

A woman wearing a red long-sleeved shirt and a blue and yellow patterned headscarf is bent over in shallow, rippling water. She appears to be working with seaweed, possibly harvesting or processing it. The background shows more of the water and some wooden posts.

# KMFRI HELPING KIBUYUNI FARMERS TURN SEAWEED INTO A BOON



**T**he once sleepy village of Kibuyuni fishing village in Kwale County has overtime transformed into a land of milk and honey for its residents who some years back lived in abject poverty, thanks to uptake of seaweed farming. Seaweed farming, a female-dominated venture, started in Kibuyuni after experimental trials by KMFRI researchers.

In mid-2000s, 30 women came together to try the novel agri-business. The success of the venture in the initial seaweed site, which today has more than 100 farmers, led to the establishment of other seaweed blocks in the South Coast.

In 2008, seaweed farming was scaled up after it emerged as a lucrative economic venture.

New seaweed blocks include Nyumba Sita, Jimbo, Mkwiro, Timbwani, Tujwane, Mwanzaro and Tumbe.

Seaweed or sea vegetables are forms of algae that grow in the sea. They are food source for ocean life and are available in a range of colours; from red to green, to brown to black.

Seaweed farming is low cost, requires minimal investment; and can be practised individually or communally. It is also compatible with traditional farming methods. The seaweed species being cultured in Kenya's South Coast include *Euचेuma denticulatum* and *Kappaphycus alvarezii*, with the former being the most common.

The two species are found naturally in East Africa and used to be collected from the wild for export. The methods used for culture are mainly off-

bottom also known as tie-tie system. Farmers require gumboots to venture into the relatively deep waters, ropes and pegs. The marine plants are tied on ropes and hung in the ocean for at least six weeks, with April to June being the most suitable months for cultivation.

Seaweed farming is viewed as a suitable and sustainable alternative livelihood for Kenya's coastal population particularly because the activity contributes to a reduction in fishing pressure from coastal populations on local fish stocks. In addition, the seaweed acts as an important breeding, nursery and feeding ground for several fish species, hence has significant contribution to the fisheries sector.



*Researchers display seaweed varieties*



# Gains from seaweed..

According to Mama Fatuma Usi, the chairperson of Kibuyuni Seaweed Cooperative, the number of farmers has increased by leaps and bounds and the BMU today is comprised of 212 women seaweed farmers and 75 men. Youth aged between 20 and 35 years have also plunged into the trade.

“Seaweed farming is all we have. Before the venture, educating children upto Form Four level was unheard of. Today, many families can afford to pay fees for their children’s secondary education. Today, we have very many youths in our area with O level certificates,” said Mama Fatuma. She is passionate about seaweed farming and appealed to women who easily despair and abandon the farming to come back to the trade recounting the strides they have made as a community since embarking on the venture.

“I get emotional when I see some of my fellow seaweed farmers handle seaweed business like a joke. Seaweed farming is not a joke. This is our cash crop. It is our ‘coffee’. It has boosted our livelihoods



KMFRI team headed by CEO Prof James Njiru (PhD), AD Socioeconomics Dr Jacob Ochiewo, M&E head Ms Nimo Jamaal and Community Mobilizer Ms Norah Magangi with Kibuyuni farmers in Shimoni during a monitoring and evaluation exercise.



Mama Fatuma Usi

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*Seaweed value added products*

in a big way. The community has been transformed. Thanks to seaweed,” she says.

During a monitoring and evaluation exercise carried out by KMFRI Monitoring and Evaluation team led by Assistant Director Socio Economics Dr Jacob Ochiewo and M&E head Ms Nimo Jamaal , the farmers acknowledged receiving training from KMFRI through the Institute’s seaweed community mobilization staff Ms Norah Magangi.

Through Training of Trainers (ToT) training, Norah has trained BMUs and the farmers now know how to test water temperatures, divide seaweed farms into manageable blocks, tie seaweeds on ropes for planting and so on.

The Blue Economy Technical Committee in collaboration with KMFRI, Kenya Industrial Research and Development Institute (KIRDI), the State Department of Fisheries and the Blue Economy, Kenya Bureau of Standards (KEBS), Brand Kenya, Kenya Intellectual Property Institute (KIPI) and the County Government of Kwale have worked together to



fast track seaweed value addition. The farmers now know how to add value to seaweed and through light-duty soap-making machines donated by the government and other agencies, they manufacture seaweed valued added hairfood, soap, shampoo and lotion.

“In the seaweed venture, the money is in the value added products,” Mama Fatuma says.

A BMU member Hassan Masudi says Kibuyuni is no longer obscure. “Today we receive high-profile visitors from around the country, who come to see seaweed. The community is now vibrant, thanks to seaweed farming.”

Hassan said through seaweed proceeds, farmers have built permanent houses, paid school fees for their children, and the venture is also a lucrative alternative for men, whose main economic activity is fishing.





# Challenges.

Unfortunately, Covid-19 slowed down the business. Mama Fatuma says before the pandemic struck, she would make between Sh20,000 and Sh8,000 in a good day from value-added seaweed soaps. The income has since drastically dropped.

Whereas the community is grateful to KMFRI and other organizations for boosting their seaweed trade, farmers said there is no ready market for dried seaweed. They said they also suffer post-harvest losses due to lack of enough boats for carrying seaweed harvest to the shores. The farmers decry that strong currents sometimes wash away seaweeds in their farms resulting in massive losses.

