

Topics at the nexus of climate change, fisheries, and blue foods

A webinar series highlighting the impact of climate change on fisheries, aquaculture, and the communities who depend on them

March 27, 2025: Ocean data collection to support climate resilient fisheries in the UN Ocean Decade

Presentation 1: The biogeochemical and ecological functioning of an ecosystem is a key factor in its resilience to climate change

The North Kenya Banks have long been considered an important emerging fishery with the potential to spur economic growth for local fishing communities. As a regionally important extension to the otherwise narrow East African continental shelf, the North Kenya Banks remain understudied with implications for efforts to develop a sustainable fisheries management strategy. The local marine ecosystem is known to be strongly influenced by wind driven upwelling processes with seasonal variability driven by the changing monsoon seasons being of particular importance. The Western Indian Ocean is warming due to anthropogenic climate change with evidence indicating reduced ocean productivity in the future. How the ecosystem of the North Kenya Banks will respond is currently uncertain but is of great importance due to the significance of coastal fishery resources to coastal communities and growing Blue Economy initiatives to exploit the North Kenya Banks fisheries more widely. There is, however, limited knowledge of the processes influencing productivity over the North Kenya Banks regions and currently there is no management plan in place to sustainably manage the fishery resources. This work examines information about the North Kenya Banks fisheries in relation to environmental processes and threats from climate change impacts with suggestions for future management directions. It aims to i) provide an overview on the state of Kenyan marine fisheries with focus on the North Kenya Banks, ii) assess existing environmental knowledge, iii) assess how productivity of the Kenya marine ecosystem will likely respond to future climate change, iv) identify critical research gaps that need to be addressed for improved management and long-term planning purposes

Webinar Presenter: **Joseph Kamau** is a Principal Research Scientist at the Kenya Marine Fisheries Research Institute, where he has dedicated over 30 years to advancing our understanding of marine ecosystems, particularly within the Western Indian Ocean. As the head of the Oceanography and Hydrography Department, Joseph specializes in biogeochemistry and environmental sciences, addressing critical issues surrounding climate change and its effects on marine resources. For most of his career, Joseph has focused on understanding how climate change affects marine ecosystems and the fisheries that rely on them. His research encompasses various disciplines, including nutrient cycling, marine biodiversity, and the impacts of changing ocean conditions. He is particularly involved in bioprospecting, where he explores potential applications of marine biodiversity for biotechnology and sustainable development. His work not only informs local and international policy on fishing and marine resource management but also engages local communities in sustainability practices. In addition to his research, Joseph is an active member of several professional organizations, including the Western Indian Ocean Marine Science Association (WIOMSA), UKRI International Development Peer Review College, and Golden Key International. He frequently presents his findings at both national and international conferences, sharing insights that promote a greater understanding of ocean health and resilience in the face of climate change. Outside of his professional responsibilities, Joseph is passionate about community engagement and education. He often collaborates with communities to raise awareness about marine conservation and the importance of sustainable practices.

Presentation 2: Boosting the Ocean Decade through data sharing - an introduction to the Decade Coordination Office for Ocean Data Sharing (DCO-ODS)

Collecting and creating data about the ocean is often complicated and costly. Analysing those data creates value from the activities which create them, but by sharing the data for further re-use, analysis and combination into new insights the value and impact of the data significantly increases. The Decade Coordination Office for Ocean Data Sharing, hosted by the International Oceanographic Information and Data Exchange of IOC (IODE), is committed to fostering effective knowledge and information exchange. Our efforts include raising awareness about data sharing, building capacity, and collaborating with Decade Actions and other entities. Through these initiatives, we aim to advance the development of an accessible, connected, and collaborative global digital ocean ecosystem. This work aligns with the Decade Data and Information Strategy and supports the achievement of Ocean Decade Vision 2030 goals. In this presentation we will present some practical steps and guidelines to make sharing of data in the Ocean Decade a reality.

More information: oceandatasharing-dco.org

Webinar Presenter: **Dr. Adam Leadbetter** has over nineteen years of experience in marine and sustainability data management, he has developed a strong network in Ireland, the UK, Europe and globally. He is an expert in the design of marine data and information systems and has worked extensively in connecting them with wider open data initiatives. Adam is keen that these data systems fulfil the needs of users and has led diverse groups of stakeholders in co-creation and design thinking approaches to identify their requirements. He has also worked alongside the UNESCO's International Oceanographic Data and Information Exchange (IOC-IODE) in different projects, for over 10 years.



This webinar series is jointly hosted by the UN Ocean Decade Programs [Blue Food Futures](#), [Fisheries Strategies for Changing Oceans and Resilient Ecosystems \(FishSCORE\)](#), [Sustainability, Predictability, and Resilience of Marine Ecosystems \(SUPREME\)](#), [Sustainability of Marine Ecosystems through Global Knowledge Networks \(SmartNet\)](#), and [Fisheries and Marine Ecosystem Model Intercomparison Project \(FishMIP\)](#) and endorsed project [Basin Scale Events to Coastal Impacts \(BECI\)](#). This webinar series highlights current efforts and challenges at the climate-fisheries nexus. Presentations and discussions will range from data-driven efforts to better understand oceanographic and biological changes affecting fisheries, to how the results can be used to inform fisheries management, aquaculture, and sustainable food decisions, to the many ways people and broader communities are being impacted by and adapting to changes in marine ecosystems and marine resource use.