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BY Jane Kiguta Photo credit: Maliki Fumbwe

KMFRI welcomes new Board Chairperson



KMFRI Ag Director General Dr James Mwaluma welcomes new Board Chair Dr Wenwa Akinyi Oranga

The Kenya Marine and Fisheries Research Institute (KMFRI) has welcomed a new Board Chairperson Dr Wenwa Akinyi Oranga. The new Chairperson made her maiden visit to KMFRI headquarters in Mombasa on 26th November, 2024, following her appointment by His Excellency President Dr William Ruto, in a gazette notice dated 15th November, 2024.

She was warmly received by KMFRI Ag Director General Dr James Mwaluma flanked by Directors, before proceeding on a courtesy visit at the DG's office.

Dr Oranga, an experienced professional with a strong background in organic chemistry research, was then taken on a familiarization tour of the Institute.



Board Chair Dr. Wenwa after a tour of KMFRI

During the visit, the Board Chair appreciated KMFRI's robust aquatic research activities and the role they play in providing innovative solutions to societal problems.

The Ag DG also delivered an insightful presentation to highlight KMFRI's roles, milestones and achievements, giving the Chairperson a platform to interact with the Institute's managers. While touring the Institute's state-of-the-art labs, Dr Oranga also acknowledged KMFRI's technological advancements, and at the same time called for increased uptake of futuristic innovations and implementation of more ideas acquired during exchange programmes with other countries.



Dr Oranga plants a commemorative tree

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The highly seasoned Board Chair also planted a commemorative tree at the Institute.



New Board Chair Dr Oranga during a courtesy visit to Director General's office

Dr Oranga has previously held critical roles which include working as a Chief Chemist at the Pyrethrum Board of Kenya, and served as a lecturer at the University of Nairobi. She became the first Kenyan woman to earn a PhD in chemistry, specifically in Organic/Natural Products Chemistry from the University of Nairobi. She has also served as Consul General at the Kenya Consulate in Los Angeles, California.



Board Chair Dr Wenwa Oranga, Board Members and Directors during an induction programme.

The new board Chair together with her board members were later taken through an induction programme to provide them with all the information and support they need to be confident and productive in their new management oversight role.

To enable new BOM members to understand the organisation, KMFRI Directors and Managers delivered presentations on the departmental operations and the environment in which they operate offering insights into how they contribute to the success of the organization.

The board members were also familiarized with KMFRI strategic plan.



New Board Chair Dr Wenwa Oranga makes her remarks

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By Jane Kiguta

Blue Economy CS officially opens new KMFRI Mutonga Research Centre

It was jubilation and fanfare as Tharaka Nithi residents welcomed the opening of the Kenya Marine and Fisheries Research Institute's (KMFRI) newest research hub, Mutonga Research Centre.



Official commissioning of KMFRI Mutonga Research Centre

Cabinet Secretary for Mining, Blue Economy and Maritime Affairs HE Hassan Ali Joho on 29th November, 2024, officially commissioned the centre alongside Tharaka Nithi Governor HE Muthomi Njuki, State Department for Blue Economy and Fisheries Principal Secretary Madam Betsy Njagi, the newly appointed KMFRI BOM Chair Dr Wenwa Oranga and



Laboratory

Ag Director General Dr James Mwaluma among other senior government officials.

Located in Kathwana Municipality, the research centre will serve the greater Eastern, Central and North-Eastern regions of the country.

The government is cognizant of the fact that investments in the fisheries and aquaculture sector play a critical role in the economic transformation of the country, and the launch of the centre is therefore critical in harnessing fresh water research, and in meeting the aquaculture needs for the entire country.

Mutonga Research Centre was born out of a request by KMFRI to the Tharaka-Nithi County through Lands County Executive, which was granted. The purpose of the land was to set up aquaculture research centre. Consequently, KMFRI was allocated 10 acres by the Tharaka Nithi County Government with an approval from the County Assembly, and further by the National Land Commission.

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While addressing the residents, CS Joho hailed the government for funding the construction of the centre, saying it will promote livelihoods.



Traditional dancers welcome CS delegation with songs and dance

PS Betsy acknowledged CS Joho's efforts in ensuring the centre was completed.



KMFRI Centre Directors for Mutonga & Sagana research centres Dr Elijah Kembanya and Dr Domitilla Kyule with CS delegation in fish feed lab.

KMFRI Board Chair Dr Wenwa Oranga for her part congratulated Tharaka residents on the official commissioning of the Centre, saying the new research hub, home to fresh water fish hatchery, fish feed laboratory and aquaculture ponds, among other facilities, will harness fish seed production and encourage uptake of fish farming, and thereby increase fish consumption.

The Board Chair encouraged the residents to leverage the centre to farm and eat more fish saying the diet has numerous health benefits which include Omega-3 fatty acids essential for brain growth and development.

Dr Wenwa also appealed to the government to adequately fund aquatic research activities citing the need for KMFRI to own a fishery vessel to facilitate exploitation of fishes in the deep sea. More fish catch will contribute to Kenya's Gross Domestic Product.

For his part, KMFRI Ag DG Dr James Mwaluma underscored the importance of the centre in boosting the local and national economy, highlighting its potential contribution to the government's Bottom Up Economy Transformation Agenda, to boost the country's overall economy, create employment and bolster resilience.



Mutonga Research Centre

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The research centre will incorporate a fish hatchery, wet and dry laboratory, training resource centre, administration block, accommodation, museum and nature trail. The most critical component of the centre is the fish hatchery, which once operationalized, will ensure consistent supply of high-quality fish seed to farmers, increase fish production and ultimately improve income and living standards.

KMFRI will work with different stakeholders including public schools, universities, county governments, communities and other practitioners to promote aquaculture and fisheries sector growth in the region.

In addition to providing dynamic and competent leadership in the generation and promotion of science-based responsible technologies in fish seed production, the hatchery will strengthen stakeholder capacities in aquaculture and aquatic resources utilization and management.



CS, PS, Tharaka Governor, KMFRI Board Chair, among other government officials tour Mutonga Research Centre

Direct community benefits will include training opportunities to primary schools, secondary schools and colleges; and uptake of aquaculture as an alternative economic activity.

BY Brian Isoe, Dr David Mirera and Joseline Kendi

Edits: Phionalorna Nzikwa

KMFRI holds a workshop on small scale aquatic food systems to improve food security

Kenya Marine and Fisheries Research Institute (KMFRI) held a one-day interactive workshop dubbed “Science-Policy Lab” (S-PoL) in Mombasa, Kenya. The workshop anchored on “Sustainable Agri-Food Systems Intelligence – Science-Policy Interface” and was geared towards knowledge exchange for an understanding on best strategies to improve food security, nutritional benefits, livelihoods, and gender inclusivity for small-scale actors within the aquatic food systems.

The workshop was officially opened by the Director Socio-Economics Dr. Jacob Ochiewo (representing the CEO). Speaking at the event, Dr Ochiewo underscored the importance of the workshop with regards to embracing cultural diversity and the use of indigenous knowledge from the local communities to enhance sustainable utilisation of aquatic resources and creating an all-inclusive approach in bridging challenges in the aquatic food systems.

The workshop was preceded by a site visit of the delegates to Kibokoni Umoja Self Help Group where the local community engages in mariculture: rearing marine species like crabs, milkfish, rabbitfish, and

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marine tilapia in earthen ponds and Mtwapa Beach Management Unit (BMU).

The Kibokoni community Mariculture project has helped to improve the livelihoods of the community as well as their nutrition due to the consumption of fish which enriches them with protein, omega 3,6, and other rich vitamins and minerals,” noted Dr Mirera, the Assistant Director of Mariculture and coordinator the workshop.

Mtwapa BMU forms a key arm of fisheries management in Kilifi County and has been the centre



KMFRI Socioeconomics Director Dr Jacob Ochiewo

of a number of model interventions to support fish cold chain management.

Delegates from over ten nations convened at S-POL to discuss issues related to small-scale fisheries and aquaculture as key aspects of the aquatic food systems.

The workshop brought together stakeholders in the value chain, including those involved in production, producer organisations, the commercial sector, civil society, non-governmental organisations, government agencies that are involved in policy making, research institutions and community organisations.



Participants follow proceedings at the conference

A Recap of the S-PoL Presentations

Interactive sessions were conducted including presentations from different actors showcasing the need to hold more workshops to share knowledge and expertise as a road map to bridging food insecurity as well as influence consumption of fish among the regional communities.

Globally, fisheries and aquaculture resources are critical to improving livelihoods, nutrition, and food security. The livelihoods of hundreds of millions of people are directly or indirectly dependent on fisheries and aquaculture and thus the need to put more focus on aquaculture.

However, as communities everywhere, including many parts of Africa, work toward sustainable development, they encounter obstacles when attempting to utilise the

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resources found in fisheries and aquaculture, such as infrastructure limitations, climate change-related effects, accessibility, and inclusivity issues.

Dr. Mirera's presentation heightened the need to collaborate with diverse multidisciplinary actors in the aquatic food systems to address the available challenges affecting the aquatic food systems through the development of policy frameworks to remedy these challenges as a whole.



KMFRI Mariculture Assistant Director Dr David Mirera

To obtain more information from the stakeholders and experts, the workshop was divided into three different segments allowing the members to delve into deeper deliberations on how to effectively bring on board the disadvantaged groups in the society especially indigenous communities, women, and children to ease access and availability of aquatic food.

The discussions also emphasised developing alternative working frameworks to eradicate available barriers hindering the already progressive adoption of aquaculture practices in the country and support effective collaboration among communities, the national government, and all stakeholders at different levels.

Dr. Mirera noted the need to catalyse the inclusion of women in the fisheries and aquaculture value chain. The central benefit of having women in the aquatic food systems was underscored during the deliberations.

Prof. Konstantinos Karantininis from the Swedish University of Agricultural Sciences, while speaking at the event emphasised the importance of putting into action recommended policies to achieve success and this entails bringing everyone on board from the fishers to the consumers. He also asked community members to be at the forefront in championing the strategic development of policies that will benefit them locally and not to shy away from airing their views.

“For this advice and strategies to succeed, we need the collaboration and involvement of the subjects of these policies. The subjects of these policies are everybody in the agrifood systems including farmers, fishers, researchers, processors, producers, and consumers,” he said.

He went ahead to suggest that consultation among key stakeholders in the aquatic food systems should be consistent to avoid sitting on key important documents without action being taken and that the workshop was a learning experience for all sectors in the agrifood systems value chain.

The group discussion culminated with a voting exercise, with the stakeholders voting for a total of six policies, two coming from each group. The actors voted for the six policies put forward with an effort to understand policies that needed more priority and the

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influence they would have once implemented.



Working group at the conference

Bottom Line: Key Takeaways and Recommendations

The workshop concluded with several key takeaways. One important finding was that small-scale fisheries play a crucial role in providing coastal communities with a social safety net and alternative sources of income when other economic opportunities are scarce. Therefore, it is crucial to create a supportive work environment that can assist and engage with various stakeholders involved in small-scale fishing and aquaculture.

Additionally, the significance of health management in aquaculture and the critical part the government regulations play in fostering the long-term expansion of the sector were also emphasised during the conference, as well as the improvement of nutritional needs among individuals.

Our increased efforts to solve the worldwide issues endangering aquaculture through research will be necessary to create sustainable small-scale aquatic food systems was the clarion call with all actors forging to work together as a team to combat challenges affecting the industry.

“We need to bring together all the different actors as we have done in these science - policy lab (communities, stakeholders at global, regional, national, subnational, and local levels) and undertake candid discussions to mainstream integrated and holistic approaches to the development of the small-scale aquatic food systems sector,” noted Dr Mirera.



Conference participants

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By David Mwoma & Edna Ng'andu

Edits: Jane Kiguta

KMFRI joins stakeholders in observing the World Fisheries day

Kenya Marine and Fisheries Research Institute (KMFRI) was among key Blue Economy stakeholders that registered their presence at the World Fisheries Day celebrations held in Lwanda Kotieno landing site, Siaya County. Deputy Chief of Staff in the Executive Office of the President, Performance and Delivery Management Mr Eliud Owalo represented the Ministry of Mining, Blue Economy and Maritime Affairs Cabinet Secretary HE Ali Hassan Joho. Mr Owalo was accompanied by State Department for Blue Economy and Fisheries Principal Secretary Madam Betsy Njagi.



KMFRI stand during the World Fisheries Day celebrations

During the fete, KMFRI showcased her research activities and scientific innovations in diverse thematic

areas, highlighting how aquatic research impacts sustainable fisheries and the Blue Economy.

This year's event was themed *"Transformative Collaborative Governance for Blue Transformation and Sustainable Investment in Fisheries"*. The function



Jubilation in Siaya during the World Fisheries Day

provided a platform to underscore the vital role the fisheries sector plays in boosting food security and nutrition in the country.

Fisheries stakeholders also shared challenges facing the sector, and called for relevant policies that will aid sustainable fisheries management for the development of the blue economy.

About World Fisheries Day

World Fisheries Day is observed on **November 21** each year. It highlights the critical importance of marine and freshwater ecosystems in sustaining the livelihoods of millions globally, promoting sustainable fishing practices, and raising awareness about the threats faced by water bodies and aquatic life.

Origins and Purpose

World Fisheries Day began as an initiative to emphasize the need for sustainable fishing practices to protect both the environment and the communities

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that rely on fisheries. It was formally recognized in 1997 during a gathering of global fisherfolk organisations, known as the World Forum of Fish Harvesters & Fish Workers (WFF).

Representatives from over 18 countries attended the gathering in New Delhi, India, where they highlighted the urgent need for better policies to safeguard the oceans, rivers, and fish stocks essential for food and economic security.

Why Fisheries Matter

Fisheries provide food and economic resources for millions, supporting around 10-12 per cent of the world's population directly or indirectly. However, unsustainable practices, overfishing, pollution, and climate change pose severe risks to aquatic ecosystems.

Fish stocks have seen a drastic decline over recent decades, with over 33 per cent of global fish stocks overfished, and another 60 per cent fished to their sustainable limits. This depletion affects biodiversity and disrupts livelihoods, particularly in coastal and island communities dependent on fishing.

Goals of World Fisheries Day

World Fisheries Day promotes sustainable fishing practices by advocating for measures that prevent overfishing, and promoting practices that allow fish populations to replenish.

The day is also aimed at protecting aquatic habitats by raising awareness about pollution, habitat destruction, and illegal fishing, which threaten marine ecosystems.

Fisheries managers also leverage the platform to highlight ways in which they can support fishing communities, especially small-scale and subsistence fishers, who are often the most affected by declining fish stocks and environmental degradation. It is also a good time to advocate for responsible fish consumption and encourage consumers to carefully select sustainably sourced seafood to reduce demand for overexploited species.

How is the day observed?



Children are shown different types of fishing gears

During the World Fisheries Day, communities, NGOs, and governments organise activities such as beach clean-ups, fishery exhibitions, workshops, and educational programmes. These events highlight local fishing communities' contributions, discuss the state of global fisheries, and promote sustainable fishing.

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By: Edward Waiyaki, Nicholas Karani, Hellen Ngoa, Faith Kimanga & Levit Kimbio Edits *Jane Kiguta*

Research on poverty among Kenya fisher folks will lead to better fisheries management strategies



Artisanal fishers in Ngomeni

That the majority of fisher folks are languishing in abject poverty cannot be gainsaid. I dare say that among our artisanal fisheries fraternity, poverty is indeed 'the root of all evil'. It generates a vicious cycle of adversity within the communities. This is the stark reality that artisanal marine fishers are grappling with - never mind that the fisheries sub-sector contributes up to 80 per cent of national marine landings!

But understanding how poverty affects fishing practices can lead to better fisheries management strategies, which ultimately promote more sustainable fisheries.

According to findings, understanding the social and economic impact of poverty on our small-scale fishing

communities is critical because the knowledge will enhance understanding on how poverty influences fishing behavior, and lead to more effective participatory conservation strategies that will also enable fishers to exploit fisheries resources more effectively.

Artisanal fisheries also known as small-scale fisheries, play a crucial role in coastal communities, particularly in Africa and developing countries. According to research, they provide food security for over 200 million people in Africa alone, and represent 96 per cent of all fisheries globally.

Despite the fishers' huge contribution to the economy, children of fishermen will often not attend school due to lack of fees. Without any access to storage facilities, the fisher is condemned to the position of being a price-taker throughout his life, constantly at the mercy of the middleman's whims.

As a result, a poor fisherfolk will do anything to survive, and this includes using destructive fishing methods which are ultimately detrimental to the fisheries resource.

And given the significant value of Kenya's marine landings over the past five years, the glaring question we should ask is: why are our artisanal fisherfolk stuck in such dismal deprivation and how can we bridge the gap?

How Market Systems Development concept works

Thankfully, research has found out that the Market Systems Development (MSD) concept offers a unique, and more importantly, sustainable approach to addressing the poverty conundrum. Unlike traditional poverty alleviation models which seek to provide direct solutions to existing problems, the MSD approach is different.

According to studies, it first identifies the problem; determines which permanent member(s) within that

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specific market system can provide the needed solutions, as well as why they are not doing so; and then facilitates actors within the system to solve the market constraints themselves. This has proven to be a far more sustainable approach, compared to the former one.



An artisanal fisher's mud-walled, thatched-roof home in Kilifi County, Kenya **Source:** [AquaDocs.org](https://www.aquadocs.org)

Effective and lasting solutions to the poverty afflicting our fisherfolk require policy. Evidence-based research can inform the development of robust policies that support poverty alleviation, food security, and sustainable fisheries, ensuring that interventions are tailored to the specific needs of these communities.

Studies show that fishers in 87 per cent of coastal Least Developed Countries earn below the extreme poverty line of \$1.90/person/day. Poverty in fisheries is multifaceted, encompassing issues of income, health, literacy, gender, and power, making it a complex "wicked problem".

Global prominence has been given to the issue of poverty as exemplified by the prominent position the Sustainable Development Goal of eradicating poverty holds.

Observations from socioeconomics perspective

Based on interactions with artisanal fishing communities along Kenya's 600-kilometre coastline, the following are some of the ways poverty manifests itself among fisherfolks.

First, inadequate incomes mean that the fisherman lives in temporary (mud-walled and thatched roof) dwellings, without any modern conveniences, such as piped water. Food insecurity is heightened in the household as meals could be limited to as few as one per day. Fishers are oftentimes 'enslaved' by middlemen who give them loans on very exploitative terms, under the guise of financial support. It is not surprising that only 5 per cent of all of Kenya's artisanal marine fishers have robust savings. Theirs is a hand-to-mouth existence, rarely punctuated by episodes of monetary relief.

The fisher suffers from a paucity of fishing or household assets. All these circumstances jeopardize his chances of consistently engaging in fishing for livelihood. And as it becomes apparent that the fisher is unable to make ends meet, he withdraws from society due to feelings of inadequacy, and over time stress gets the better of him. The long and short of it is the fisher's life is characterized by severe deficiency materially, financially, nutrition-wise and socially.

Given the multi-dimensional nature of poverty, in terms of the inter-woven nature of its causes, understanding (or at least improving our understanding of) its root causes is critical. Identifying the cause of a problem goes a long way in determining its solution. Only well designed (social) research can help us better grasp the complex nature of the poverty afflicting our artisanal fisherfolk.

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Mtafiti Pictorials

Photos by KMFRI Corporate Communications & PR team



KMFRI and Blue Economy agencies joined hands in a tree-planting exercise in Kipini, Tana River County, promoting sustainability and environmental conservation.



KMFRI team, led by Dr. Christopher Aura, joins officials from the State Department for Blue Economy, Kenya Fisheries Service, and Kisumu County Veterinary Officers for a family photo.



KMFRI Kisumu, in partnership with Cornell University, hosted a fish health and biosecurity workshop to boost aquaculture practices in Lake Victoria.



KMFRI hosts Fisheries students from Wildlife Research & Training Institute Kenya (WRTI), Naivasha, for a lab tour on sample collection, processing, and specimen storage.

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KMFRI Sang'oro, led by Senior Research Scientists Robert Ondiba & Safina Musa, host WRTI Naivasha fisheries students.



KMFRI research assistants during a dissemination exercise to empower fisher communities on gear disposal and on tackling marine litter challenges.



Wildlife Research Training Institute students in a practical session at KMFRI aimed at exposing them to aquaculture practices, fish propagation, nutrition, and feed production.



KMFRI research assistant holds out a modified gillnet to fisherfolks in Tana River County. The nets will help combat marine litter in our oceans.