Seaweed: The untapped economic potential for Bangladesh

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- *Bangladesh currently produces some 400 tons of seaweed, valued at 55 million taka (about $500,000), while a study suggested the country could produce 50 million tons of seaweed annually by 2050.*
- *Despite the potential to grow and earn more foreign currency through export, the sector is dealing with a number of difficulties, including inadequate investment as well as proper guidelines and regulations.*
- *According to the Food and Agriculture Organization (FAO), seaweed farming is one of the fastest*

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Seaweed, a type of algae that grows at the bottom of oceans and rivers, is often used by some local Indigenous communities in Bangladesh. And in recent years, a few urban restaurants have also used seaweed in fresh salads, cooked vegetables, fish curries and meat dishes.

Additionally, the aquatic resource has largely been used globally for different purposes, including in industrial raw materials and foods in East Asian countries like China, Japan and Korea.

A survey conducted by the Maritime Affairs Unit (MAU) of the Bangladesh Ministry of Foreign Affairs along with the Netherlands found the presence of several hundreds of seaweed varieties in the Bay of Bengal.

It is estimated that Bangladesh has a ready market for the product with a potential market value of nearly $20 million, as the plants can supply raw materials for biochemicals, pharmaceuticals and cosmetics industries. But in the absence of proper guidelines and regulations, seaweed farming and businesses are yet to form in the country.

Considering increasing demands for seaweed at home and abroad, Bangladesh has recently explored the prospects of utilizing the aquatic plants under its blue economy expansion. Image by Khairul Alam.

“In Bangladesh, seaweed farming is new yet time-worthy, and its farming technique comparatively easy,” said Khairul Alam, a scientist at the Bangladesh Fisheries Research Institute. “Our coastal areas, especially in the islands like Saint Martin and seashores of the Cox’s Bazar district’s soil and water, are very suitable for seaweed farming.”

Poor people living in the coastal areas can survive and become economically independent by cultivating seaweeds. Seaweed can also be used for medicinal purposes, as it can cure many diseases, he added.

Seaweed is a type of photosynthesizing nonflowering plant that usually grows at the bottom of oceans or rivers without roots, stems or leaves. It is usually attached to rocks, sand, mud, shells or other hard structures in coastal marine areas.

Among the three types of seaweed, the green one is commonly eaten as food. Red is used in the production of hydrocolloids, as an aqueous raw material in industrial production, while brown seaweed is used for both food and hydrocolloid production.

Some local collections of seaweed can grow for two to three months, from November to January. There is good growth of the edible green, red and brown seaweeds in the Sundarbans mangrove forests on the root structures known as pneumatophores.

kilometers (441 miles) long, and its coastal area is 47,201 km2 (918,224 mi2).

Around 30 million people live in 19 coastal districts of Bangladesh, and a good number of them depend on the sea for their daily livelihood. Educating coastal residents about seaweed-producing techniques can change their way of living, said Khairul Alam.

In recent years, a few urban restaurants have also used seaweed in fresh salads, cooked vegetables, fish curries and meat dishes. Image by Khairul Alam.

Educating coastal residents about seaweed-producing techniques can change their way of living, say experts. Image by Khairul Alam.

Varieties and the economic prospect of seaweeds in Bangladesh

According to the Food and Agriculture Organization (FAO), seaweed farming is one of the fastest-growing aquaculture sectors globally, with an annual production of about 33 billion tons, valued at $11.8 billion. This is anticipated to double by 2024. More than 40 countries produce seaweed, with China and Indonesia accounting for 87% of the global production.

Bangladesh currently produces some 400 tons of seaweed, valued at 55 million taka (about $500,000). However, a recent study suggested it could be increased to 50 million tons by 2050.

According to the survey, 220 seaweed species were identified in Bangladesh. This presence of seaweed offers the country huge commercial potential, as it could reduce import dependency for domestic use and also fetch foreign currency through export to the global market.

Some seaweed varieties could end up in five industries: fish feed, animal feed, food additives, bulk cosmetics ingredients and high-value cosmetic ingredients. Seaweed can also be used for fertilizers, biofuels, and products to prevent environmental pollution. Increased consumption of seafood can support nutrition security.

If the full potential of this crop is realized, millions of jobs might be produced for inhabitants of coastal communities like Cox's Bazar, Chattogram, Noakhali, Patuakhali and Satkhira, the survey suggested.

According to a survey, 220 seaweed species were identified in Bangladesh. Image by Khairul Alam.

Existing problems in seaweed farming

Seaweed producers in Bangladesh deal with several difficulties, including natural calamities, inadequate investment and lack of proper guidelines and regulations.

Shafiqul Islam, a professor in the Department of Marine Science and Fisheries at the University of Chittagong, said, “For example, the farms are usually damaged by cyclones. There is another problem is the lack of investment. Big companies are skeptical about investment in this sector. Some companies show interest, but they are not sure of their profit. It is a booming sector; it will soon be a competitive area.”

A study has identified pollution as a major problem in seaweed farms. The study showed that turbid water in the Bay of Bengal decreased production — heavy waves washed out the seaweed farms, which led to economic loss for farmers.

In addition, farmers identified short production cycles and a lack of technical knowledge as some of the many factors hindering seaweed production. For example, a lack of knowledge of site suitability leads to choosing an unsuitable site for cultivation.

Another study showed that the lack of post-harvest technologies was the most significant technological obstacle in Bangladesh. For the cultivation of seaweeds, seed banks are essential because there aren’t any quality seeds available throughout the culture stage. The low farm gate price of seaweeds, the absence of value-added items, a poor supply chain, insufficient financial support and inadequate research support are additional obstacles to the growth of a seaweed business in Bangladesh.

Banner image: *Local fishermen harvesting seaweed in Bangladesh. Image by Khairul Alam.*

Seaweed an increasingly fragile lifeline for Philippine farmers

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