

Mtafiti Monthly

By: John Father Small

Mikindani Wastewater Treatment Plant launched to tackle ocean pollution



In a momentous step toward enhancing environmental sustainability and marine ecosystem protection, the Kenya Marine and Fisheries Research Institute (KMFRI), under the leadership of Board Chair Dr. Wenwa Akinyi and Acting Chief Executive Officer Dr. James Mwaluma, proudly joined hands with partners and the local community for the official launch of the Mikindani Constructed Wetland Sewage Treatment Plant in Mombasa County.



KMFRI Board Chair Amb. Dr. Wenwa Oranga Odinga

The event, held in Mikindani, was a significant milestone in Kenya's ongoing commitment to implementing nature-based solutions under the Blue Economy agenda. The launch attracted a high-level delegation of government officials, diplomats, development partners, and community leaders.

Key dignitaries in attendance included the Cabinet Secretary for Mining, Blue Economy and Maritime Affairs, H.E. Ali Hassan Joho; Principal Secretary for Blue Economy and Fisheries, Ms. Betsy Njagi; Mombasa Governor H.E. Abdulswamad Sherrif Nassir; Jomvu MP Hon. Badi Twalib; Mombasa Senator Hon. Mohamed Faki Mwinyihaji; and Mombasa Woman Representative Hon. Zamzam Mohammed.

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CS for Mining and Blue Economy H.E Hassan Ali Joho

Also present were notable international partners including European Union Ambassador to Kenya, H.E. Henriette Geiger; French Ambassador H.E. Arnaud Suquet; and senior representatives from the United Nations Environment Programme (UNEP) and the United Nations Human Settlements Programme (UN-Habitat). Their participation reflected the strength of collaboration between the Kenyan government and the international community in promoting sustainable development and environmental stewardship.

In his keynote address, Cabinet Secretary H.E. Ali Hassan Joho underscored the importance of collaboration between national and county governments, research institutions, and development partners in realizing the goals of the Blue Economy. He described the Mikindani facility as a flagship project for safeguarding marine ecosystems and improving public health through responsible sewage treatment. The CS also directed KMFR to use this project as a model for replication across other coastal areas.

KMFRI Acting CEO Dr. James Mwaluma expressed deep appreciation to all stakeholders involved in the project. “The Mikindani Wetland Sewage Treatment Plant is a shining example of science serving society. Through strategic partnerships and community engagement, we are turning research into real-world solutions that protect our ecosystems and uplift our communities,” said Dr. Mwaluma. He commended the support received from the European Union-funded Go Blue Project, UNEP, and UN-Habitat, and affirmed KMFR’s commitment to scaling up such initiatives.



KMFRI Ag CEO Dr. James Mwaluma

European Union Ambassador H.E. Henriette Geiger emphasized the growing opportunities within the blue economy, particularly in job creation, innovation, and sustainable livelihoods. “There is so much untapped potential in the blue economy,” she said. “But for us to succeed, projects like this must be cared for by the communities they serve. The Mikindani facility is nature-based, which makes it not only effective but also beautiful. We cannot have a green transition

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without blue.” Her remarks resonated strongly with the crowd, reinforcing the message that environmental sustainability must be locally driven and globally supported.

The Mikindani Constructed Wetland Sewage Treatment Plant is a groundbreaking nature-based infrastructure that uses vegetation, soil, and microbial processes to treat wastewater. Unlike conventional treatment systems, it integrates seamlessly into the surrounding environment, enhancing biodiversity and aesthetic appeal while reducing pollution entering the ocean.

Governor H.E. Abdulswamad Sherrif Nassir echoed the importance of county-level action in achieving national and global environmental goals. He thanked KMFRI and partners for selecting Mombasa as the pilot site and pledged his administration’s continued support for similar green infrastructure projects across the region.



CS for Mining and Blue Economy H.E Hassan Ali Joho

The event concluded with a tour of the facility, where guests witnessed firsthand the plant’s operations and its impact on surrounding communities. With clear commitment from all stakeholders and enthusiastic local involvement, the Mikindani project marks a transformative step toward sustainable wastewater management and environmental restoration.

As KMFRI continues to lead scientific innovation and policy support in marine and fisheries research, the successful launch of the Mikindani Constructed Wetland stands as a testament to the power of partnership, community ownership, and long-term vision in shaping a cleaner, healthier, and more resilient coastal Kenya.

By: Jane Kiguta

KMFRI showcases Blue Economy innovations at Homa Bay's 62nd Madaraka Day celebrations

In a significant move to highlight Kenya's Blue Economy impact on diverse communities in Kenya, the Kenya Marine and Fisheries Research Institute (KMFRI) alongside other participating Blue Economy affiliated organizations set up a knowledge-sharing hub in Homa Bay County, Kenya, during Madaraka Day 2025 Thematic Week Summit on Blue Economy, ahead of the nation’s 62nd Madaraka Day celebrations themed “Our Waters, Our Wealth”.

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Madaraka Day is a national holiday that is celebrated every 1 June in every year in the Republic of Kenya. It commemorates the day in 1963 that Kenya attained internal self-rule after being a British colony since 1920.

The build-up activities took place ahead of the national celebrations marked on 1st June, 2025.



Sagana Centre Director Dr Domitila Kyule

KMFRI showcased her research products and innovations, underscoring the importance of aquatic resources in sustainable development. This reflected the government's commitment to promoting the Blue Economy agenda, which focuses on harnessing the potential of marine and freshwater resources for economic transformation.

Mining, Blue Economy and Maritime Affairs Cabinet Secretary (CS) His Excellency Hassan Joho was the first senior government official to tour KMFRI's exhibition stand where the institute showcased groundbreaking research in freshwater and marine innovation, and how it's transforming lives across the country.



KMFRI AD Limnologist Dr. Chrisphine Nyamweya and CS Hassan Joho

Accompanied by State Department for Blue Economy and Fisheries Principal Secretary (PS) Madam Betsy Njagi, Homa Bay Governor H.E Gladys Wanga, KMFRI Board Chair Amb. Dr Wenwa Akinyi Oranga - Odinga, and Acting CEO Dr. James Mwaluma (PhD), the CS explored our scientific research displays and engaged with our dedicated team of researchers.

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The CS applauded the idea of the summit saying it provided a platform for having Blue Economy discourses that can offer solutions to challenges faced by stakeholders in the fisheries sector. He, among other things, called for the deployment of the right fishing technologies, adding that his ministry is endowed with experts who can capacity build the fishers where necessary.



KMFRI Board Chair Amb. Dr. Wenwa Oranga Odinga

And after touring KMFRI's information sharing hub at the summit, the CS said the government will provide support to aquatic stakeholders to enable them to fully exploit the Blue Economy treasures in fish processing, fish feed production and fish value addition.

Governor Wanga said she is willing to partner with KMFRI to equip communities in the Lake region with skills in fish value addition.

The event showcased how KMFRI's work aligns with the government's Bottom-Up Economic Transformation Agenda by harnessing aquatic resources to create jobs and spur economic growth across the country.

KMFRI, established in 1979 and currently operating under the Ministry of Mining, Blue Economy, and Maritime Affairs, has been at the forefront of research in fisheries, oceanography, aquaculture, and environmental studies.

In line with the Blue Economy agenda, KMFRI has been collaborating with various stakeholders to implement ecosystem restoration programs.

To meet the rising demand for fish, KMFRI has implemented various aquaculture programs focusing on freshwater aquaculture, feed formulations, fish breeding, genetics, and value addition. These initiatives aim to promote sustainable fishing practices and enhance food security.

The government's support for aquaculture is evident in the establishment of mariculture zones and the promotion of cage culture systems. These efforts are expected to boost fish production and create employment opportunities in coastal communities.

As Kenya continues to prioritize the Blue Economy, KMFRI's initiatives serve as a model for integrating environmental conservation with economic development. The ongoing projects in Homa Bay and other coastal regions demonstrate the potential of community-led conservation efforts in achieving sustainable development goals.

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The successful implementation of these programs underscores the importance of collaboration among government agencies, research institutions, and local communities in promoting sustainable use of marine and freshwater resources.

By: Jane Kiguta

KMFRI's Acting CEO Dr. Mwaluma highlights role of science in Blue Economy policy dialogue

Kenya Marine and Fisheries Research Institute (KMFRI) Acting CEO, Dr. James Mwaluma (PhD) was among the panelists on the Day Two of the Madaraka Day 2025: Thematic Week Summit on

Blue Economy, which featured the Policy Dialogue on the Blue Economy and Fisheries.

The high-level panel discussion brought together key stakeholders from Kenya Fisheries Service (KeFS), the International Fund for Agricultural Development (IFAD), UNESCO-IOC Africa, the Kenya Beach Management Unit (BMU) Network, and the Lake Basin Development Authority.

The discussions focused on aligning science, policy, and community action to support sustainable fisheries and maximize opportunities within the Blue Economy.

Addressing how KMFRI's research contributes to decision-making in sustainable fisheries management, Dr. Mwaluma emphasized the importance of fish stock assessments.



KMFRI Ag CEO Dr. James Mwaluma

"Our research findings help inform licensing decisions by identifying fish abundance and distribution. This ensures that harvesting is done sustainably and within ecological limits," he said.

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Dr. Mwaluma also highlighted the role of water quality assessments in preventing fish kills, especially under the increasing pressure of climate change. "Through continuous monitoring, we can predict and mitigate unusual events caused by environmental changes," he noted.

Commenting on the intersection of science and investment, Dr. Mwaluma revealed that KMFRI has been collaborating with Homa Bay County to develop a Marine Spatial Plan (MSP). "The plan, which is now complete and set for launch, will guide the county in mapping fishing zones and identifying other Blue Economy resources," he said.

The Marine Spatial Plan provides a strategic approach to balancing ecological sustainability with economic development in marine and coastal areas.



Members present at the MSP Launch

KMFRI has also been conducting biodiversity assessments aimed at restoring indigenous fish species that have vanished from Lake Victoria. According to Dr. Mwaluma, this involves breeding

studies and habitat restoration to promote the return of these critical species.

He further emphasized that KMFRI works in close collaboration with the State Department for Blue Economy and Fisheries. Together, they publish State of Aquaculture Reports which serve as key references for policymakers working to implement sustainable fisheries practices.

The panel underscored the essential role of scientific research in shaping policies and investment strategies that support the long-term viability of the Blue Economy in Kenya and beyond.

By: Faith Mboka Edits: Jane Kiguta

Kenya charts a sustainable future for Lake Victoria with new Marine Spatial Plan

Kenya has taken a major step in promoting sustainable use of its freshwater resources with the launch of the Marine Spatial Plan (MSP) for Lake Victoria. The plan was officially unveiled by H.E. President William Ruto ahead of Madaraka Day 2025. It marks a significant milestone in the country's commitment to advancing its Blue Economy strategy and protecting one of Africa's most vital water bodies.

The Marine Spatial Plan offers a structured and science-based approach to managing Lake Victoria's

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multiple uses. It clearly maps out zones for fishing, aquaculture, conservation areas, tourism, ports and harbors, and navigation routes. This zoning helps to reduce conflicts among users, promote sustainable development, and protect the lake's natural environment. The plan also aims to ensure that economic activities on and around the lake do not harm its ecological balance.

integrated planning and good governance can support both environmental protection and economic growth. The plan not only addresses current needs but also anticipates future challenges related to climate change, population growth, and increased demand for water resources.

President Ruto praised the plan as a "historic achievement" and reaffirmed the government's dedication to a thriving and inclusive Blue Economy. He emphasized that the MSP is not just a policy document, but a real tool to guide action, create jobs, and ensure long-term sustainability for the communities that depend on Lake Victoria.



His Excellency President William Samoei Ruto at the Lake Victoria Marine Spatial Plan launch

Development of the plan was led by the Kenya Marine and Fisheries Research Institute (KMFRRI), with technical support from Longline Environment Ltd. and funding from Gatsby Africa. It involved strong collaboration with key national agencies including the National Land Commission, Kenya Fisheries Service (KeFS), State Department for Blue Economy and Fisheries, and the Kenya Maritime Authority. Together, these institutions combined research, stakeholder input, and policy knowledge to create a well-rounded and practical strategy.

The MSP aligns with the Physical and Land Use Planning Act and directly supports national development goals under Kenya Vision 2030 and the Fourth Medium-Term Plan. It demonstrates how



KMFRRI team at the Lake Victoria MSP launch

With the launch now complete, attention turns to implementation. Government agencies, local communities, private sector players, and development partners are expected to work together to enforce the plan, monitor results, and make improvements as needed. The Marine Spatial Plan for Lake Victoria stands as a model for sustainable inland water management in Africa and beyond.

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By: Jane Kiguta

KMFRI donates boats to Homa Bay ahead of Madaraka Day 2025 celebrations



Two Fishing vessels donated by KMFRI

KMFRI Acting CEO Dr. James Mwaluma (PhD), accompanied by senior management, led the official handover at the shores of Lake Victoria. The vessels were received by Homa Bay County Executive for Fisheries and Blue Economy Ms. Sarah and the Beach Management Unit (BMU) Chairperson.

Homa Bay County controls 80 percent of Kenya's portion of Lake Victoria, making this donation a significant boost to local fishing communities and the region's blue economy potential.

During the panel discussion

During the Blue Economy Summit held earlier in the week, county officials revealed plans to expand cold storage capacity and upgrade fish processing facilities. Key discussions also focused on modernizing fish landing sites and enhancing post-harvest value addition.

In her address at the summit, Homa Bay County H.E Governor Gladys Wanga emphasized the transformation of BMUs into cooperative societies,



As Kenya prepared to mark Madaraka Day 2025 in Homa Bay County, the Kenya Marine and Fisheries Research Institute (KMFRI) donated two fishing vessels to the county government. The gesture is part of KMFRI's Corporate Social Responsibility (CSR) initiative to promote sustainable fishing in Lake Victoria.

The donation came just a day after President William Samoei Ruto launched a Marine Spatial Plan for the lake, a move hailed as a critical step toward sustainable blue economy development.

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which will improve market access for fishers and raise commercial fish production.



KMFRI Ag CEO Dr. James Mwaluma handing over life jackets to one of the residents

“Our fishers are at the heart of this sector,” she said. “The time has come to phase out wooden boats and transition to modern, efficient fishing vessels.”

Also speaking at the event, Cabinet Secretary for Mining, Blue Economy and Maritime Affairs, H.E. Ali Hassan Joho, reaffirmed the national government’s commitment to fostering a supportive environment for blue economy investments. He called on stakeholders to adopt appropriate fishing gear to enhance productivity and sustainability.

Layout by Faith Mboka, Ian Muteithia, Alex Musyoki

MSP FOR LAKE VICTORIA?

On our LinkedIn platform, the social media post announcing the launch of the Marine Spatial Plan (MSP) for Lake Victoria sparked an interesting conversation reflecting genuine curiosity and some light-hearted debate.

See the posts below:

MSP or LSP?? I thought Marine refers specifically to saltwater environments like oceans, seas, and sometimes brackish coastal estuaries.

Shouldn't it be Lake spatial plan, I thought Marine is Ocean

Kizungu sio mdomo chetu (English is not our mouth) ! It is a spatial plan alright -

“Marine “in for lake Victoria, as in laugh with your eyes and cry with your heart!

“It seems that spatial planning for lakes is still a relatively new initiative, perhaps linguists are still working on a proper term for it! 😊 Looking forward to an interesting conversation. Thanks again for the feedback!

What do you think? Let’s pick up this discussion