

Mtafiti Monthly

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KMFRI Director General, Dr. Paul Orina Participates in Blue Voices Regional Summit in Zanzibar

The Kenya Marine and Fisheries Research Institute (KMFRI) Director General, Dr. Paul Orina, joined regional leaders at the Blue Voices Regional Summit on Combating Illegal Fishing and Promoting Sustainable Blue Economies, held in Zanzibar.



Participants of the Blue Voices Regional Summit

The summit was held under the theme **“One Ocean, One Voice,”** it brought together governments,

researchers and partners from across the Western Indian Ocean to strengthen regional cooperation, combat illegal, Unreported and unregulated (IUU) Fishing and advance lawful, sustainable fisheries. The three-day forum attracted delegations from Kenya, Tanzania, Zanzibar, and Mauritius, among other partners, reflecting a shared commitment to coordinated ocean governance.

The forum was organized by the Jahazi Project and co-hosted by the Government of Zanzibar through the Ministry of Blue Economy and Fisheries, it aimed at promoting collaborative solutions. These solutions range from enhancing data transparency and vessel tracking to empowering local communities, all with the goal of protecting our oceans and ensuring the sustainability of coastal livelihoods.



Participants of the Blue Voices Regional Summit pose for a group photo

Participants emphasized the importance of community empowerment and inclusive governance as critical pillars for a sustainable blue economy. IUU fishing continues to undermine government revenues, marine ecosystems, and the livelihoods of coastal

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communities across the region, making coordinated action a priority for participating nations.

Dr. Paul Orina highlighted the role of research institutions such as KMFRI in generating evidence to inform policy, support regional cooperation, and promote the sustainable use of marine and aquatic resources. He reaffirmed KMFRI's commitment to working with regional partners to combat IUU fishing and support initiatives that safeguard ocean health and coastal livelihoods.



KMFRI Director General, Dr. Paul Orina giving a presentation during the Blue Voices Regional Summit

The Blue Voices Regional Summit underscored the shared responsibility of countries bordering the Western Indian Ocean to speak and act with one voice in protecting the ocean which is an essential resource that connects ecosystems, economies, and communities across the region.

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KMFRI Hosts Belgian Government Delegation to Strengthen Longstanding Partnership

The Kenya Marine and Fisheries Research Institute (KMFRI), under the leadership of Director General Dr. Paul Orina, recently had the honor of hosting a high-level delegation from the Belgian Government. The visit aimed at reinforcing the enduring partnership between the two countries.



KMFRI senior staff and the members of the Belgian Government Delegation pose for a group photo

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The delegation was led by Mr. Carl Decaluwe, Governor of West Flanders and President of the Vlaams Instituut voor de Zee (VLIZ), and included the VLIZ Vice President, General Director, and other senior officials. Also present was Prof. Micheni Ntiba, former Principal Secretary for the State Department for the Blue Economy and Fisheries, and a distinguished beneficiary of Belgian-supported initiatives.



During the engagement, the delegation was briefed on KMFRI's mandate and its more than 40-year collaboration with Belgium. This long-standing partnership has produced a significant body of multidisciplinary research addressing key ecological, marine, aquatic, and socioeconomic challenges. The depth and impact of this cooperation span decades and reflect a strong foundation for continued scientific collaboration.

The VLIZ delegation reaffirmed their interest in deepening Belgium and Kenya collaboration, particularly in areas such as grants and capacity building, aquaculture development, marine science research and the broader Blue Economy agenda. The discussions highlighted a shared commitment to

advancing science-driven solutions for sustainable marine and aquatic resource management.



The Governor of West Flanders and President of the Vlaams Instituut voor de Zee (VLIZ), Mr. Carl Decaluwe receives a gift from KMFRI Director General Dr. Paul Orina

The visit underscores the enduring partnership between Belgium and Kenya and reaffirms a common vision for advancing the Blue Economy through research, innovation, and sustainable practices.

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KMFRI Study Links Lake Victoria Fish Kills to Eutrophication and Rising Pollution

A recent study by the Kenya Marine and Fisheries Research Institute (KMFRI) has raised serious concerns over the health of Lake Victoria, linking recurrent wild fish kills to eutrophication and increasing pollution. Published in the **KMFRI Kenya Aquatica Journal (2025)**, the study provides scientific evidence that the lake is experiencing growing environmental pressure, largely driven by human activities within its vast watershed. These findings reinforce long-standing warnings by scientists that declining water quality is threatening freshwater ecosystems, fisheries resources, and the livelihoods of millions who depend on the lake.



AI Image illustrating fish cage farming

The research, conducted primarily in Kisumu Bay, identified eutrophication as a major driver of fish mortality. Excessive nutrients, particularly nitrogen and phosphorus, enter the lake through untreated sewage, agricultural runoff, and industrial effluents from surrounding urban centres. These nutrients stimulate the rapid growth of algae, leading to frequent algal blooms. When the algae die and decompose, they consume large amounts of dissolved oxygen in the water, creating hypoxic conditions that are unable to support fish and other aquatic organisms. KMFRI scientists recorded critically low oxygen levels during the study period, conditions that can cause fish to suffocate and die within a short time.



AI Image Illustrating Fish Kills due to rising pollution

Pollution was also highlighted as a key compounding factor. Elevated levels of ammonium and other toxic substances were detected in parts of the lake, pointing to inadequate waste management and weak enforcement of environmental regulations. These pollutants not only stress fish directly but also worsen eutrophication by altering water chemistry and

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biological processes. The situation has been made more severe by climate-related factors, such as rising water temperatures and changes in lake circulation, which can intensify oxygen depletion, particularly in enclosed bays.

These scientific findings align closely with observations highlighted in a **Citizen Planet feature**, in which scientists expressed alarm over the rising levels of pollution in Lake Victoria. The programme documented visible signs of ecological distress, including discolored waters, fish deaths along the shoreline, and concerns from fishing communities whose catches and incomes are declining. Together, the media coverage and KMFRI research paint a consistent picture of a lake ecosystem under strain, with human activities overwhelming its natural capacity to recover.

Lake Victoria is a shared regional resource, supporting fisheries, transport, and food security across Kenya, Uganda, and Tanzania. In Kenya alone, thousands of households rely directly on fishing and related value chains for their livelihoods. Continued fish kills therefore have far-reaching socio-economic consequences, threatening income, nutrition, and community stability, in addition to undermining biodiversity and ecosystem health.

In response to these challenges, KMFRI scientists, led by Dr. Christopher Aura, Director of Freshwater Systems, have called for urgent, science-based interventions. Central to their recommendations is integrated watershed management, an approach that recognizes the close link between land-based activities and lake health. This includes improving wastewater treatment, controlling agricultural runoff, restoring wetlands and riparian buffers, and strengthening collaboration among government agencies, communities, and regional partners. According to the researchers, only coordinated action across the entire lake basin can effectively reduce pollution loads and reverse eutrophication trends.



AI image illustrating Integrated Watershed Management a way to curb fish kills

The study highlights the need for practical, science-based actions to protect freshwater ecosystems. With environmental pressures on the lake continuing to increase, the future of Lake Victoria will largely depend on how quickly stakeholders turn research findings into effective policies, improved management practices, and long-term conservation efforts.

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KMFRI Director General, Dr. Paul Orina together with regional leaders at the Blue Voices Regional Summit on Combating Illegal Fishing and Promoting Sustainable Blue Economies in Zanzibar.



KMFRI Director General, Dr. Paul Orina was honored to host a high-level delegation from the Belgian Government during their official visit to Kenya with the aim of strengthening the long-standing Belgium and Kenya Partnership.

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KMFRI Researchers conducted a research in Kisumu Bay and identified eutrophication as a major driver of fish mortality. Excessive nutrients particularly nitrogen and phosphorus enter Lake Victoria through untreated sewage, agricultural runoff and industrial effluents from surrounding urban centers.



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