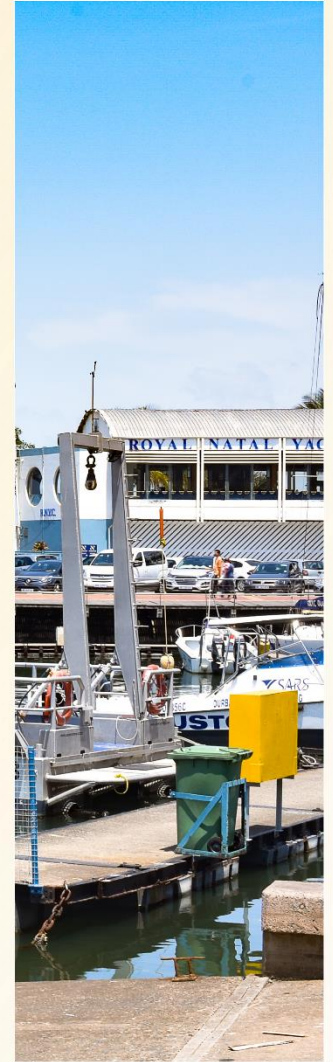


Program

Coastal Hazards in Africa 2020



[View the live stream on Facebook](#)



Keynote Speaker

Dr Esteves is currently an Associate Professor in Physical Geography at Bournemouth University. Most of her work concerns understanding coastal changes driven by natural and human-induced processes at time-scales relevant to coastal management. She has worked in sites spanning across Latin America, East Africa, the USA and the UK.

Coastal habitats are key to reduce exposure to coastal hazards in East Africa

This talk highlights results from a novel integrated assessment of social vulnerability and exposure to coastal hazards covering Mozambique, Tanzania, Kenya and Madagascar. An estimated 22% of the coastline and 3.5 million people are at higher levels of exposure in the region, which can increase to 39% and 6.9 million people, if mangroves, coral reefs and seagrasses are lost. Coral reefs protect 2.5 million people, mostly in Mombasa, Zanzibar and Dar es Salaam. Results demonstrate that nature-based coastal protection is critical in East Africa, particularly in Kenya and Tanzania. Applications of this knowledge to identify 'priority concern areas' and inform risk reduction strategies will be discussed.

	Erosion and coastal flooding hazards in Africa	Surname	First Name	Institute	Title	Session (UTC+2)	Session
Topic 1 27/10/20	Log in (09:50 -10:00 UTC +2)					09:50	1
	Keynote	Esteves	Luciana	Bournemouth University, United Kingdom	Coastal habitats are key to reduce exposure to coastal hazards in East Africa	10:05	
	1	Ivens Portela	Luís	Laboratório Nacional de Engenharia Civil, Portugal	Currents, waves and sediment transport in Nacala Bay, Mozambique	10:45	
	2	Mfikili	Athi	Nelson Mandela University, South Africa	Stratigraphic and sedimentological signatures as proxies to interpret past extreme marine events along the South African coast	11:00	
	3	Lück-Vogel	Melanie	Council for Scientific and Industrial Research, South Africa	South Africa's coastal climate risk: a national assessment	11:15	
	4	Pretorius	Lauren	University of KwaZulu-Natal, South Africa	Towards a high-resolution sea-level reconstruction along southern Africa's southern Cape	11:30	
	Break - 30 min (11:45 - 12:15 UTC +2)					11:45	2
	5	Guastella	Lisa	Alan Smith Consulting, South Africa	Beach Webcam Analysis of Coastal Change Induced by the 2014 Austral Spring Storm Cluster	12:15	
	6	Smith	Alan	Alan Smith Consulting, South Africa	Littoral Drift Sand Budget and its Role in Coastal Erosion and Deposition	12:30	
	7	Smith	Francois	Advisian, South Africa	An investigation into and potential solutions for the spit and beach erosion at St. Francis Bay, South Africa.	12:45	
	8	Santamaria-Aguilar	Sara	University of Kiel, Germany	A Regional scale Assessment of coastal flooding in South Africa	13:00	
	9	Juma Hamza	Amina	Bournemouth University, United Kingdom / Kenya Marine and Fisheries Research Institute	Adaptation options for East Africa mangrove users with changing climate	13:15	
	10	Dramé	Awa Bousso	Sorbonne University, Paris / Columbia University, New York / UCL - University College, London	Impact Assessment of an on-shoreline highway (VDN) Extension in Dakar (Senegal)	13:30	
	11	Kupfer	Sunna	University of Kiel, Germany	Modelling compound flooding in the Breede Estuary, South Africa	13:45	
	Break - 30 min (14:00 - 14:30 UTC +2)					14:00	3
	12	Sedrati	Mouncef	University South Brittany, France	Emplacement and movement of boulders by storm waves – Field evidence from Laghdira beach - Larache (NW of Morocco)	14:30	
	13	Fanikiso	Lynn	University of Cape Town, South Africa	Preliminary Assessment of Coastal Erosion by Data Integration of Optical and SAR Satellite Data	14:45	
	14	Orimoloye	Stephen	Swansea University, United Kingdom	Flooding Effects of Bimodal Wave Overtopping of West African Coastline	15:00	
	Chat session - 60 min (15:15 - 16:15 UTC +2)					15:15	



Dr Mather holds a PhD focused on coastal climate changes and has advised a number of Southern African countries on the risk and potential impacts of sea level rise on their coastlines. He is active in the fields of stormwater design and management, river and canal design and management and coastal and port engineering at one of the largest coastal Metro's in South Africa. He has worked up through the ranks to Director level and in recent years as a Project Executive he has provided strategic direction to these sectors. He has been employed by the eThekweni municipality for the last 34 years. Andrew has been actively involved in sea level rise and coastal erosion research over the last two decades in South Africa. Following an assessment of international models, he developed a wave run up model better suited to South African conditions.

Keynote Speaker

What could possibly go wrong? Coastal Hazards in the African context.

Planning for coastal hazards in Africa is often a haphazard process. Inadequate information, a lack of skills, poor buy-in and poor or non-existent data hampers the hazard planning process often leading to a crisis on the ground. Blame games and Climate Change becomes the scapegoats for the disaster. For the sake of our citizens, we need to move beyond this state of affairs. We will examine the potential range of coastal hazards that we should be planning for to reduce the impact on human life and property and the environment.

Topic 2 28/10/20	Pollution and oil spill risks	Surname	First Name	Institute	Title	Session (UTC+2)	Session
	Log in (09:50 -10:00 UTC +2)					09:50	4
	Keynote	Mather	Andrew	eThekweni municipality, South Africa	What could possibly go wrong? Coastal Hazards in the African context	10:05	
	15	Wakalapa	Eliezer Brown	Mbeya University of Science and Technology, Tanzania	Public and environmental health risk associated with consumption of fish contaminated with organohalogenated compounds and heavy metals in the Tanzanian coast.	10:45	
	16	Bundy	Simon C	SDP Ecological & Environmental Services, South Africa	Looking at a Nurdle Spill in Another Light : Nurdle deposition along the KwaZulu Natal shoreline – a proxy for sediment transport and the defining of coastal cells	11:00	
	17	Mpofu	Mthulisi	University of Fort Hare, South Africa	Proposal on Assessment of groundwater quality relative to saltwater intrusion in Ndlambe Municipality, Eastern Cape South Africa.	11:15	
	18	Vermeulen	Els	SouSA Cosortium	Nowhere to hide? The future of South Africa's endangered Indian Ocean humpback dolphin <i>Sousa plumbea</i>	11:30	5
	Break - 30 min (11:45 - 12:15 UTC +2)					11:45	
	19	Guastella	Lisa	Alan Smith Consulting, South Africa	Influence of currents and winds on pollutant dispersal, as indicated by the Durban nurdle spill.	12:15	
	20	Soussi	Abdellatif	University of Genova, Italy	Maritime risk assessment: Strait of Gibraltar case study	12:30	
	21	Aissa	Chaimae	Université Abdelmalek Essaâdi, Morocco	Evaluation of the quantity of macro / microplastics in coastal waters. Case Study: North West Morocco.	12:45	
	22	Faye	Yandé	Université Cheikh Anta Diop de Dakar, Sénégal	Coastal evolution and risks of an urbanized sand spit in Senegal: The case of Joal	13:00	
	23	El Ouaty	Otman	Université Abdelmalek Essaâdi, Morocco	Multistatistical approaches and sediment quality index for geoenvironmental, ecological and human health risk assessment of heavy metals (HMS) in Nador Lagoon sediments, northeast Morocco.	13:15	
	Chat session 60 min (13:30 - 14:30 UTC +2)					13:30	



Dr. Kwasi Appeaning Addo is currently Associate Professor and Director of the Institute for Environment and Sanitation Studies at the University of Ghana in Accra. His research focus on shoreline morphodynamics, coastal erosion and flooding studies, coastal vulnerability assessment under sea level change scenarios, coastal zone management and application of drone and video technology in nearshore coastal studies. Prof. Kwasi has consulted for several organization in the area of coastal erosion and flooding management and he is a member of the Expert Group of the High Level Panel for Sustainable Ocean Economy, technical advisor to the West African coast observation mission (WACOM) project, and a member of the International Pool of Experts, UN Ocean Affairs and the Law of the Sea. He is also a member of several professional bodies and a visiting scholar to universities and has publised extensively on coastal topics with a focus on the West African coast.

Coastal hazards in West Africa-Challenges and the way forward

Keynote Speaker

The coastal zone of West Africa is a highly productive region that provides goods and services to the coastal nations. The presence of abundant marine resources, habitats that provide critical ecosystem services, fertile agricultural lands, and opportunities for trade and transport identify the West Africa coast as a major driver of economic growth, accounting for approximately 56% of the sub-region's GDP. However, the coastal environment is undergoing changes that increase the vulnerability of the over 31% of the region's resident population. Natural and human driven factors combine to increase risk in the vulnerable coastal areas. Hazards, such as erosion and flooding have damaged vulnerable communities, threatened coastal infrastructure, destroyed sources of livelihoods and increased poverty. The trend is projected to continue with increased intensity under climate change and sea level rise. Attempts by governments in the sub-region to protect the coastal environment against erosion and flooding hazards have not been very successful due to issues such as adopting ineffective management approaches, lack of capacity and non-coordinated monitoring regime. This paper discusses the coastal management challenges in the sub-region, and possible measures to increase resilience in the coastal ecosystems to enhance sustainable management.

Topic 3 29/10/20	Coastal hazards management in Africa	Surname	First Name	Institute	Title	Session (UTC+2)	Session
	Log in (09:50 -10:00 UTC +2)					09:50	6
	Keynote	Appeaning Addo	Kwasi	University of Ghana, Ghana	Coastal hazards in West Africa: Challenges and the way forward	10:05	
	23	Kihia	Charles	Egerton University, Kenya	Dangerous marine faunal attack events and their management among a selection of seascape users at the Kenyan coast	10:45	
	24	Cawthra	Hayley	Council for Geoscience, South Africa	How examples from palaeo record of sea-level, climate and environment can help to inform future trends.	11:00	
	25	Clark	Belinda	CEN Integrated Environmental Management Unit, South Africa	The value of research in risk avoidance and management in the Environmental Impact Assessment Process.	11:15	
	26	Seyoum	Dawit	University of KwaZulu-Natal, South Africa	Investigation of XBeach Cross-Shore Capacity Under Fixed Model Parameters	11:30	
	Break - 35 min (11:45 - 12:20 UTC +2)					11:45	7
	Industry Spotlight	Radermacher	Max	Obscape, South Africa/Netherlands	Affordable real-time catchment monitoring: A case study in Durban, South Africa	12:20	
	27	Ntsala	Palisa	Sustainable Seas Trust, South Africa	Baseline assessment of community awareness on solid waste management: Central, Port Elizabeth, Nelson Mandela Bay Metropolitan Municipality	12:45	
	28	van Niekerk	Tanna	Sustainable Seas Trust, South Africa	Baseline estimation of marine litter in Algoa Bay	13:00	
	29	Solana	Gorka	Universidade SAVE, Mozambique	Implementing a decision support system for coastal management in Inhambane Bay (Mozambique): hydrodynamic characterization	13:15	
	30	Amara Zenati	Ahlam	University Abdelmalek Essaadi, Morocco	Monitoring the water and sediment quality of the Port Tanger Med 1, Morocco	13:30	
	31	Essoh Sone	Willy	University of Douala-Cameroun, Cameroun	Application of multi-criteria analysis for the mapping of flooding risk areas in Douala	13:45	
	32	Bouktib	Radouan	University Abdelmalek Essaadi, Morocco	The monitoring of port's structures using topo-geodetic methods Case study: Tanger Med port, Morocco	14:00	
	Closing					14:15	



Dr. Max Radermacher, Obscape Director, handles Obscape's software and global business development. Obscape supplies real-time systems for environmental and industrial observations. We create integral measurement solutions. All our systems have been developed in-house and are characterised by their reliability, ease-of-use and cost-effectiveness. Observation data are collected into the Obscape Data Portal. Whether you are measuring with a single device or with an extensive multi-sensor setup, our systems will support you in managing your primary process. The product range includes measurement devices for waves, weather, rain, water levels and visual observations. By consolidating various measurements into a single data portal, a large network of devices can easily be monitored and maintained. Graphical charts, automated reports, setting of thresholds and alerts are some of the useful features provided.

Affordable real-time catchment monitoring: A case study in Durban, South Africa

Adequate management of catchment areas is aimed at preserving vital water resources and preventing catastrophic flooding events. To that end, real-time availability of information regarding the state of all the water bodies and water flows that comprise the catchment area is an indispensable asset. Obscape has developed a suite of affordable, robust and easy-to-use measurement devices for real-time monitoring of e.g. rainfall, river levels, weather and stormwater runoff. Due to their built-in solar panels and cellular modems, the devices are completely wireless and therefore very easy to install. The real-time data can be viewed, analysed and downloaded through a versatile and free data portal. A case study will be presented for Durban, South Africa, where Obscape's solutions have been used for more than 10 years for real-time monitoring of all 25 catchment areas that comprise the municipality. This has enabled the Durban municipality to manage their water systems and respond quickly to hazards like flooding, drought and beach erosion.

Industry Spotlight



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Helping people to care for our ocean

Hosted by: Errol Wiles (SAIAB), Carlos Loureiro (Uni. Stirling), Bronwyn Goble (ORI), Marilyn Bodasing (ORI)

Scientific Committee

Carlos Loureiro, Scientific Committee lead (University of Stirling, United Kingdom)

Abdelmounim El M'rini (Abdelmalek Essaâdi University, Morocco)

Bronwyn Goble (Oceanographic Research Institute, South Africa)

Errol Wiles (South African Institute for Aquatic Biodiversity, South Africa)

Hayley Cawthra (Council for Geoscience, South Africa)

Lauren Pretorius (University of Kwazulu-Natal, South Africa)

Mohammed Maanan (Université de Nantes, France)

Mouncef Sedrati (Université de Bretagne Sud, France)

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Tommy Bornman (South African Environmental Observation Network, South Africa)

