

# Kenyan and International Scientists Embark on Major Marine Research Expedition

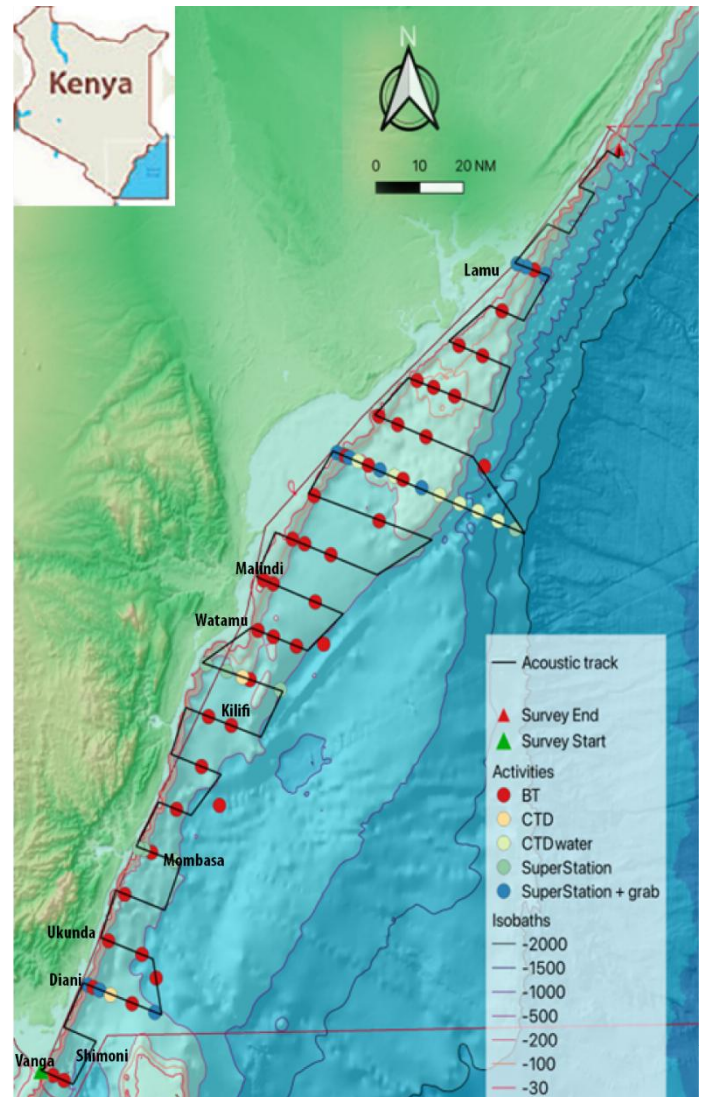
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Scientists from the Kenya Marine and Fisheries Research Institute (KMFRI), in collaboration with experts from across Africa and Europe, have launched a major scientific expedition aboard the R/V *Dr. Fridtjof Nansen*, a world-renowned Norwegian research vessel. The research cruise, which begins today—April 24, 2025—in Mombasa, will span approximately ten days, covering Kenya's coastal and marine waters, including the Exclusive Economic Zone (EEZ).

The primary mission of this expedition is to assess fish biomass, examine oceanographic conditions, and evaluate overall ecosystem health—critical elements for the sustainable management of marine resources and fisheries. Scientists will collect new data on the Kenyan segment of the Indian Ocean by analysing key oceanographic parameters such as sea surface temperature, salinity, depth profiles, and biological productivity, including phytoplankton, zooplankton, and fish larvae diversity, distribution, and biomass.

The data will contribute to regional resource assessments led by the Southwest Indian Ocean Fisheries Commission (SWIOFC). Survey, locations, transects, bathymetry and planned activities are outlined in the accompanying map (Figure 1).

This expedition also presents a valuable opportunity for capacity building and international collaboration. A significant number of the researchers on board are



**Fig. 1: showing marine zones, depth contours, planned survey locations, major coastal towns and key to research activities. (Source: Sailing Order R/V**



early-career oceanographers from universities and institutions in Europe and Africa. KMFRI team is listed in Table 1.

**Table1: Names and expertise of the KMFRI Research Team on board the Research Vessel**

<b>Dr. Gladys Okemwa – Co-Cruise Leader and Fisheries Expert</b>	<b>Dr. Esther Fondo – Fisheries</b>
<b>Dr. Amon Kimeli – Physical Oceanography</b>	<b>Ms. Josephine Marigu – Fisheries</b>
<b>Mr. Alexander Fullanda – Plankton Studies</b>	<b>Ms. Mary Mkonu – Plankton Studies</b>
<b>Mr. Oliver Ochola – Chemical Oceanography</b>	<b>Mr. Jibril Olunga – Fisheries Taxonomy</b>

The Kenyans are joined by scientists from Norway, France, Portugal, Spain, Côte d'Ivoire, Ghana, Tanzania, Angola, Mozambique and South Africa.

According to the vessel's sailing orders, the Kenyan leg of the cruise will begin at a location near Vanga in Kwale County of south coast and conclude off Kiunga in Lamu County of the north coast.

Operated under the EAF-Nansen Programme—a collaboration between the Food and Agriculture Organization (FAO) and the Norwegian Agency for Development

**Fig.2: Imager of R/V Nansen (Credit FAO** Cooperation (NORAD)—the *R/V Dr. Fridtjof Nansen* seen partly in Fig. 2 is

equipped with state-of-the-art instruments for conducting marine ecosystem research and supporting capacity development in partner countries. Kenya stands to benefit greatly through enhanced collaboration with Norway and the broader scientific community.

### **A Legacy of Research in Kenya**

The *R/V Dr. Fridtjof Nansen* has a long history of contributing to marine science in Kenya. Between 1980 and 1983, it conducted four major surveys along the Kenya

coast, focusing on hydrography and the diversity and biomass of pelagic and demersal fish. Key missions are summarized in Table 2.

**Table 2: Details of previous research undertaken by RV Dr. Fridtjof Nansen in the Kenya coast**

<b>Month &amp; Year</b>	<b>Research Focus</b>
<b>December 1980</b>	<b>Initial assessment of small pelagic fish via acoustic methods and demersal species via trawling across depths of 10–500 meters.</b>
<b>August 1980</b>	<b>Acoustic survey with detailed mapping of fish distributions, especially in the Malindi-Ungwana Bay area.</b>
<b>December 1982</b>	<b>Survey on fish abundance and distribution, including hydrographic sections and diverse fishing methods (e.g. traps, longlines).</b>
<b>May 1983</b>	<b>Focused on central shelf trawling (20–200 meters) to refine biomass estimates and analyse fish community structures.</b>

*(Source: FAO report on the Dr. Fridtjof Nansen Programme and Surveys off Kenya, 1975–1993)*

These surveys provided extensive data on Kenya’s continental shelf and slope, revealing a rich biodiversity, particularly among small pelagic fish species. Their findings have been crucial in guiding fisheries management and marine policy.

### **Significance of the Current Research Cruise**

This latest expedition is part of a broader effort to better understand marine ecosystems in the Western Indian Ocean. It follows recent cruises in Tanzania (Leg 3) and Mozambique (Legs 1 & 2). The insights gained will inform national and regional marine policies, support conservation initiatives, and drive sustainable Blue Economy development in Kenya.

By involving Kenyan researchers and fostering collaboration with international experts, the cruise strengthens regional expertise and lays a strong foundation for future oceanographic surveys by KMFRI and its partners.