

newsletter

Union Géographique Internationale
International Geographical Union

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Margarita Stancheva, Editor
Norbert P. Psuty, Co-Editor

Objectives: The Commission on Coastal Systems encourages the study of coastal systems throughout the world. The Commission sponsors and supports activities leading to the exchange of information regarding coastal systems among our members and throughout the IGU at large. The focus of attention is on interactive systems, both human and physical, and the areas of inquiry include issues such as sea-level rise, land-use changes, estuarine resources, coastal tourism and shoreline development, coastal recreation, and coastal zone management. The Commission will make concerted efforts to emphasize issues of Global Change. Copies of our Newsletter and announcements are on our website: <http://igu-coast.org/>

MESSAGE FROM THE CHAIR

Welcome to the Commission on Coastal Systems, and I hope that 2022 is an enjoyable and fruitful year for you all, and for coastal science in general. 2021 turned out to be almost as disruptive as 2020 had been. We continued to see changes to the way that almost all of our activities are undertaken, as a result of the pandemic. However, I hope that you have all kept safe, and that you have been able to adjust to undertaking research, sharing the results, and networking with colleagues in these altered circumstances.

In this Newsletter, we share some of the activities that the Commission has promoted and other developments related to coastal systems. The International Geographical Union held the International Geographical Congress in August hosted by colleagues in Istanbul. It was a virtual event, similar to EGU in April. In September, CoastGIS was held virtually in Raseborg, Finland at the Novia University. Details can be found later in this newsletter.

In 2022, there will continue to be significant coastal sessions. Two sessions will be convened at **EGU** in early April. The centenary of the IGU will be marked by a special hybrid (online and in person) **Extraordinary International Geographical Congress** in Paris, and three sessions on coastal issues are being organised. Details of each of these can be found in the following pages, and I urge you to participate; the **call for papers for each closes early in January**. Also particularly noteworthy is the ongoing series of conferences on Coastal Hazards in Africa, and further details about the next one of these are likely to be available soon.

I am very pleased to welcome several new members to our Steering Committee: Irene Delgado-Fernandez, who continues with colleagues to convene a very successful coastal morphodynamic session at EGU and who has produced the wonderful Coast for Kids videos; Paul Liu, who has worked on many of the large Asian delta systems and who has organised the very successful weekly source-to-sink webinar series since August 2020; and Niki Evelpidou, who has been active in developing networks of coastal scientists and who is editing a journal special issue on Coastal Systems. More details are available in the following pages and on the CCS website. I thank each of the members of the Steering Committee for the contributions they have made, and for their ongoing support that enables the Commission to build stronger networks and to promote future coastal activities.

COLIN WOODROFFE

PHOTO OF THE ISSUE



A number of coastal and marine landforms testify to the late Holocene, the relative sea level changes and the present-day evolution, providing evidence on the morphological configuration of the coastline and the coastal evolution of central Cyclades (Aegean Sea, Greece). This site is situated at the western part of Naxos island, the biggest of Cyclades complex islands. The coastal zone of this site is composed of sandy beach, bordered by low lying sand dunes. Dune fields are developed, at an almost continuous area of 20 km defining the back-shore boundary, relative to the coastline, while at the same time, natural coastal wetlands (lagoons) extend behind the dunes, inland, below sea level. The submarine area is characterized by the presence of a series of beachrock slabs identifying former fossilized beaches. Sand dunes are one of the most vulnerable and threatened ecosystems of the island which is facing an ongoing desertification for many reasons.

Photo credits and submitted by: CCS SC Member Niki Evelpidou, National and Kapodistrian University of Athens, Greece.

MEETINGS / SESSIONS SPONSORED OR CO-SPONSORED BY THE COMMISSION ON COASTAL SYSTEMS

APRIL 3-8, 2022. EUROPEAN GEOSCIENCES UNION GENERAL ASSEMBLY, VIENNA, AUSTRIA



Vienna | Austria | 3-8 April 2022



The EGU General Assembly 2022 (EGU22) will be a conference with a virtual component where everybody is welcome, in person or online! We plan for the format of the conference to be flexible, giving us the opportunity to more easily adapt to the uncertain global context. Two sessions are co-sponsored by the Commission on Coastal Systems:

GM6.7 Session: Coastal Zone Geomorphological Interactions: Natural versus Human-Induced Driving Factors

The session will be organised for the fourteenth time at the EGU2022 General Assembly and gives priority to the subjects of coastal geomorphology: evolution of coastal landforms, coastal morphodynamics, coastline alterations and various associated processes in the coastal zone, e.g. waves and sediment drift, which shape coastal features and cause morphological changes.

This session explores the interactions between natural geomorphic processes and human interventions in the coastal zone. Topics include work on predicting shoreline change and the effects of human activities on the coast, including coastal vulnerability to natural and human-related hazards, coastal and environmental sensitivity classifications and risk assessments, impacts on coastal dune fields, eco-restoration and re-building of coastal environments, Marine Spatial Planning, and Integrated Coastal Management.

This session is being organised by Margarita Stancheva (Bulgaria), Andreas Baas (UK), Hannes Tonnison (Estonia), Giorgio Anfuso (Spain) and Guillaume Brunier (France).

Session link: <https://meetingorganizer.copernicus.org/EGU22/session/43936>

GM6.9: Coastal morphodynamics: nearshore, beach and dunes

The session will be organised for the fifth time at the EGU2022 General Assembly. Examining the morphodynamics of coasts from the nearshore through to inland dune systems, is a fundamental requirement in understanding their short- to long-term behaviour. Operating across large spatial and temporal scales, examination of their resulting landforms is both difficult and complex. Recent methodological advances, however, now enable traditionally isolated coastal disciplines to be examined across various zones, promoting integration along multiple time and space scales, helping to couple processes with landform responses.

At the coast, dunes provide a physical barrier to flooding during high energy storms, while beaches and nearshore areas help dissipate storm impact through a series of dynamic interactions involving sediment transfers and sometimes rapid morphological changes. Examination of complex interactions between these three interconnected systems has become essential for the understanding, analysis and ultimately, the management of our coasts.

This session welcomes contributions from coastal scientists interested in the measurement and modelling of physical processes and responses within the three sub-units over various spatial and temporal scales. It will highlight the latest scientific developments in our understanding of this part of the planet's geomorphic system and will facilitate knowledge exchange between the submerged (e.g., nearshore waves, currents, and sediment transport) and sub-aerial (e.g., beach and aeolian dune dynamics) zones.

This session is being organised by Irene Delgado-Fernandez (UK), Emilia Guisado-Pintado (Spain) and Derek Jackson (UK).

Session link: <https://meetingorganizer.copernicus.org/EGU22/session/43952>

Abstract submission deadline: 12 January 2022, 13:00 CET !.

JULY 18-22, 2022. UGI-IGU PARIS, THE CENTENNIAL CONGRESS, PARIS, FRANCE



The International Geographic Union will reach its 100th anniversary in 2022.

To celebrate this creation, the evolution of the discipline over the last century, and its contemporary and future significance, the International Geographical Union and the French National Geography Committee, organized this exceptional congress.

Around the theme "**Time for Geographers**", the congress will mark the 100th anniversary of the International Geographical Union. **The Paris 2022 UGI Centennial Congress will take place between July 18 and July 22, 2022.**

The event will be organised in venues epitomising the living heart of geography in the city: Sorbonne, Institut de Géographie, Société de Géographie.

Three sessions at the IGU Paris are sponsored by the Commission on Coastal Systems:

Coasts' Futures: The Challenge of Coastal Resilience in the Face of Global Change, convened by Ywenn De La Torre and Virginie Duvat

Coastal systems increasingly experience erosion, flooding, soil and aquifer salinization, and induced damage and disruption to human activities, as a result of both climate change impacts (especially sea-level rise, increased wave height and accelerating ecosystem degradation) and the disturbances caused by local human activities. Yet, these systems concentrate major human and natural assets. Whereas some of them concentrate megacities, critical infrastructure and economic activities, others exhibit a diversity of ecosystems that provide multiple and critical

ecosystem services to human societies. The increased exposure and vulnerability of these systems to global climate-ocean change and local anthropogenic pressures interrogates their capacity to persist and adapt.

This session will focus on this adaptation challenge through the spectrum of coastal resilience, defined as the ability of coastal systems to adjust through natural- and human-driven processes to global change. Natural systems have, at least to some extent, the capacity to adjust to anthropogenic climate change and local pressures through sediment reorganization and landward migration. Likewise, human societies deploy a large range of adaptation measures aimed at reducing coastal risks through taking action on hazards and/or vulnerability. Among other responses, ecosystem-based adaptation is increasingly considered to reduce risks.

This session firstly welcomes contributions addressing the observational and methodological challenges raised by the urgent need to better understand current and future changes affecting all types of coastal systems (from the poles to the equator), their dynamics and resulting risks to human societies at multiple spatial-temporal scales. Contributions presenting the resilience of coastal systems to extreme events and recent progress in physical modelling are particularly welcome. This session secondly welcomes contributions addressing the adaptation challenge through the presentation of risk management and adaptation practices and their major outcomes. The latter are diverse and include a large range of measures, from those that are community-based and embedded in indigenous and local knowledge to those that are technologically innovative. Along this spectrum, nature-based solutions and strategic and managed retreat are increasingly implemented along coastlines, which allows to draw lessons from the ground. Furthermore, the adaptation challenge interrogates the capacity of human societies to collectively design from now on and despite a large range of uncertainties (which relate in particular to the climate and socio-economic dimensions) context-specific and desirable adaptation pathways.

Coastal resources and unsustainability: addressing underlying issues to strengthen resource governance, convened by Ritika Prasad and Bratati De

Coastal resources such as fisheries, oil and gas energy and minerals are vital for the sustenance of terrestrial and marine ecosystem. A healthy coastal environment is essential for social, economic and cultural development of individuals but there are high levels of conflict in the demands for coastal space and its resources. The coastal ecosystem involves complicated interaction and feedback in various forms. Among all the interactive processes shrinking coastal land, marine resource utilisations, food production, climate change and ecosystem degradation are the prominent processes that have local to global effects for the present as well as for the future earth. Advancement in technology has led to unsustainable fishing practices such as bottom trawling and dredging, industrialisation of the deep sea through off shore oil and gas drilling and depletion of mangroves for recreation and tourism activities. So to promote coastal economy, sustainable development of its resources should be considered. In terms of energy efficiency, we need to harness the wind energy, tidal energy and solar energy in coastal zones. This way we can make less dependence on the oil and gas which are responsible for alteration in our climate and ecological system. The recent oil spill off the island of Mauritius in Indian Ocean in 2020 has brought the dangers of moving large quantities of oil by sea back under the spotlight (NOAA Satellite Assessment of the Oil Spill in Mauritius, 2020). The amount of fish available in the oceans is an ever-changing number due to the effects of both natural causes and human developments. The Mediterranean Sea is the most overfished in the world, with 62% of its fish stocks now overfished and at serious and real risk of being depleted (State of Mediterranean and Black Sea Fisheries SoMFi, 2020). In order to maintain the fish stock in the years ahead, fisheries will have to develop sustainable fisheries. Mining the ocean bed can be devastating to the natural ecosystems. Dredging of any kind pulls up the ocean floor sediments resulting in widespread destruction of marine animal habitats and also introduces heavy metals into the food chain. Presently, the level of exploitation that is happening worldwide, it is evident that the regeneration capacity of the coastal resources cannot keep pace with the growing demand. Robust coastal resource governance can better account for, and ideally reduce the effects of unsustainable activities on coastal resources and thereby support the transition to a sustainable blue economy.

The aim of this session is to discuss case studies that highlight the importance of limiting unsustainable consumption of coastal resources and shift to a more efficient utilisation of them in terms of clean energy, strategic mining of minerals, sustainable aquaculture and land use practices. Giving emphasis on geoinformatic tools and techniques we can monitor the ocean resource utilisation from the past to the present and future. Such specialisation can provide multi temporal and multi scale framework capability. This session will deliver an opportunity for scientists, researchers, students and decision makers to communicate their understandings and experiences on the coastal

ecosystem and move towards judicious and rational use for the management of resources so that these crucial habitats can sustain for future generations.

Coastal Tourism, Heritage and Nature Conservation in the Anthropocene, convened by Vincent Andreu-Boussut and Céline Chadenas

As Anthropocene is driving global and local changes in the productivity, the distribution and the overall functioning of the ecosystems, many scientific contributions have flourished to address new insights and concepts for nature conservation. Among the impacted spaces and territories worldwide, coastal areas and shorelines are undergoing rapid changes linked to sea level rise and, therefore, constitute key areas to better understand what nature conservation should be and become under the Anthropocene. In this burgeoning debate in the scientific field of nature conservation and heritage studies, social uses and practices of natural areas cannot be set aside. Tourism economy has played a key role in the protected areas implementation and continues to play a major part in the socio-economical legitimacy of nature conservation and heritage projects. Thus, challenges for nature conservation are also challenges for tourism, from changes in the local practices and engagement with nature and heritage sites, to economic turn.

The main objective of this session is to explore theoretical implications, issues and new challenges in nature conservation (especially in protected areas) facing new Anthropocene ecologies in coastal areas. Within this overall question, the nature and heritage conservation and tourism nexus can be specifically addressed.

Any proposals from geography to interdisciplinary approaches are welcome theoretical perspectives, new insights, case studies, research or operational feedbacks. The main themes can be specified but are not restrictive:

- Heritage conservation vs change: issues and challenges;
- Change in tourism values and practices facing Anthropocene;
- Adaptation and nature conservation: experiences, issues, barriers.

Important deadlines:

The deadline for the abstract submissions to all sessions is January 11th, 2022, without extension.

The announcement of the accepted abstracts is expected by January 21st, 2022.

Two types of sessions

Abstracts are possible in two formats:

- Oral communication: Presentation will not exceed 15 minutes, in one of the working languages of the session (see the presentation sheet of the session to which you submit your proposal).
- E-poster: If your e-poster proposal is accepted by the session organisers, e-poster format guidelines will be specified as soon as possible.

Everything you need to know is on the congress website: information about the congress scientific objectives and key dates for registration, session submission and abstract submission:

<https://www.ugiparis2022.org/index.php?langue=en&onglet=4>

REPORTS ON MEETINGS

**AUGUST 16-20, 2021. 34th INTERNATIONAL GEOGRAPHICAL CONGRESS (IGC)
“GEOGRAPHY: BRIDGING THE CONTINENTS”, ISTANBUL, TURKEY**

**34th International
GEOGRAPHICAL
Congress**
17-21 AUGUST, 2020 • Istanbul
Istanbul University
"Geography: bridging the continents"



The 34th International Geographical Congress was held 16-20 August 2021, convened by host nation Turkey. With its theme of ‘Bridging the continents’, it was to have been held in Istanbul, ideally placed, and blending the cultures and traditions of West and East, Mediterranean and Anatolian. The decision was taken to postpone it from August 2020

when we were all in the grips of the global coronavirus pandemic. In view of the continuing disruption due to Covid19, this was a virtual Congress. Nevertheless, more than 600 delegates from 75 countries were warmly welcomed by the Congress hosts Chairman, Barbaros Gönençgil, and Ahmet Ertek, of Istanbul University Geography Department, on behalf of the Local Organizing Committee.

The First International Geographical Congress was held in Antwerp in 1871, and it passed a motion in favour of the use of the Greenwich Meridian as a global standard. And 150 years later, IGC remains the greatest periodic international event for the world geographic community; the various plenary presentations and parallel sessions were scheduled according to GMT. In his welcome speech, IGU President, Michael Meadows, emphasised how Geography remains extremely relevant today; indeed the six themes of the Congress capture the challenges that society faces across the world: Globalization vs Localization, Climate Change, Migration and Conflicts, Earth and Disasters, Eurasia and Middle East Studies, and the Anthropocene. Geographers continue to play a role, promoting greater global sustainability.

The Commission on Coastal Systems convened three parallel sessions at the Congress, chaired by Margarita Stancheva and Colin Woodroffe, and focused on the theme ‘sustaining coastal and marine environments in the Anthropocene’. In a keynote presentation, Jon French and co-authors described a new framework within which to foster more resilience-based coastal management. Margarita Stancheva addressed the issues at the land-sea interface, incorporating both natural processes and the impact of human activities, as part of maritime spatial planning in the Black Sea (in the context of the MARSPLAN-BS II project). Goro Komatsu described environmental conflicts that have hampered the establishment of the Costa Teatina National Park in central Italy, and Panu Kuntu explained the assessment criteria by which 45 Baltic Sea coastal habitats were assessed along the irregular coast of Finland.

In subsequent sessions, Colin Woodroffe outlined sediment sources and sinks in three contrasting coastal compartments in southeast Australia, and how their geomorphology has changed as the landscapes have evolved and in response to human influence. Chinni Kumar Kommireddi analysed the suspended sediment loads in rivers draining to the east coast of India, demonstrating that there had been consistently decreasing sediment delivery to the coast as a result of the proliferation of small dams throughout the catchments. In a subsequent presentation, he noted how this had implications for the historical trends of erosion along the shoreline of the Godavari delta. Dhriti Sengupta, and co-authors, described trajectories of land reclamation using Google Earth Engine; they showed extensive reclamation in major cities, many of them in the megacities of Asian deltas, where land subsidence and sea-level rise needs to be considered. The indicators and targets for ecological quality assessment of the northwest Pacific region were described by Vladimir Shulkin, as part of the Northwest Pacific Action Plan (NOWPAP). Maryam Rahmati described a remote sensing study of several wetlands in Iran. In the final presentation, Ahmet Ertek reported on the conditions in which beachrock has been forming in Lake Van in eastern Anatolia.

A special issue of the *Journal of Coastal Conservation* is being produced based on papers presented at the congress.

Submitted by: Colin Woodroffe, CCS Chair.

SEPTEMBER 15-16, 2021. COASTGIS 2021: "SUSTAINABLE COASTAL PLANNING IN A CHANGING WORLD" RASEBORG, FINLAND

CoastGIS 2021 – held virtually for the first time since it first began in 1995 – took place on the 15th and 16th September 2021 in Raseborg in Finland at the Novia University of Applied Sciences.

The overall aim of the conference is to examine the role of GIS and the related technologies of remote sensing and mapping to coastal management. In light of the pandemic and the visible impacts of climate change in the last few years the theme seemed very appropriate.

As always there was a very good programme covering a range of themes including: coastal mapping and data, coastal habitat, conservation, remote sensing, UAVs in coastal monitoring and mapping, spatial data, Big Data, coastal society and support, marine spatial planning, tools for coastal management, and the impacts of climate change on coastal management. The conference presentations were accompanied by Keynote talks, several workshops and a number of scientific posters.



Photo: Ekenäs Old Town by Johan Ljungqvist for Visit Raseborg

As Chair of the International Organising Committee of the CoastGIS series of conferences, I played a small role in the local organisation of the event and the proceedings which included presenting a paper on the research at the University of Aberdeen using UAVs in coastal monitoring, mapping and modelling, a UAV workshop, and even conducting a virtual wine tasting with a coastal vineyards theme! In addition, I was also asked to present some of the work of EGCP Ltd. and eventually came up with a ‘mashup’ of the TTPT project set in the context of monitoring, mapping, and modelling beach litter – a topic that has been the focus of some of our undergraduate and MSc research work at the University of Aberdeen over the years – and one that very nicely links into our current EGCP beach cleans.

The whole event went very smoothly – using WebEx as the virtual platform – and effectively relaunched the CoastGIS series of conferences again – having been delayed from 2020 by the pandemic. CoastGIS is a relatively small event – usually about 100 delegates in total – but one that brings together a unique group of people, many of whom began their involvement in the first CoastGIS conference in Cork in 1995. The University of Aberdeen has had the pleasure of hosting two of the CoastGIS events in the past and our continued involvement is an important part of the work of the Aberdeen Institute of Coastal Science and Management (AICSM) and coastal management in Scotland.

The only downside this year was not being able to travel to Finland – and whilst we got a very nice presentation from their Tourist Board about Raseborg and the surrounding area – it was not quite the same as being there! Usually CoastGIS events have some fantastic coastal excursions both before and after the conference. My lasting memory from Cork is one of being flown over the coast in a huge twin-rotor helicopter – a Chinook I think! What better way to see the coast than from the air!

Submitted by: CCS Vice Chair David R. Green, University of Aberdeen, Scotland, UK.

OCTOBER 12-16, 2021. 3RD INTERNATIONAL SYMPOSIUM ON COASTAL RESOURCES AND ENVIRONMENT (CORE 2021) ON: “COASTAL BIOGEOMORPHOLOGY AND NATURE-BASED SOLUTIONS”, NANJING, CHINA



The 3rd International Symposium on Coastal Resources and Environment (CORE 2021) on: “Coastal Biogeomorphology and Nature-based Solutions” was successfully held by Hohai University on 12th-16th October, 2021 in Nanjing, China. Prof. Joseph Hun-wei LEE, the chairman of IAHR (International Society of Hydraulic and Environmental Engineering) and the President of Macau University of Science and Technology, and Prof. Weiya XU, the Vice President of Hohai University attended the opening ceremony and delivered opening speeches. The opening ceremony was chaired by Prof. Zheng GONG, the Dean of School of Harbor, Coastal and Offshore Engineering, Hohai University.

This year’s conference was carried out both onsite and online due to the need of epidemic prevention and control. More than 160 experts and scholars from more than 50 research institutes in nearly 20 countries attended the conference, while nearly 10,000 people from more than 70 countries were attracted through online live broadcast and ZOOM conference room. Totally, 10 specially invited reports, 82 presentations in 4 parallel sessions, and about 20 poster presentations were arranged, covering five topics including Estuarine and coastal hydrodynamics and bio-morphodynamics, Sediment dynamics involving biological effects, Data acquisition and monitoring techniques, Estuarine and coastal species competition and co-existence, Coastal management and nature-based solutions. The detailed list of presentations can be viewed here: <http://core2021.iahr.org/>. The participants had in-depth discussions on the research frontiers from small-scale physical-biological processes to large-scale estuarine and Coastal geomorphology evolution, as well as related engineering measures. Particularly, to encourage the young scholars and graduate students, their academic reports were comprehensively evaluated by participating experts and 14 distinguished young scholars and graduate students were finally honored with “Excellent Presentation Awards for Young Researchers”.

CORE is an international academic conference initiated by Hohai University, aiming to establish an open platform for exchanges in the field of coastal zone resources and environment, and promote international cooperation. The 1st and 2nd CORE were successfully held in 2017 and 2018 with increasing attendees and international influences. This year, the 3rd CORE was sponsored by IAHR, and jointly organized by Hohai University, University of Edinburgh, Sun Yat-sen University and University of Dublin, Ireland. Professor Zeng Zhou and Professor Zheng Gong from Hohai University, Professor Simon Mudd from University of Edinburgh, Professor Zhan Hu from Sun Yat-sen University, Professor Iris Moller from University College Dublin are co-chairmen of the organizing committee.

The next symposium is going to be held by Beijing Normal University in 2022.



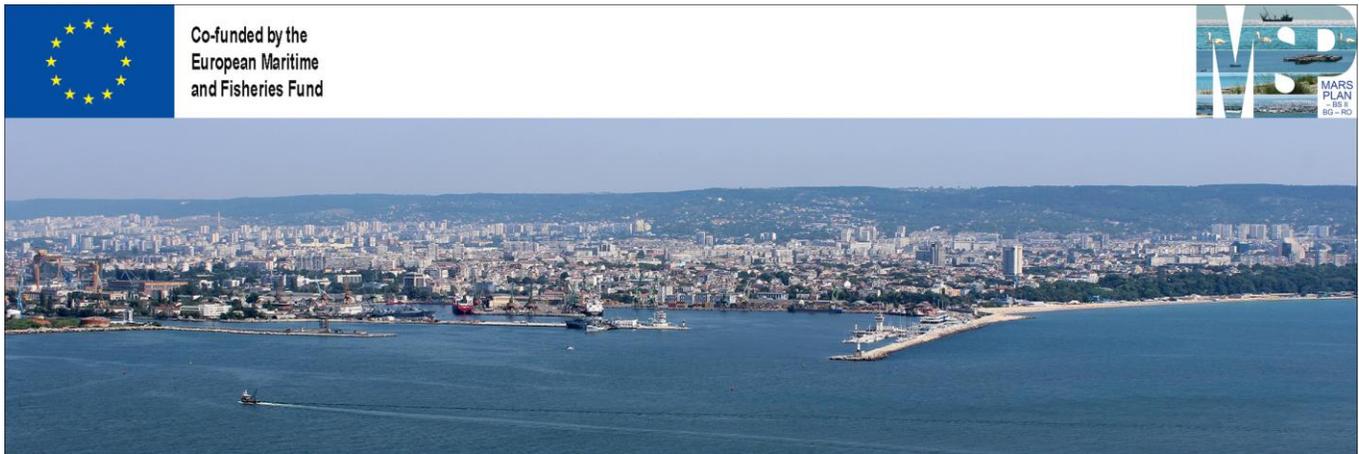
Photo: Keynote speakers



Group photo of onsite participants

Submitted by: Zeng Zhou, Ph.D, Professor in Coastal Geomorphology, College of Harbour, Coastal and Offshore Engineering, Hohai University, Nanjing, China.

NOVEMBER 25, 2021. MARSPLAN-BS II FINAL CONFERENCE: LESSONS FROM THE BLACK SEA FOR COHERENT CROSS-BORDER MSP (Virtual)



The Final Conference of the MARSPLAN-BS II project was held virtually on November 25, 2021. The project is implemented with the financial assistance of the European Maritime and Fisheries Fund (EMFF) of the European Union (EU) via the European Commission`s Directorate General for Maritime Affairs and Fisheries (DG MARE) and the European Climate, Infrastructure and Environment Agency (CINEA) under the Multi-beneficiary Grant Agreement EASME/EMFF/2018/ 1.2.1.5/01/SI2.806725. The project runs from July 2019 till the end of 2021 and its main goal is to support coordinated cross-sectoral Maritime Spatial Planning in Bulgaria and Romania in the framework of EU MSP Directive 2014/89/EU and to establish a long-term mechanism for cross-border cooperation in the Black Sea Basin. The project is coordinated by the Bulgarian Ministry of Regional Development and Public Works (national Competent MSP Authority). Project partners from Bulgaria are: National Center for Regional Development, Center for Coastal and Maritime Studies and “Nikola Vaptsarov” Naval Academy. The Romanian partners are: Ministry of Development, Public Works and Administration (national Competent MSP Authority), GeoEcoMar, National Institute for Marine Research and Development „Grigore Antipa“ and Ovidius University of Constanta.

Over 80 participants from different organizations attended the conference, including representatives of the European Commission's Directorate General for Maritime Affairs and Fisheries (DG MARE) and the European Climate, Infrastructure and Environment Executive Agency (CINEA); the Black Sea Commission, the Organization of the Black Sea Economic Cooperation, members of the MARSPLAN-BS II Advisory Board and all project partners.

Dr. Margarita Stancheva (CCS Secretary and CCMS project coordinator) presented: *How to integrate Land-Sea Interactions (LSI) in MSP for the cross-border region*, and *Best practices and recommendations for further work on integrating Land-Sea Interactions into cross-border MSP*. Dr. Stancheva also presented a case study study, focused on *Addressing Multi-Use (MU) concept with maritime spatial planning in the cross-border region (Bulgaria)*. The CCMS is leading the implementation of both LSI and MU activities in the MARSPLAN-BS II project.

More information on presentations from the MARSPLAN-BS II final conference and project results can be found on the MARSPLAN-BS II website:

<http://www.marsplan.ro/en/events.html>

<http://www.marsplan.ro/en/results/marsplan-bs-ii-integration-of-land-sea-interactions.html>

<http://www.marsplan.ro/en/results/marsplan-bs-ii-addressing-the-multi-use-concept.html>

As part of the project, we are happy also to promote our newly-published article in the Marine Policy Journal through the Elsevier Share Link: URL (<https://authors.elsevier.com/a/1eK3K,714MjLbC>), **providing 50 days' free access to the article**. Anyone clicking on this link before February 16, 2022 will be taken directly to the final version of our article on ScienceDirect, which they are welcome to read or download. No sign up, registration or fees are required. The paper has been published in collaboration with University of Gdansk, Poland, National Research Council (CNR), Institute of Marine Sciences (ISMAR), Venice, Italy, and Marine Scotland - Marine Planning and Policy, Scottish Government, Scotland, UK,

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Supporting multi-use of the sea with maritime spatial planning. The case of a multi-use opportunity development - Bulgaria, Black Sea

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With expanding human uses of sea space, the role of marine/maritime spatial planning (MSP) in supporting their sustainable co-existence and synergies, while preserving marine ecosystems, becomes an increasingly challenging task. To address the sustainable exploitation of sea resources, and the optimal use of sea space, the concept of Multi-Use

(MU) has been introduced. Despite international examples of successfully applied multi-uses, this concept is still new for Bulgaria, its decision-makers, spatial planners and stakeholders.

The paper is aimed at investigating the opportunity for development of one multi-use combination involving Tourism, Underwater Cultural Heritage & Environmental Protection in Bulgaria. Based on desk research and active stakeholder engagement, the study identifies the main drivers and barriers of multi-use, the expected benefits (added values) of its implementation, and its potential negative impacts. Furthermore, recommendations are proposed to overcome the identified barriers and impacts with the support of MSP and to further exploit multi-use potential at the local, regional (subnational), national and cross-border levels.

Submitted by: CCS Secretary Margarita Stancheva (Center for Coastal and Marine Studies, Bulgaria).

MEETINGS WITH COASTAL INTEREST

MAY 19-20, 2022. EUROPEAN MARITIME DAY (EMD) RAVENNA, ITALY



The European Maritime Day (EMD) is the annual two-day event during which Europe's maritime community meet to network, discuss and outline joint action on maritime affairs and sustainable blue economy.

EMD is the place where 'Ocean Leaders Meet'. It provides an engaging and complete interactive experience to catch up on the current state of play on a broad range of issues concerning the blue economy and the marine environment and discuss ways of moving forward. It features a large number of excellent speakers, thematic sessions, stakeholder workshops and project pitch sessions organised by stakeholders and the European Commission as well as hundreds of B2B meeting opportunities. EMD targets professionals from businesses, governments, public institutions, NGOs and academia.

The 2022 edition of European Maritime Day will take place in Ravenna, Italy, on 19-20 May. It will be co-organised by the European Commission, the City of Ravenna and the Region of Emilia-Romagna.

At the core of European Maritime Day is a 2-day conference. High-level plenary sessions including inspirational speakers, leadership exchanges and stakeholders' workshops attract experts and stakeholders from across Europe and beyond.

Information on registration and agenda will follow in the next months!

MAY 30-JUNE 3, 2022. 4TH BALTIC EARTH CONFERENCE ASSESSING THE BALTIC SEA EARTH SYSTEM, JASTARNIA, HEL PENINSULA, POLAND



Baltic Earth

Earth System Science for the Baltic Sea Region

The conference covers the topics of the Baltic Earth Assessment Reports (BEAR), which reflect the majority of Grand Challenges and research themes of Baltic Earth over the past nine years. Conference participants will present

their research around these topics and are invited to discuss both Baltic Earth achievements and the way forward. The conference is intended as discussion forum for scientists, students, managers and other stakeholders. The sessions of this conference reflect the topics of the Baltic Earth Assessment Reports and other Baltic Earth topics. In discussing the different topics, we would like to include the perspectives from other marginal seas (like the neighboring North Sea, but also around the world). Contributions from other marginal seas shall help to evaluate the state of the regional Earth system (including human impacts) and management options in the Baltic Sea and elsewhere.

Conference topics:

- Salinity dynamics
- Biogeochemical functioning and development: From catchment to the open sea
- Natural hazards and extreme events
- Sea level dynamics and coastal erosion
- Human impacts and their interactions
- Sustainable management options
- Analysing and projecting past and future climate changes
- Comparing marginal seas around the world

Call for Papers

Contributions in accordance with the conference topics as outlined above, both oral or as poster, are welcome. Extended abstracts in English, maximum of two pages, including figures, tables or diagrams, are invited to be submitted by E-mail to the International Baltic Earth Secretariat.

Abstracts must be submitted by e-mail to balticearth@hereon.de by 21 January 2022. Please indicate to which topic you would like to have your presentation allocated. An electronic abstract template is available for download at <https://baltic.earth/hel2020>. Please use this template, other formats will not be not accepted.

Abstract Deadline: 21 January 2022

Conference website: baltic.earth/hel2022/

JUNE 13-17, 2022. PARTICLES IN THE AMERICAS (PIA) CONFERENCE (VIRTUAL)



The 2022 Particles in the Americas (PiA) Virtual Conference will take place between June 13 to 17, 2022.

The mission of PiA is to bring together the scientific, academic and technical community from the American continent to study, evaluate and disseminate information and knowledge across the spectrum of disciplines related to sedimentation and sediment transport processes. PiA focuses on the science, engineering, monitoring and modelling of erosion and transport of particles, and promotes activities to improve the management of natural resources, mitigation and reclamation decisions for the benefit of the environment and society. Abstracts related (but not limited to) to the following topics are welcome!

- Methods for Sediment Monitoring, Measurements and Characterization
- Sediment Processes Assessment and Modeling

- Reservoir Sedimentation Management and Control
- Sediment in Coastal and Marine Environments
- Sediment Habitats, Biodiversity and Ecosystem Services
- Stream/River, Wetland and Coastal Restoration
- Assessment, Restoration and Reclamation of Mining Influenced Soils
- Sediment Management Policy and Implementation

More information can be found on the PiA website: <https://www.particlesintheamericas.org/conference.html>

Important dates:

- ✓ **Abstracts submission deadline:** February 4th, 2022
- ✓ **Notification to authors:** April 8th, 2022
- ✓ **Speaker/Author registration deadline:** May 13th, 2022
- ✓ **Early Bird registration:** February 4th to May 13th, 2022

SEPTEMBER 12-16, 2022. LITTORAL CONFERENCE 2022, COSTA DA CAPARICA, PORTUGAL



16TH INTERNATIONAL CONFERENCE
LITTORAL 22
 12 - 16 SEPTEMBER | COSTA DA CAPARICA, PORTUGAL
 ADAPT OUR COAST FOR A SUSTAINABLE FUTURE

The 16th conference Littoral has been postponed until September 2022, and will be hosted by nova School of Science and Technology of NOVA University Lisbon (FCT NOVA). **Conference Special topic: Adapt our coast to a sustainable future.** This event will take place between 12-16 September 2022 in Lisbon - Portugal, bringing together an opportunity for all participants to visit and enjoy our coast. The organisers also considering the possibility to offer online access - to ensure international accessibility to the conference and reduce the carbon footprint of those less likely to travel to Lisbon.

CONFERENCE THEMES:

1. Literacy, education and governance

Ocean literacy and Education for a sustainable future
 Governance, active citizenship, and coastal communities

2. Planning and management

Marine and coastal spatial planning and green/blue infrastructure
 Source to sea – River basin and coast interactions
 Nature-based solutions for coastal ecosystem restoration and management

3. Blue and circular economy

Blue and circular economy in coastal areas

Fisheries, Aquaculture and other sea food resources
Tourism and Port Activities
Innovative energy production and mineral resources

4. Risks and climate change

Climate change adaptation processes and strategies
Risk assessment and management and emergency planning
Offshore and nearshore infrastructure for coastal protection
EU policy and projects – managing global change and environmental risks

5. Coastal monitoring, mapping and modelling technologies

Remote sensing and UAV (unmanned aerial vehicle)
Geospatial technologies (GIS)

6. Ecosystems, ecological services and biodiversity

Coastal Ecosystem restoration and management
Biodiversity, coastal ecosystems, nature conservation and ecosystem services

7. Aquatic ecology and quality

Ecotoxicology and risk assessment
Marine litter and microplastic
Bioremediation
Biosedimentary Dynamics of coastal environments
Wastewater treatment, emerging components, and coastal water quality

Get ready and submit your abstract!

The LITTORAL22 Scientific Programme Committee invites authors to submit an abstract for either an oral or a poster presentation.

Abstract submission date: 31 January 2022!

Visit the LITTORAL website: <https://www.littoral22.com/>, for more information and deadlines and stay tuned for further updates!

SEPTEMBER 12-16, 2022. 10TH INTERNATIONAL CONFERENCE OF THE INTERNATIONAL ASSOCIATION OF GEOMORPHOLOGISTS (IAG), COIMBRA, (PORTUGAL)



The 10th International Conference of the International Association of Geomorphologists (IAG) will take place in Coimbra (Portugal) from 12 to 16 September 2022, under the theme "**Geomorphology and Global Change**". It is organized by [IAG](#) and [Portuguese Association of Geomorphologists \(APGeom\)](#) and co-organized by the [Centre of](#)

[Studies in Geography and Spatial Planning \(CEGOT\)](#), the [Department of Geography and Tourism \(University of Coimbra\)](#), and the [Department of Earth Sciences \(University of Coimbra\)](#).

A bustling scientific programme will represent the latest innovations in theoretical, methodological and applied approaches in geomorphology. The organizers, APGeom, are proud that the conference will take place in Coimbra – a medium-sized city, rich in history and heritage, and strongly connected with its university, one of the oldest in Europe (730 years old) and a UNESCO World Heritage site since 2013.

The programme will include opportunities to explore the diverse geomorphology of Portugal – from the mountains of Minho, through the Central Cordillera, passing carbonate and karstified massifs, quartzitic mountains and by the plateaus of "Meseta" and Alentejo, down to a coastline with beach-dune systems, cliffs and estuaries of ecological value.

Field trips such as to the Serra da Estrela, the Alentejan and Algarve coasts, the Cape Vert – Fogo island, the Azores and Madeira islands, etc. will be proposed around the conference dates and the usual opportunity will be offered to young geomorphologists to participate in a one-week intensive training course associated with the conference.

Important dates

- 14 January - 14 March 2022: Abstract submission
- 31 May 2022: Deadline for early bird registration
- Other important dates can be found [here](#)

Follow the conference website for further information: <https://www.icg2022.eu/>

NOVEMBER 9-11, 2022. 3RD COASTAL SYMPOSIUM, KÜSTE IM WANDEL - COAST IN TRANSITION 2022, HAMBURG, GERMANY



The increasing pressure on our coasts due to climate change and human use increases the need for results and options for action for sustainable coastal management.

The 3rd Coastal Symposium 'Küste im Wandel - Coast in Transition 2022' brings together scientists and practitioners and is a forum for exchange on the research topics of:

- nature based coastal protection strategies,
- sustainable fisheries and
- multiple stressors for coastal organisms.

After the focus on the first day is on the exchange with practitioners (conference language German), the scientific discussion will be deepened on the 2nd and 3rd day (conference language English). A varied program invites networking and discussion.

Be there and make a note of the most important dates:

Submission of oral presentations and posters **from 1 June until 31 July, 2022.**

Registration until 30 September, 2022.

Follow the conference website for further information: <https://deutsche-kuestenforschung.de/id-3rd-coastal-symposium.html>. -----

HIGHLIGHTS & FEATURES

The International Geographical Union (IGU) and the International Geographical Congress (IGC)



The International Geographical Union (IGU) promotes the study of geographical problems; initiates and coordinates geographical research requiring international cooperation; promotes scientific discussion and publication; provides for the participation of geographers in the work of relevant international organizations; facilitates the collection and diffusion of geographical data and documentation in and among its member countries; promotes International Geographical Congresses. See the IGU webpage - <https://igu-online.org/>.

The **Commission on Coastal Systems (CCS)** is one of the Commissions within IGU. The IGU Executive has approved the continuation of the Commission for another four years, but encourages broadening of the membership of the Steering Committee. Accordingly, we would be pleased to hear from coastal scientists who have an interest in contributing to the further development of the coastal network. The CCS has a website that can be found at: <http://igu-coast.org/>. Contact information for CCS Officers and Steering Committee members can be found on the website along with past and present newsletters.

If you are interested in becoming a member of the CCS, an on-line membership form is available at the end of newsletter.

SPECIAL ISSUES OF JOURNALS ON COASTAL TOPICS

COASTAL SYSTEMS: MONITORING, PROTECTION AND ADAPTATION APPROACHES



Journal of
*Marine Science
and Engineering*

*Special Issue in Journal of Marine Science and
Engineering*
an Open Access Journal by MDPI

Coasts are dynamic and fast-changing environments. They are areas of unique natural importance, providing important natural habitats for flora and fauna and home to more than 40% of the global human population. Because of their rich resources, they are more densely populated than the hinterland and exhibit higher rates of population growth and urbanisation. Over millennia, changes in relative sea level, geomorphological processes and extreme events such as storms, hurricanes and tsunamis have shaped and changed the earth's coastlines. Although coastal areas are naturally dynamic, and climate change is considered responsible for many impacts over the long term, a number of other factors, such as human interventions, sediment supply from fluvial systems, etc., also contribute significantly. Therefore, a systems approach is necessary to understand the adaptation challenge. This Special Issue invites researchers and scientists involved in related studies to come forward with their research and present their findings.

Guest Editors:

Prof. Dr. Niki Evelpidou, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Panepistimiopolis, Zografou, 15784 Athens, Greece evelpidou@geol.uoa.gr

Dr. Anna Karkani, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Panepistimiopolis, Zografou, 15784 Athens, Greece ekarkani@geol.uoa.gr

Dr. Miltiadis Polidorou, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Panepistimiopolis, Zografou, 15784 Athens, Greece mpolidorou@geol.uoa.gr

Deadline for manuscript submissions: 1 February 2022!

Submitted by: CCS SC Member Niki Evelpidou, National and Kapodistrian University of Athens, Greece.

APPLICATIONS OF STRUCTURE-FROM-MOTION PHOTOGRAMMETRY IN COASTAL AND MARINE STUDIES



geosciences

Special Issue in Journal of Geosciences
an Open Access Journal by MDPI

Structure-from-motion (SfM) is a topographic survey technique that has recently emerged from traditional photogrammetry and advances in computer vision, offering potential to generate high accurate dense point clouds at different scales, to reconstruct the three-dimensional geometry of objects or surfaces. The applications of SfM in coastal and marine geosciences are vast, ranging from geomorphology, sedimentology, natural hazards, structural geology, geoheritage, archaeology, etc.

This Special Issue aims to document the vast applications of SfM across different coastal and marine environments, such as coastal barriers, sandy and boulder beaches, rock platforms, nearshore and deeper waters. We welcome original contributions addressing a wide range of processes and scales, especially those highlighting diverse and novel approaches. Submitted papers are expected to meet a series of criteria, including: i) a sound description of methods such as equipment and photogrammetric processing; ii) model parameters; iii) assessment of topographic quality through comparison against independent points; and iv) appropriate acknowledgement and handling of uncertainties.

Guest Editors:

Dr. Rafael C. Carvalho, School of Life and Environmental Sciences, Deakin University, Victoria VIC 3280, Australia r.cabralcarvalho@deakin.edu.au

Dr. Javier Leon, School of Science and Engineering, University of the Sunshine Coast, Sippy Downs, QLD 4556, Australia jleon@usc.edu.au

Dr. Luis Conti Escola de Artes, Ciencias e Humanidades, University of Sao Paulo, Sao Paulo 05508-060, Brazil lconti@usp.br

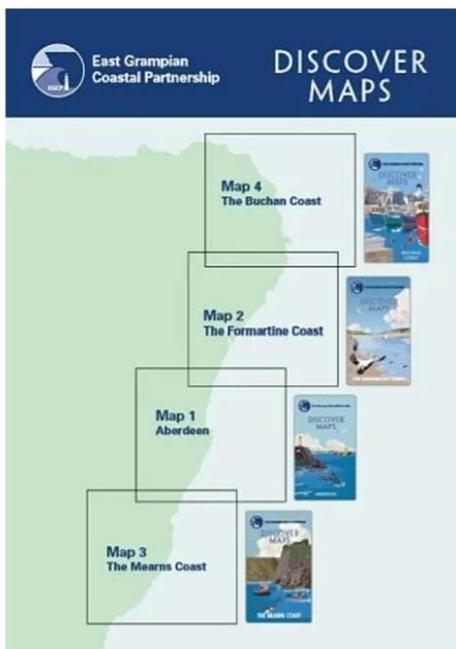
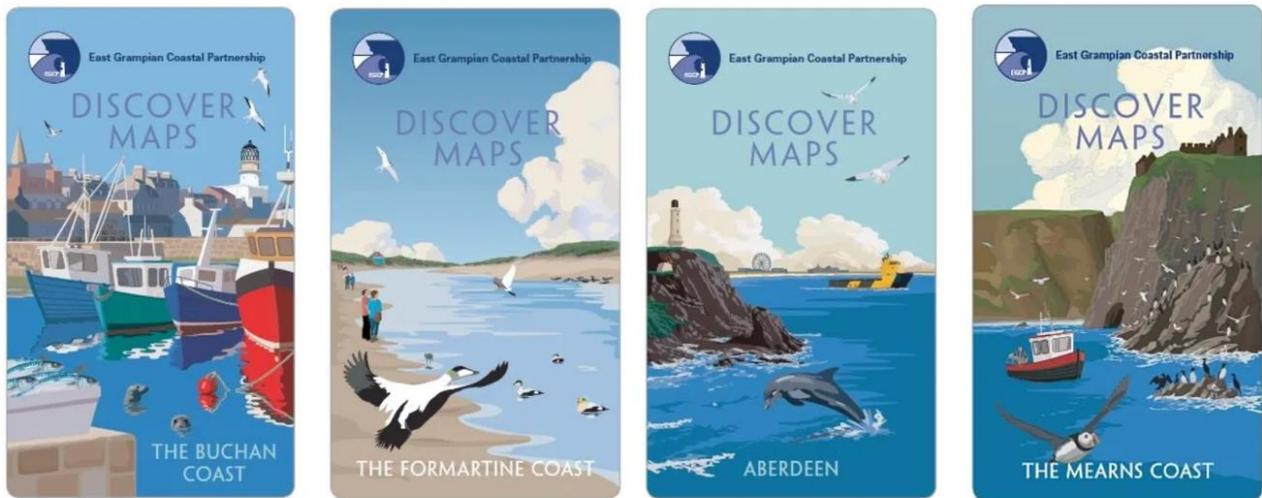
Deadline for manuscript submissions: 15 May 2022!

Submitted by: Rafael C. Carvalho, School of Life and Environmental Sciences, Faculty of Science Engineering & Built Environment, Deakin University, Australia.

EGCP – DISCOVER MAPS PROJECT



The East Grampian Coastal Partnership (www.egcp.scot) is currently completing an exciting new series of four maps covering the Aberdeen and Aberdeenshire coast as part of the EGCP Discover Maps Project. These maps will contain a wealth of interesting information about the coast and a record of the: people, history, environment and activities that make the North East coastline of Scotland so unique and special. Alongside the Discover Maps, EGCP Ltd. is also developing a video.



We hope this project will continue to grow and become a social story of the area and its people.

Find out more about this project @ <https://www.egcp.scot/discover-maps>

Esri StoryMap:

<https://storymaps.arcgis.com/stories/3b43b0002dcb4ca4b1d65d8484ebb1d0>

Contact: David R. Green for further information: d.r.green@abdn.ac.uk

DRONES: SPECIAL ISSUE "UAVS FOR COASTAL SURVEYING"

Dear Colleagues,

UAVs, unmanned aerial systems (UASs), USSs, and underwater drones have all evolved very quickly in recent years. They have found many research and commercial applications utilizing cameras and other sensors to monitor, map, model, and survey the environment. This Special Issue will focus specifically on the role these platforms and sensors can play in monitoring, mapping, modelling, and surveying the coastal zone, and on the rapidly evolving technology.

Drone technology provides the means to collect many different environmental multi-temporal and multi-spatial image and data sets. Drones are now widely used for habitat mapping, beach topographic survey, coastal erosion monitoring, coastal ecology mapping, shallow water bathymetry, coastal management, shoreline mapping, coastal protection structures, cliff faces, coastal geomorphology, wildlife monitoring, and saltmarsh topography, and evolution amongst many other applications.

Data analysis and the combination of multiple drone datasets offer the potential to quickly and efficiently transform spatio-temporal data into information specific to the coastal environment, planning, and decision making. Mining and utilizing this data will require enhanced computer algorithms and programs to unpack and understand the visual information, and to facilitate information management. Developments in the automation of flight, image acquisition, and information extraction, including documentation, tracking, and GIS data integration, will all be very important in realizing this potential.

Software developments will drive drone technology and its future possibilities, and artificial intelligence (AI) will increasingly be incorporated at all stages of data use. At present, cloud-based machine learning (deep learning and predictive analytics) is being employed to identify data characteristics, with spatial datasets trained by specialized teams. However, although there are already some drone-based AI solutions for image recognition/machine vision in the industry, it is still early in the technology development cycle.

This Special Issue therefore welcomes scientific papers on the rapidly developing technology of airborne, surface, and underwater drones and their application to coastal data collection, storage, processing, information extraction, geo-visualization, and communication in the context of monitoring, mapping, modelling, and surveying the coastal environment.

Dr. David R. Green

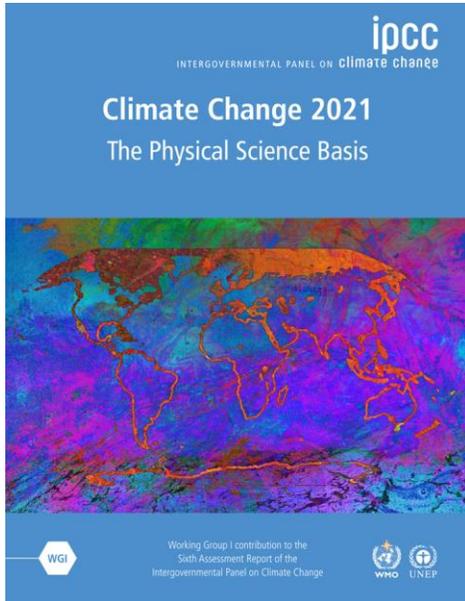
Dr. Brian S. Burnham

Guest Editors

https://www.mdpi.com/journal/drones/special_issues/UAVs_Coastal_Surveying

BOOKS & REPORTS ON COASTAL AND MARINE TOPICS

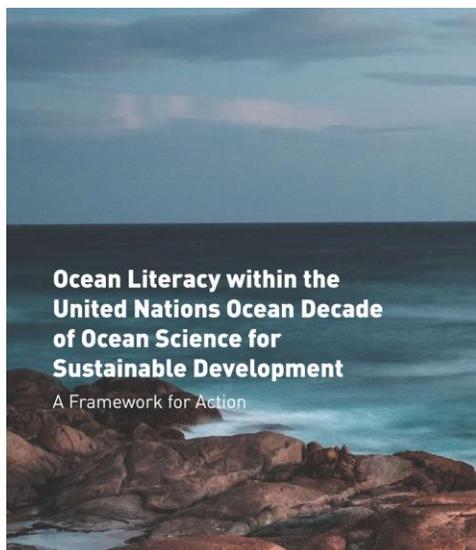
CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, THE WORKING GROUP I CONTRIBUTION TO THE SIXTH ASSESSMENT REPORT



The Intergovernmental Panel on Climate Change releases its next report titled "[Climate Change 2021: the Physical Science Basis](#)" on 9 August 2021. This report is the Working Group I contribution to the Sixth Assessment Report and is released following an approval session held remotely to consider the document from 26 July to 6 August.

Working Group I assesses the physical science basis of climate change. The [REPORT](#) provides the latest assessment of scientific knowledge about the warming of the planet and projections for future warming, and assess its impacts on the climate system.

OCEAN LITERACY WITHIN THE UNITED NATIONS DECCADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT: A FRAMEWORK FOR ACTION



Ocean Literacy efforts can contribute to progress in all of the Ocean Decade Challenges by encouraging an informed society that values the ocean and takes action to overcome such challenges.

This Ocean Literacy Framework for Action (the Framework) builds on the Ocean Decade Action Framework developed in the Implementation Plan to provide all stakeholders with further insights into how Ocean Literacy supports the Ocean Decade, as well as how Ocean Literacy Actions can be designed to contribute to the Ocean Decade Challenges and Objectives. The Framework is an invitation for all stakeholders to develop Ocean Decade Actions and any collaborations, partnerships and networks needed to: expand access; to showcase and share Ocean Literacy tools; and to increase the research, monitoring and evaluation of the impacts of Ocean Literacy.

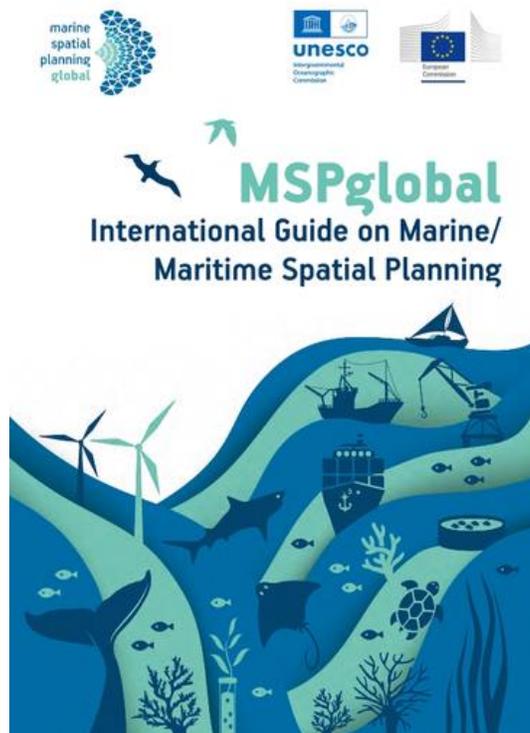
Originally published by **Intergovernmental Oceanographic Commission of UNESCO**

(<https://unesdoc.unesco.org/ark:/48223/pf0000377708.locale=en>).

The United Nations
Decade of Ocean Science
for Sustainable Development
(2021-2030)



MSPGLOBAL INTERNATIONAL GUIDE ON MARINE/MARITIME SPATIAL PLANNING



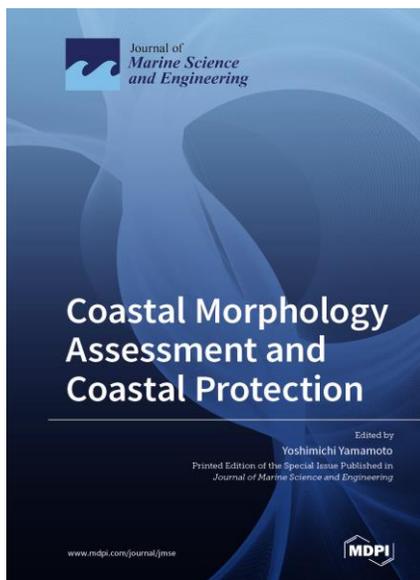
Produced jointly by the Intergovernmental Oceanographic Commission (IOC) of UNESCO and the European Commission's Directorate-General for Maritime Affairs and Fisheries (DG MARE), the "[MSPglobal International Guide on Marine/Maritime Spatial Planning](#)" presents a diversity of topics, case studies and actions to assist governments, partners and practitioners in their MSP processes. From setting the scene and designing the planning process to implementation and evaluation, the publication draws on the expertise and experience accumulated worldwide on technical, practical and conceptual aspects related to MSP since the first guide was published in 2009 by the IOC-UNESCO. It addresses new and emerging issues related to ecosystem-based management, such as the blue economy and climate change, and incorporates MSP within the more global context of the 2030 Agenda for Sustainable Development.

"The ultimate goal of Marine Spatial Planning is to offer to all stakeholder groups and communities a platform to co-design how they can conserve the ocean while using its resources and space. In the starting year of the Ocean Decade, this new flagship guide takes us forward towards establishing MSP as a major tool for sustainable ocean management," said Vladimir Ryabinin, IOC Executive Secretary.

The guide was officially launched during the [final conference](#) of the joint IOC-UNESCO/DG MARE MSPglobal Initiative, celebrated on Tuesday 5 October 2021 during a major virtual event.

NEW SPECIAL ISSUE BOOK "COASTAL MORPHOLOGY ASSESSMENT AND COASTAL PROTECTION"

Editor: Yoshimichi Yamamoto



The Special Issue reprint book of Journal of Marine Science and Engineering "**Coastal Morphology Assessment and Coastal Protection**" has been published online and is freely accessible on the MDPI Books platform (<http://www.mdpi.com/books/pdfview/book/4536>).

Sediment, which collects in rivers and seas to secure a large amount of aggregate, reduces the supply of earth and sand to coasts. Dams and breakwaters constructed in various places also impede the transportation of earth and sand. Furthermore, the maintenance dredging of dam lakes and waterways will also disrupt the supply of sediment to coasts if the dredged sediment is not released back into the water system.

Due to these development activities, coastal erosion has become a serious problem in many beaches around the world. Moreover, due to the excessive industrial activities of human beings, the exacerbation of natural disasters caused by global warming is becoming a real problem. In addition, because

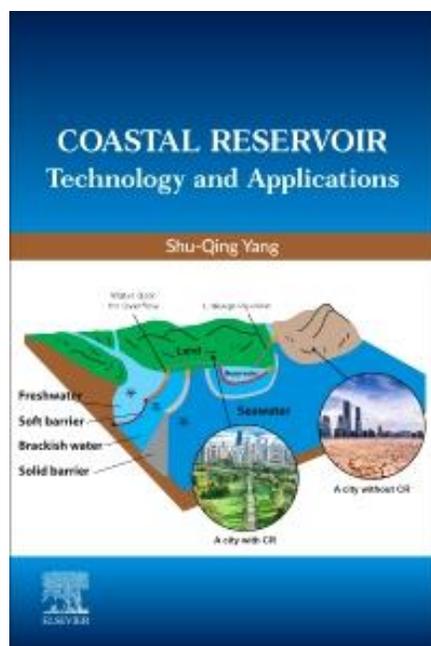
great earthquakes with a magnitude of 9 or more have occurred about three times per 100 years at boundaries of the Pacific Crust Plate and the Nazca Crust Plate since 1700, the possibility of losing many lives and assets in the Pacific coastal areas due to a huge tsunami caused by a great earthquake should not be underestimated. Therefore, research into the prevention and mitigation of coastal erosion and coastal disasters is becoming increasingly important.

This Special Issue, “Coastal Morphology Assessment and Coastal Protection”, consists of five peer-reviewed papers, collected to contribute to the technological progress on the prevention of coastal erosion and coastal disaster resulting from large waves and tsunamis.

COASTAL RESERVOIR TECHNOLOGY AND APPLICATIONS

1st Edition - January 1, 2022

Author: Shu-Qing Yang



Coastal Reservoir Technology and Applications presents the analyses showing that the world is not running out of water, but water is running out of river mouths—we need to work to harness this resource. Compared with inland water storages and desalination technology, coastal reservoirs are a nature-based water solution without disturbing the environment. This book mainly answers the questions of what the coastal reservoir technology is, where we should construct coastal reservoirs, and how to supply sufficient, high-quality and affordable water to the world with minimum environmental/social impacts. Chapter 1 reviews modes of water resources development in the history along with current problems and reasons. Chapter 2 discusses the definition of coastal reservoirs, its classifications and applications, and the SPP/downstream water management strategy.

Other chapters analyse water crisis in every continent, as well as their water solutions. The possible coastal reservoir for each major river is suggested as well. Without freshwater, no one can survive. Likewise, without sufficient, high-quality and affordable freshwater, no community can achieve sustainable development. However, water is also a killer when it is too much (floods), too dirty (pollution), and too turbid. Different from other books, this resource shows how to solve these water problems. Coastal reservoirs and SPP strategy

are suggested to develop floodwater in a safe way in coastal and inland regions, respectively. Solution of water-food-energy-ecosystem nexus needs a paradigm shift from upstream to downstream water management, i.e., from mountainous dams to coastal reservoirs, which conserves the precious, clean freshwater in seawater environment.

The **IGU Commission on Coastal Systems (CCS) website** is at: <http://igu-coast.org/>

Contact information for CCS Officers and Steering Committee members can be found on the website along with past and present newsletters. If you are interested in becoming a member of the CCS, an on-line membership form is available at the end of the Newsletter.

Mike Meadows, Professor at the Department of Environmental & Geographical Science, University of Cape Town, South Africa, President of the International Geographical Union (IGU), is our liaison with the executive committee of the IGU: michael.meadows@uct.ac.za.

BECOME A CORRESPONDING MEMBER OF THE IGU COMMISSION ON COASTAL SYSTEMS

If you wish to be a member:

Please complete and return the form located on this page of the Newsletter, preferably by email.

To maintain your membership:

Share your information and experiences. Provide information on your professional activity and the items you think will be of interest to your fellow members.

Please provide the following:

new CCS member		current CCS member	
Name	.....	Department	.....
Institution	.....	Street or P.O. Box	.....
City	.....	State/Province	.....
Zip code	.....	Country	.....
Fax	.....	Phone	.....
		E-mail	.....

I am interested in receiving the Newsletter of the Commission.

My specialization in the field of coastal systems is:

1.
2.
3.
4.
5.

We personally request that you take a moment to distribute this newsletter to those who you believe will be interested in its contents. The newsletter will be distributed twice yearly, primarily by email. Please take a moment to forward this copy of the newsletter to those on your coastal emailing list and encourage them to join by forwarding their email address to us.

Thank you for your cooperation. Margarita and Norb

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