Seaweed and Livelihoods: Efforts of Paje Farmers to Tackle Challenges.

FADIA MGANGA MAKAME

On September 15, the Mawimbi team, led by their leaders, visited Paje village to learn about various aspects of seaweed farming and the challenges they face in this industry. This visit was part of a broader initiative to enhance sustainable aquaculture practices in the region. During their time in Paje, the team met with several local farmers, gaining insights into their daily operations, market dynamics, and the socio-economic impacts of seaweed cultivation. The farmers shared valuable information about their farming practices, including seedling selection, harvesting techniques, and the environmental conditions that affect their yields. Additionally, the discussions highlighted critical challenges such as climate change, fluctuating market prices, and the need for better access to resources and training. By fostering collaboration and knowledge exchange, one of the farmers, Ms. Sihaba Mustafa, explained that seaweed farming for them faces many challenges, especially in generating income. The price of seaweed is 1,000 TZS per kilogram of dried seaweed, which is insufficient to meet their needs and lift them out of poverty. They spend a significant portion of their earnings on purchasing farming equipment such as ropes, nets, and sticks, which are essential for maintaining their crops. As a result, they have been working traditionally, continuing the legacy left by their parents as part of their cultural lifestyle. Many farmers are exploring innovative methods to diversify their products and increase income, such as integrating seaweed with other local agricultural products like cassava and vegetables. However, they face barriers such as limited access to markets, insufficient capital for investment, and the lack of training in modern farming techniques, which could enhance productivity and profitability.

Additionally, Ms. Bahati Masoud mentioned that climate change has a significant adverse effect on seaweed farming, causing the seaweed to die and not grow properly. Changes such

as strong winds can uproot the sticks and damage the crop, while decreasing water levels and increased temperatures lead to deterioration and death of the seaweed. These environmental shifts not only hinder progress but also threaten the livelihoods of families who rely on this farming. Research indicates that rising sea temperatures can lead to shifts in marine ecosystems, affecting the health of seaweed farms and resulting in lower yields. Moreover, erratic weather patterns, including unpredictable rainfall and prolonged droughts, contribute to the instability of farming practices, making it increasingly difficult for farmers to plan their cultivation cycles.

Climate change effect on seaweed farming

Moreover, nearby hotels contribute to the death of seaweed by discharging dirty water and excess water from swimming pools, which contains high levels of calcium, leading to the death of seaweed. Even the disposal of waste into the ocean severely affects this farming. Pollution from urban runoff and inadequate waste management systems exacerbate these issues, underscoring the need for better environmental regulations and community awareness programs to protect these vital ecosystems. The local community has voiced concerns about the impact of tourism on their livelihoods, advocating for more sustainable tourism practices that respect and preserve the marine environment. Through the Blue Economy policy, the government plays a significant role in uplifting these farmers and appreciating their efforts by providing tools for carrying seaweed during planting and harvesting, as well as drying equipment and other materials. This initiative aims not only to support seaweed farmers but also to promote sustainable practices that can boost the local economy while preserving marine biodiversity. Collaborations with NGOs and international organizations are crucial to provide further training, financial resources, and research support. These partnerships can help farmers

adopt more resilient farming practices and explore alternative income sources, such as eco-tourism or processing seaweed into higher-value products.

In this Paje village, there is a small factory deal with processing of seaweed called FURAHIA WANAWAKE PAJE ZANZIBAR which is run by women and focuses on processing seaweed to produce various products, including soap, oil, and seaweed flour. Many farmers benefit from seaweed through this project and earn money to support their livelihoods. This initiative empowers local women, providing them with skills and a source of income while promoting value-added products that can capture higher market prices. The factory has also become a model for other communities looking to develop similar ventures. By creating a local brand, the women of Furahia not only support their families but also contribute to the community's economic resilience, encouraging a shift towards more sustainable and diversified economic activities.

Furahia Wanawake seaweed processor point *Soap product from seaweed*

Despite various efforts taken by the government, these are some of the challenges faced by seaweed farmers in Paje village. Therefore, strong collaboration is needed to uplift these farmers across all areas of Zanzibar in order to enhance the market and give value to the seaweed products produced in various regions of Zanzibar. Engaging with local and international stakeholders can help establish fair trade practices, improve supply chains, and create awareness of the ecological benefits of sustainable seaweed farming. Additionally, educational initiatives aimed at both farmers and consumers can cultivate a greater appreciation

for seaweed’s nutritional and environmental advantages, ultimately leading to a more resilient and prosperous future for these communities.