESSONS LEARNED FROM AN EVER-EXPANDING BIOTOPE MAP Light talk
- 17:05 T. McClinton
IMPROVED BENTHIC GEOLOGIC MAPPING USING OBJECT-BASED AND MACHINE-LEARNING TECHNIQUES Light Virtual talk
- 17:10 F.J. Gutiérrez, R. Dowdeswell, B. Milner, W. Wang, D. Websdale
THE POTENTIAL OF ARTIFICIAL INTELLIGENCE IN PHASE-MEASURING BATHYMETRIC SONAR DATA PROCESSING Light talk

17:15 **Poster session Flash Presentation (1 minute each poster)**
17:40 **Poster session “Grecale Room” with refreshment**
19:00 **END**

Thursday 19th May 2022

9:10 Gloden sponsor2: R2Sonic

Session 5 (part B) New approaches from coast to deep water habitat mapping Chair: T. Le Bas, G. Cochrane

9:15 **Virtual Key note** by Steve Hall

THE NIPPON FOUNDATION / GEBCO SEABED 2030 PROJECT – DELIVERING THE DEFINITIVE GLOBAL MAP OF THE OCEAN FLOOR.

9:35 C. Marques, M. Ribeiro, A. Moura, C. Monteiro, L. Veiga, H. Leonor, K.K. Knut
USING SATELLITE-DERIVED BATHYMETRY DATA FROM 4S PROJECT TO MONITOR SHALLOW WATER AREAS—THE CASE OF BUGIO (PORTUGAL) Light talk

9:40 D. Mallace, J. Wheeler
COLLECTING HABITAT DATA DOESN'T HAVE TO IMPACT THE HABITAT – USING USVs TO COLLECT OCEAN DATA IN A CARBON NEUTRAL & ENVIRONMENTALLY SAFE MANNER Light talk

9:45 B. McCormack, M. Borrelli
USING UNCALIBRATED REFLECTIVITY BACKSCATTER FROM THE BATHYMETRIC DATA STREAM OF A PHASE-MEASURING SIDESCAN SONAR: OBJECT DETECTION AND BOTTOM CLASSIFICATION Light talk

9:50 A.C.G. Schimel, M.F.J. Dolan, S. Chand, T. Thorsnes, L. Bjarnadottir
ISKAFFE: A TOOL FOR BACKSCATTER DATA QUALITY CONTROL Light talk

9:55 M. Steinsiek, K. Hartmann, K. Knauer, C. Kleih, M. Siegmann
AI MEETS SEABED: MAKING THE BENTHIC ANALYSIS OF VIDEO RECORDS, AIRBORNE AND SATELLITE DATA MORE EFFECTIVE Light talk

10:00 K. Trzcinska, J. Tegowski, P. Pocwiardowski, L. Janowski, J. Zdroik, A. Kruss, M. Rucinska, Z. Lubniewski, J. Schneider von Deimling
CHARACTERIZATION OF BENTHIC HABITATS USING ACOUSTICALLY CALIBRATED MBES AND ANGLE VARYING GAIN CORRECTION OF BACKSCATTER— AS A PART OF ECOMAP PROJECT Light talk

10:05 H. Van Rein, E. Manca, A. Cordingley, G. Lourenço, A. Audsley, T. Hooper, L. Molloy, J. Day, P. Walker, M. Hartley, L. Robinson
NOVEL APPLICATION OF EUNIS-BASED MAPPING PRODUCTS TO DEMONSTRATE THE POTENTIAL FOR MARINE SPATIAL PLANNING PROCESS USING A NATURAL CAPITAL-BASED APPROACH IN THE UK Light talk

10:10 P. Wintersteller, K. Karantzas, J. Quintana, P. Nomikou, R. Neville, K. Baika, D. Lampridou, and NEANIAS team members
THE NEANIAS CLOUD-BASED UNDERWATER SERVICES Light talk

- 10:15 R. Devillers, L. ElMoussaoui, E. Lebreton, A. LeQuilleuc, A. Aubry, T. Claverie, A. Collin, Y. Lubac, T. Schmitt, M. Jasinski
IMPROVING SEAFLOOR AND MARINE HABITAT MAPPING IN DATA POOR REGIONS USING ICESAT-2 SATELLITE-BASED LIDAR AND VERY-HIGH RESOLUTION IMAGERY FUSION
- 10:30 K. Hartmann, K. Knauer, C. Kleih, J. Wenzel, J. Berglund, C. Paz von Friesen, R. Santos, V. Marques, A. Moura, M. Filippone, D. Adhiwijna, M. Stender, J. Banton, E. Mondon, J. Beaudoin, D. Urdaneta, M. Rovere, C. Pellegrini, V. Funari, A. Mercorella, L. Vigliotti, F. Madricardo, A. Remia, I. Conese, V. Drakopoulou, V. Kapsimalis, S. Reizopoulou, D. Sakellariou, G. Rousakis, M. Salomidi
SHALLOW WATER MAPPING AND MONITORING IN THE BROWSER – SDB-ONLINE
- 10:45 G. Summers, A. Lim, A., A.J. Wheeler
A GEOMORPHOLOGICAL OBJECT-BASED IMAGE ANALYSIS APPROACH TO INVESTIGATE THE HYDRODYNAMICS SURROUNDING COLD-WATER CORAL MOUNDS
- 11:00 Break**
- 11:15 M. Papaelias, F. P. García Márquez, S. Marini, F. Foglini, F. Madricardo, Pedro José Bernalte Sánchez; V. Jantara Junior
LONG-TERM AUTONOMOUS ROBOTIC SOLUTIONS FOR COASTAL TO DEEP SEAFLOOR ENVIRONMENT MAPPING AND MONITORING

Session 6

Habitat mapping and climate change

Chair: A. Bastos, B. Todd

- 11:30 J.V. Barrie, H.G. Greene
CLIMATE CHANGE AND AN URBAN SEA – IMPACT OF THE EVENTS OF 2021 ON THE SALISH SEA
- 11:45 C. J. Brown, B. Misiuk, B. DiTrollo, T. Trappenburg, S. C. Lowe, K. Robert
BENTHIC ECOSYSTEM MAPPING FOR SUSTAINABLE OCEAN STEWARDSHIP IN A SHIFTING OCEAN CLIMATE
- 12:00 J. Harff, J. Dudzińska-Nowak, Wenyan Zhang, F. Foglini, Jakub Miluch, J. Zhang
MARGINAL SEAS TASK GROUP OF THE DEEP-TIME DIGITAL EARTH (DDE), IUGS BIG SCIENCE PROGRAM
- 12.15 **Lunch**

**Session 7
(Part A)**

Habitat mapping for maritime spatial planning (MSP) within an ecosystem based approach

Chair: A. Bastos, B. Todd

- 13:15 A. Fedorovska, M. Kostanda, I. Barda, I. Andersone
INVESTIGATION OF NATURA 2000 MARINE BENTHIC HABITATS IN THE LATVIAN EEZ: IDENTIFICATION, CHALLENGES AND DESIGNATION OF NEW MPAS
- 13:30 S.L. Goode, A.A. Rowden, D.A. Bowden, M.R. Clark, F. Stephenson
USING PATCH CHARACTERISTICS OF BENTHIC COMMUNITIES DERIVED FROM HABITAT SUITABILITY MODELLING TO INFORM SPATIAL MANAGEMENT OF THE MARINE ENVIRONMENT
- 13:45 A. Giladi, M. Kanari, T. Katz, G. Tibor

Virtual

MONITORING SEDIMENT TRANSPORT AND GRAIN SIZE DYNAMICS ALONG THE ISRAELI CONTINENTAL SHELF USING MULTIBEAM BATHYMETRY AND BACKSCATTER

- 14:00 K. Ismail, A. Ali, Z. Bachok, C.D.M. Safuan, R. Che Hasan, A.A. Chan, N.M. Said
A STEP TOWARDS EFFECTIVE ECOSYSTEM-BASED MANAGEMENT IN MALAYSIA MARINE PARKS: STANDARDISED BENTHIC CLASSES USING MARINE LANDSCAPE APPROACH
- 14:15 F. McGrath, B. Picton, C. Morrow, L. Scally, N. Pfeiffer
SYNTHESIS AND DEVELOPMENT OF 'SENSITIVE ECOSYSTEM ASSESSMENT AND ROV EXPLORATION OF REEF' (SEAROVER) SURVEY OUTPUTS FOR RESEARCH AND POLICY SUPPORT
- 14:30 P. S. Menandro, F.V. Vieira, A.C. Lavagnino, G.C. Boni, T. Franco, A.C. Bastos
WHY DOES BENTHIC HABITAT MAPPING MATTER FOR BRAZILIAN SCIENCE AND MANAGERS? A MULTI-SCALE APPROACH IN THE SOUTHEAST BRAZILIAN SHELF
- 14:45 S. Millán, N. Rivas, J. Cortina, D.F. Morales, L. Chasqui
BENTHIC HABITAT MAPPING UNDER MULTILEVEL APPROACH IN THE ARCHIPELAGO OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA, COLOMBIAN CARIBBEAN
- 15:00 **Break**

**Session 7
(Part B)**

Habitat mapping for maritime spatial planning (MSP) within an ecosystem based approach

Chair: B. Misiuk, T. Pearman

- 15:30 C. Murray, C. Brown, M. Bailey, S. Denney, S. Iverson, Mills-Flemming, V. Gazzola, B. Muisik, F. Whoriskey
COMBINING SATELLITE IMAGERY AND ACOUSTIC DATA TO SUPPORT HABITAT CHARACTERIZATION OF THE BRAS D'OR LAKE ESTUARY TO SUPPORT STEWARDSHIP OF CULTURALLY, ECOLOGICALLY, AND COMMERCIALY IMPORTANT SPECIES
- 15:45 T. Thorsnes, B.N. Borrevik, N. Tengs-Hagir, H. Welde, G. L. Taranger
TOWARDS THE BEST MAPPED COASTAL ZONE IN THE WORLD? THE NORWEGIAN MARINE BASEMAPS INITIATIVE
- 16:00 B. Vinha, V.A.I. Huvenne, A. Gori, K. A. Barnhill, C. Wardell, M. Schumacher, S. Piraino, J. M. Roberts, T. H. Hansteen, C. Orejas
MAPPING OF VULNERABLE MARINE ECOSYSTEM (VME) INDICATOR TAXA OFF CABO VERDE (EASTERN EQUATORIAL ATLANTIC OCEAN)
- 16:15 C. Wardell, J. Strong, A. Haïssoune, A.L. Jones, L. Coals
MARINE HABITAT MAPPING TO SUPPORT THE USE OF CONSERVATION AND ANTI-TRAWL STRUCTURES IN KEP PROVINCE, CAMBODIA
- 16:30 G. Castellan, L. Angeletti, F. Fogliani, V. Grande, P. Montagna, M. Taviani
TO WHAT EXTENT ARE MESOPHOTIC COMMUNITIES IN THE MEDITERRANEAN SEA PROTECTED BY THE CURRENT CONSERVATION NETWORK? Light talk
- 16:35 H. Vital, J.E.L. Oliveira, A.G. Aquino da Silva, F.E. Silva, V.C. Fontes
SENSING, INTEGRATION AND ANALYSIS OF DIGITAL INFORMATION IN THE MARINE GEOLOGICAL MAPPING – SEABEDMAP PROJECT. PHASE I Light talk

16:40 T.F. Wanda, E.A. Wiles H.C. Cawthra and A. de Wit
MULTIBEAM BATHYMETRY AS THE BASELINE FOR MARINE RESEARCH: APPLICATION IN
MARINE HABITAT MAPPING, SOUTH AFRICA Light talk

16:45 GEOHAB Annual Meeting

Friday 20th May 2022 – Field Trip “To the origins of Venice”

- 9:00 START FROM SAN SERVOLO ISLAND
- 9:30 LIDO INLET: THE MOSE SYSTEM

- 10:00 TREPORTI CHANNEL: A ROMAN ROAD UNDER THE WATER?
THE SCOURS AT THE TIDAL CHANNEL CONFLUENCES
- 10:15 SAN FELICE SALT MARSHES
- 10:30 SCANELLO CHANNEL
- 11:00 TORCELLO ISLAND: GUIDED TOUR TO THE BASILICA AND MUSEUM
- 13:00** LUNCH BREAK
- 15.00 GUIDED TOUR IN THE LAZZARETTO NUOVO ISLAND

- 17:00 TRAVEL BACK TO SAN SERVOLO

- 18.00 ARRIVAL TO SAN SERVOLO

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- 2 F. Di Giovanna, J. A. Trotter, P. Montagna, M. McCulloch, G. Castellan, V. Grande, M. Taviani, F. Foglini
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- 3 S. Medelytė, A. Šiaulys, E. Vaičiukynas, K. Buškus, S. Olenin
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- 5 L. Fallati, A. Savini, C. Argenitino, S. Bünz, G. Panieri
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- 6 A. Gasparotto, C. Bertolini, J. Da Mosto
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- 7 S. Innangi, M. Innangi, M. Di Febbraro, G. Di Martino, M. Sacchi, R. Tonielli
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- 8 T. Lahami, I. Guarneri, A. Petrizzo, D. Galvez, V. Grande, F. Foglini, F. Madricardo
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- 9 Le Bas T., Durán R., Bialik O., and Micallef A.
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