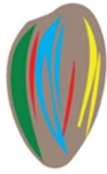




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# MARKUP

EU-EAC MARKET ACCESS UPGRADE PROGRAMME

## Market Profile

### SEAWEED PRODUCTION in Zanzibar/Tanzania



Author: Al-haj M Jecha – Ministry of Trade & Industry



This market profile has been developed within the framework of the Market Access Upgrade Programme (MARKUP) – Tanzania Window (TZ1.1.1)

**Disclaimer:** The views expressed herein can in no way be taken to reflect the official opinion of the International Trade Centre

*“It is important to get seaweed production on an industrial scale. Seaweed is a valuable source of essential amino acids that are in low supply in protein derived from terrestrial plants. Denmark is prepared to buy millions of tons of seaweed to produce optimized feed protein for pigs. But we need a stable supply and quality – and a competitive price”.* Jens Legarth, CEO Fermentation experts and A Member of the Industrial Network of Ocean Center Denmark<sup>1</sup>.

## **PART A**

### **INTRODUCTION.**

The seaweed industry is perhaps one of the least understood and underestimated sectors of the world's fisheries, consisting of a relatively small number of scientists, industrialists and farmers. Certainly, its economic and commercial qualities are among the most poorly documented. Yet it is a sector of considerable rapid growth, with a total commercial value approaching United States Dollars (USD) 1 billion per annum. Moreover, the products of its most dynamic section i.e. the extraction of seaweed colloids, touch upon almost every aspect of modern society, according to the Food and Agriculture Organization (2018)<sup>2</sup>.

Historically, Tanzania started its formal seaweed and overall alginate-related production for trade purposes in 1989 in the coastal regions of Zanzibar. Seaweed experts from the Philippines introduced two types of seaweed, namely *Euचेuma Spinosium* and *Euचेuma Cottonii* in Zanzibar, famously known for the use in pet food, dairy, meat industries and pharmaceutical industries<sup>3</sup>. The initial objective for planting these types of seaweed was for experimentation, but after showing effective results, the agro-product became a potential export commodity. Since then the government has taken deliberate action to maintain the standard quality of seaweed and products related to the natural cycle of seaweed (such as algae), as well as finding profitable markets. Before 1989 local farmers produced seaweed to facilitate domestic use with minor activities of local trade.

Today, and as far as seaweed is concerned in Tanzania, Zanzibar islands are the heart of seaweed production in Tanzania. Kilwa, Mafia, Lindi and Mtwara also produce seaweed, but pale in comparison to Zanzibar's production. The Zanzibar White House annual journal 2018 shows that Zanzibar-Tanzania is the third largest seaweed producer, challenged by Indonesia and the Philippines. It is a sector that has an average of 24,000 seaweed farmers, 90% of which are women<sup>4</sup>. However, scouting and identifying the best potential markets has been challenging and costly for the government. Local farmers have repeatedly complained, via media channels, that the selling price of seaweed is too low (roughly, TZS 800 per kilo) which is equivalent to USD 0.38. The main factor causing the inability to access the best markets is the lack of tools to scan for potential markets with high demand for seaweed, easy market access and high prices.

This short report explores trade analysis for the seaweed production in the world and aims at finding the right market. It departs from the regular narrative of traditional report by being a more data-oriented report combining both quantitative and qualitative assessment. The report seeks to show the market size of the product, the demand and growth value of seaweed over the last five years, market share, and the dynamism of seaweed performance over time (market trend).

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<sup>1</sup> <http://www.besustainablemagazine.com/cms2/algae-for-biogas-in-central-denmark-region/>

<sup>2</sup> <http://www.fao.org/3/AC860E/AC860E01.htm>

<sup>3</sup> <http://www.fao.org/3/CA1121EN/ca1121en.pdf>

<sup>4</sup> Ikulu Zanzibar Journal No. 037 May 2018

By and large, this report uses International Trade Centre (ITC) intelligence trade tools to identify and understand the global market for seaweed products. ITC tools are online data tools used for trade analysis and research. These tools include the ITC Trade Map, market access map, market analysis tools, export potential map, market price information, rules of origin facilitator, etc. There are other secondary sources that will be used in collecting and analyzing.

The report is divided into five main parts. Part A is an introductory part, part B provides a market scan, and Part C and D consist of market entry and market zoom. The last part shows limitations, recommendations and conclusion.

## **PART B**

### **MARKET SCAN**

#### **i. Product Overview.**

##### **- SEAWEED and its CHARACTERISTICS.**

**Seaweeds** are marine plants that grow particularly close to the seabed. In classic biological terms, seaweed refers to one of the benthic organisms found either near or in marine sedimentary habitats, for instance along the foreshore and abyssal depths. Some of the fundamental requirements for seaweed growth are seawater habitat, light that can penetrate the seabed since it is essential for photosynthesis, and a substrate to attach to<sup>5</sup>.

Seaweed includes members of algal species such as red algae, brown algae, and green algae. The term *seaweed* is a colloquial term for some algal species in marine waters. Depending on the technology and efforts during cultivation, seaweed grows throughout the year.

Tanzanian regions growing seaweed: In Zanzibar, seaweed grows in all five regions of the islands. In mainland Tanzania, it grows in Lindi, Mafia, Mtwara and Kilwa.

Uses: Ecologically, seaweed is essential as food for some marine organisms. Human beings utilize seaweed for various purposes such as medicine, research, food, and fertilizers.

In the context of this market profile, seaweed has the HS code 121229 (Seaweed and other algae, fresh, chilled, frozen or dried, whether or not ground, unfit for human consumption).

##### **- World Production and Consumption.**

On a global level, the production of seaweed for export has been reported at USD 283 million. For the value imported, the amount reached USD 314 million in 2018. Differences may arise from Free on Board (FOB) and Cost, Insurance, Freight (CIF) prices as well as from reporting errors. It can be observed in the table below that there is a relatively higher number of values imported at the world level than the value exported pointing to a trade imbalance.

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<sup>5</sup> <https://www.biology-online.org/dictionary/Seaweed>

**Table 1.1: World exporters of seaweed**  
(marked in red where import is higher than export)

Exporters	Value exported in 2018 (USD thousand)▼	Trade balance in 2018 (USD thousand) ₤	Annual growth in value between 2014-2018 (%) ₤	Annual growth in quantity between 2014-2018 (%) ₤	Annual growth in value between 2017-2018 (%) ₤	Share in world exports (%) ₤	Concentration of importing countries ₤
World	283,018	-30,869	-3	-1	-7	100	0.16
Chile <i>i</i>	98,341	95,385	-3	-2	-23	34.7	0.46
Ireland <i>i</i>	43,249	33,451	21	15	1	15.3	0.08
Peru <i>i</i>	28,361	28,348	2	3	-8	10	0.94
Indonesia <i>i</i>	18,471	18,014	-29	-23	-23	6.5	0.27
Canada <i>i</i>	9,689	7,214	0		1	3.4	0.81
Portugal <i>i</i>	9,079	8,100	77	84	94	3.2	0.93
Morocco <i>i</i>	8,609	8,552	-5	-13	-3	3	0.32
Philippines <i>i</i>	8,562	8,366	-25	-15	2	3	0.21
France <i>i</i>	6,233	-18,460	1	37	8	2.2	0.21
United States of America <i>i</i>	6,189	-38,718	23	20	47	2.2	0.08

**Table 1.2: World importers of seaweed**

Importers	Value imported in 2018 (USD thousand)▼	Trade balance in 2018 (USD thousand) ₤	Annual growth in value between 2014-2018 (%) ₤	Annual growth in quantity between 2014-2018 (%) ₤	Annual growth in value between 2017-2018 (%) ₤	Share in world imports (%) ₤	Concentration of supplying countries ₤	Average tariff (estimated) applied by the country (%) ₤
World	313,887	-30,869	-1	2	-6	100	0.14	
China <i>i</i>	112,119	-108,409	-3	-2	-19	35.7	0.49	16.6
United States of America <i>i</i>	44,907	-38,718	0	7	7	14.3	0.13	0
Japan <i>i</i>	30,943	-29,212	-1	-5	-10	9.9	0.15	0.9
France <i>i</i>	24,693	-18,460	10	21	52	7.9	0.17	0
Spain <i>i</i>	23,435	-19,813	1	16	47	7.5	0.2	0
Ireland <i>i</i>	9,798	33,451	17	13	17	3.1	0.78	0

- **Tanzania's Production Capacity.**

The two types of seaweed introduced in Tanzania and currently produced, E. Spinosium and E. Cottonii, are produced and processed in different ways. Large quantities of seaweed exported from Tanzania are either dried or raw. Only recently, a few companies have started processing seaweed into manufactured products. Both raw and manufactured seaweed is exported through the Zanzibar Harbor Port in Malindi Street for shipment to designated destinations<sup>6</sup>.

ii. **Global Trade Overview**

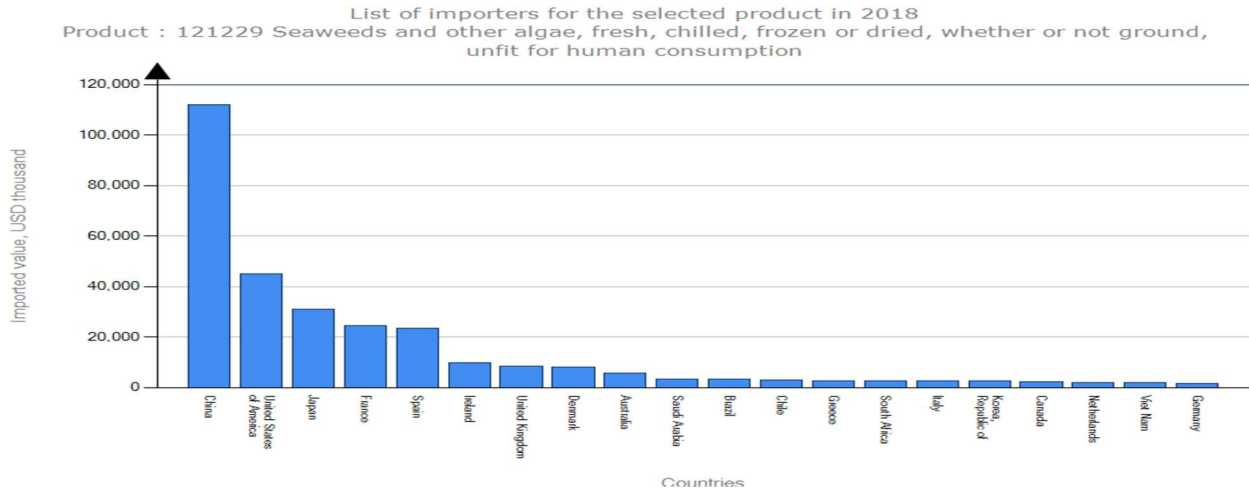
According to ITC's Trade Map, **Chile**, followed by **Ireland**, **Peru**, and **Indonesia**, are the world largest producers and exporters of seaweed, while **China**, the **USA**, **Japan**, and **France** are the largest importers

[6 \(see reference number 4\)](#)

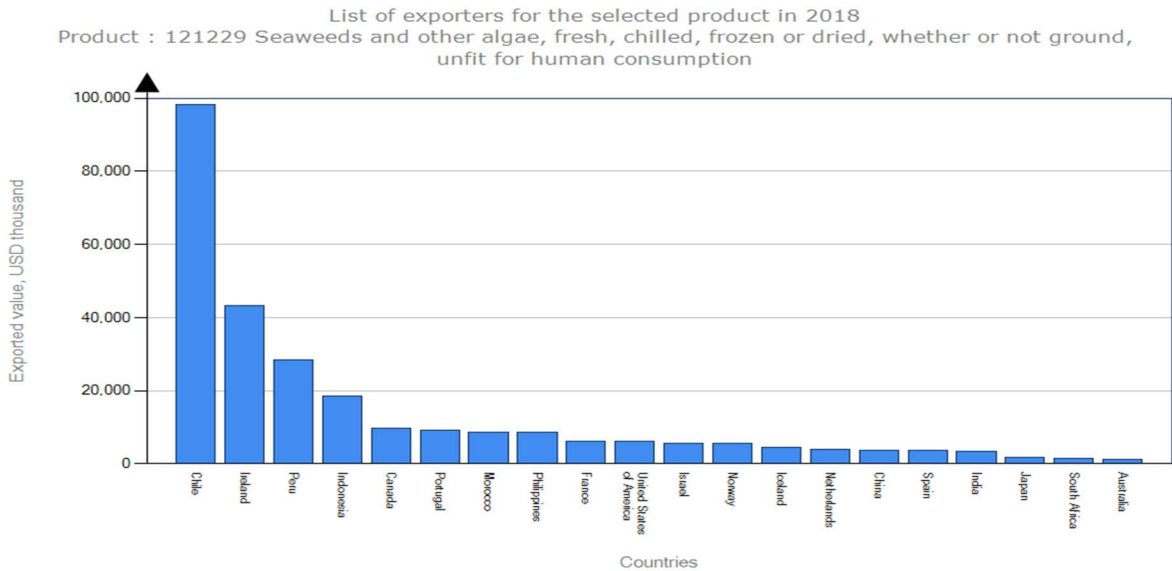
and consumers of seaweed. ITC's map access shows a list of more than 40 countries that import and export seaweed. Tanzania is ranked 38<sup>th</sup> in the list of seaweed exporters in the world.

The two bar charts below show the list of countries that import and export seaweed (HS code 121229) with highest values being China for importers and Chile for exporters.

**Table 2: Importers and import value**



**Table 3: Exporters and export value**



The annual growth in value for 2017/18 has significantly decreased by 6 percent in the world market, whereas for the period 2014-18 the annual growth in value has fallen by only 1 percent in the world market. These results indicate that there is a significant gap between the 5 year-trend and two year-trend of negative 5 percent and recently the imported value of seaweed production has not been maintained in the world market. In other words, recent price changes prove that the world market for seaweed is volatile and somewhat unstable.

The world annual growth in quantity increased by 2 percent between 2014 and 2018. This difference between annual growth in value and annual growth in quantity tells us that currently, the growth in value is weaker than the growth in quantity in the world market. In situations like these, it could happen that either the supply of seaweed exceeds the demand causing the price to decrease or transportation and insurance costs fall. In general, there are several factors that could cause the decrease of unit value at the global market level.

To get an idea of the market structure and how competitive the seaweed industry is around the world, it is imperative to look at market shares. The top 3 main exporters are Chile, Ireland and Peru with respective market shares of 37.7%, 15.3% and 10% and accounting for a combined total of 60%. This informs us that the world market is averagely concentrated, and the market structure is polarized. The top 10 markets account for approximately 80.1% of the market shares, which implies a likelihood of fewer markets that exporters can sell seaweed and higher competition in destination markets.

## Part C

### MARKET ENTRY

#### iii. Tanzania's Export Performance on Seaweed Product

Before analyzing Tanzania's export performance for seaweed, the issue of missing data must be addressed. ITC tools provide data that is either reported by national authorities such as Tanzania's National Bureau of Statistics, United States Census Bureau, Eurostat, or from COMTRADE which is produced by the United Nations Division database. In that regard, with missing data problems there is a chance that the report conclusion could be biased.

The aggregated data produced by ITC Trade Map tool positions Tanzania as the 38<sup>th</sup> seaweed exporter in the world with a total value of USD 123,000 worth of export in 2018. However, the data for average annual growth in value and in quantity for the last five years is not available. According to ITC Trade Map instruction, the indicator for annual growth for five years is calculated only if data is available for at least four years, otherwise the space is left blank.

Tanzania has a 0.0004% market share in the world exports. Of course, this low percentage rate does not necessarily mean there are no available markets to sell seaweed to, but it shows that Tanzania's market size in value is inconsiderable at a global level. However, by comparing Tanzania's growth in value with the world's growth in value, the market share shows a steady growth rate.

**France** and **Poland** are the only seaweed importers from Tanzania, with France's value of seaweed imports in 2018 reported to be USD 119,000 and US D4,000 for Poland, according to ITC direct data. Tanzania faces 0% tariff for exporting seaweed in both countries with France having (0.17) moderate concentration of all supplying countries compared to Poland (0.63) which is highly concentrated.

Alternatively, using mirror data could remedy the issue of missing data for non-reporting countries. In this case, we assume Tanzania has not fully reported her data to either COMTRADE, or any other reliable data source that ITC uses to retrieve data.

For mirror data, countries such as **Denmark** (USD 2,007,000), followed by the **United States of America** (USA) (USD 1,890,000), **France** (USD 1,715,000) and **Spain** (USD 403,000) have been noted as the biggest importers of seaweed from Tanzania. Imports of these four countries amount to a total of about USD 6 million.

### Which are the most attractive markets for Tanzania's seaweed?

After assigning scores to the indicators (variables) for better screening, **Denmark** scored the highest as the most attractive market for Tanzania's seaweed. Unlike the USA and France, which also get significant scores, exporting seaweed to Denmark has many benefits in terms of cash (value), tariff, market share, distance and market concentration.

The Market Access tool indicates that Denmark has 0% tariff on Tanzania's seaweed exports as well as to all other seaweed exporting countries. Furthermore, it applies 0% most-favored nation (MFN) duties to all seaweed producing countries exporting to Denmark. In this regard, Tanzania does not have a tariff advantage since all countries face the same tariff.

The table below shows the list of most attractive markets for Tanzania.

**Table 4: The 3 most attractive markets for Tanzanian seaweed (from highest to lowest)**

	Target Country	Imported value (000) in most recent year	Unit value (USD /unit)	World market share (%)	Annual growth rate in value past 5 years	Tariff Advantage (%)
1	Denmark	2,007	604	2.6	15	0
2	USA	1,890	580	14.3	5	0
3	France	1,715	578	7.9	27	0

## Part D

### MARKET ZOOM

#### iv. Market Screening

##### DENMARK-TANZANIA MARKET PROFILE ON SEAWEED



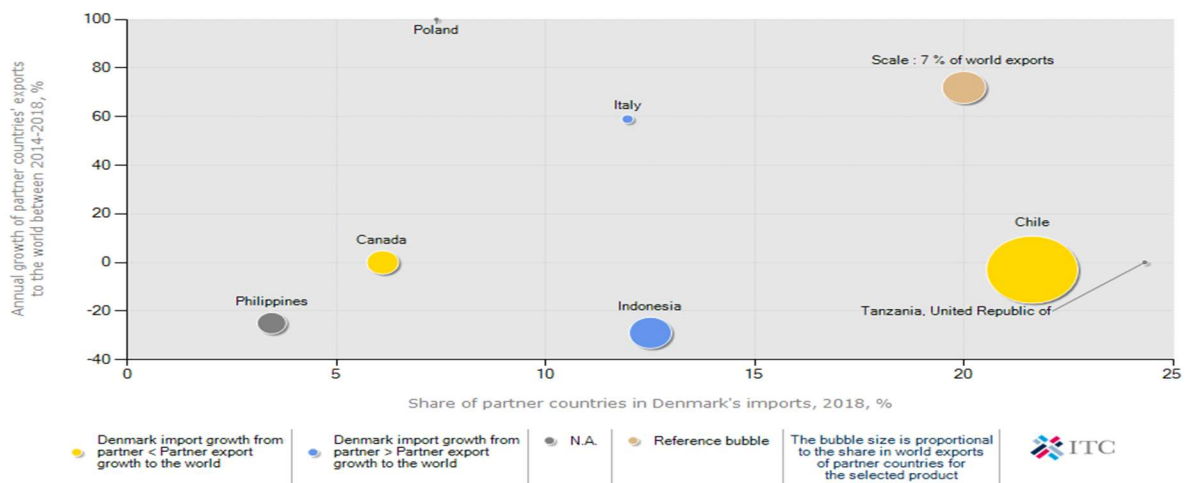
Tanzania and Denmark have a long-standing trade relationship. The ITC Trade Map indicates that Tanzania started to export seaweed to Denmark in 2012, with a reported value of USD 1.06 million. Since 2012, seaweed trade with Denmark has been growing at a rapid pace in terms of value and quantity. The value exported in 2018 was USD 2.2 million, a record which no country set before in relation to seaweed. In comparison with other importers, Denmark is still a good market opportunity until further changes in the market. The market structure looks promising as it appears to be fragmented (2.6%), giving Tanzania a competitive advantage in the market for seaweed.

#### Main Competitors

**Chile** and **Indonesia** have been rival seaweed exporting countries for a long time. Tanzania, however, leads the winning race in growth imported value and growth imported quantity over the last two to five years. Chile is gaining market share in the world by 34.7%; however, it is yet to gain market share in Denmark. As a matter of fact, ITC tools show that seaweed exports from Chile to Denmark have experienced a decline in recent years. In terms of distance, Tanzania continues to have an advantage over both Chile and Indonesia.

#### Map 1: Diversification of suppliers for seaweed product to Denmark.

Prospects for diversification of suppliers for a product imported by Denmark in 2018  
Product : 121229 Seaweeds and other algae, fresh, chilled, frozen or dried, whether or not ground, unfit for human consumption





Seaweed HS code 121229. Denmark is the selected target market however; seaweed does not have a national tariff line (NTL) that specifies the type of seaweed being imported.

## THE SIX P'S.

### 1. **Panorama:** The context in the target market: PEST Analysis.

**Political Environment in Denmark:** Located in the Scandinavian region (area in Northern Europe and Northern Atlantic), **the Kingdom of Denmark** is a Nordic constitutional monarchy organized as a parliamentary democracy. The country exercises traditional hegemonic influence, and practices soft power in handling internal affairs. Denmark is a member of the European Union (EU), but not of the Eurozone<sup>7</sup>. Denmark has set policy priorities in governing their country including security and development, migration, inclusive sustainable economic growth, people's freedom and promoting human rights<sup>8</sup>. According to Freedom House score, Denmark scores 97% as one of the freest countries in the world with excellent record in democracy and regular free and fair elections. Recently, Denmark has urged African countries to actively promote human rights issues and freedoms of speech<sup>9</sup>. Tanzania is among those countries urged to be considerate on human rights issues.

**Economy:** the economic situation in Denmark is, without a doubt, thriving in comparison to many countries in the world. It is a modern market economy that features highly advanced industries. Denmark has world-leading firms in pharmaceuticals, maritime shipping, renewable energy and high-tech agricultural sector. Denmark is a net food, oil and gas exporter. In 2016 the economy grew by 2% and 2.3% in 2018. Unemployment was down to 5.5% in 2018 and the country is filled with highly skilled workers. The gross domestic product (GDP) purchasing power parity remains outstanding, estimated at USD 287.8. The country has maintained a healthy budget surplus of 1%, however due to its aging population, the country's economy is expected to decline.

Trading with an economically stable nation could mean Tanzania can sell its seaweed quickly and reliably.

**Society:** the Danish population is approximately 5,809,502 million people whereas natives who are predominantly Inuit-Greenlandic and Faroese are approximately 86.3%. The remainder of the population includes descendants of Turkish, Polish, Syrian, German, Romanian, Iraqi people etc. The national language is Danish, and English is the second most spoken language. Majority of Danes are culturally conservative and admire their traditional heritage and customs (CIA fact-book; 2109). Tanzania and Denmark have joint supportive cultural programs which include exchange visits, arts and traditional dances. Example Nafasi Art space funded by the Danish government for talented artists and workshops to promote arts.

**Technology:** Digitalization and technological advancement is a priority in Danish development programs set to drive economic growth. The country has modern universities, science and technology institutions and research programs that facilitate innovations. In addition, there is excellent telephone and internet services with one of the highest broadband penetration rates in Europe (CIA fact-book; 2019).

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<sup>7</sup> <https://www.cia.gov/library/publications/the-world-factbook/geos/da.html>

<sup>8</sup> <http://tanzania.um.dk/en/danida-en/culture/>

<sup>9</sup> <https://freedomhouse.org/report/freedom-world/2018/denmark>

Tanzania's current government has been trying to lay down better infrastructure and communication system. This ensures modern logistical means of exporting seaweed and being able to communicate and track the goods while shipping.

## **2. People: Need based segment.**

- a. Agricultural farmers: Seaweed is used by group of farmers in Denmark. When seaweed arrives in Danish industries such as *AlgaeCenter Denmark*, it is transformed into biogas in order to be used as fertilizer in agriculture<sup>10</sup>.
- b. Pet farmers: – The cluster of pet farmers use seaweed as food supplements and medication for pets such as dogs, pigs, horses etc. due to high mineral content such as insoluble dietary fibers. In the pet industry segment alone, seaweed is worth millions of dollars.
- c. Scientists, medical researchers and pharmacists: Seaweed is packed with bioactive compounds which can be used in the pharmaceutical industry for medicine and healthcare products. Medical Institutions in Denmark such as Aarhus University, Technological institute, DONG Energy A/S, Ocean Center Denmark, Kattegat Center, and Hartmann Foundation – AlgaeCenter Denmark are prominent institutions that use imported seaweed for medical research and drug industries. Example Kattegat uses nearly 100 tons (fresh weight) seaweed on a weekly basis to manufacture drugs. This indicates that the potential for exporting Tanzania's seaweed into Denmark is rather high.

## **3. Product:**

Tanzania's Seaweed can be processed into value-added products that are demanded by the Danes. Products such as health-promoting feed, agro-fertilizers, cosmetic and detergents, research documents with effect on the immune system of animals are daily demanded in the Danish Market.

- a. Animal health related drugs product and food from seaweed

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<sup>10</sup> <http://www.besustainablemagazine.com/cms2/algae-for-biogas-in-central-denmark-region/>

# Denmark can grow all its own animal feed protein

Instead of importing large quantities of protein feedstuffs from other countries for food and feed, Denmark can produce enough of its own protein to cover its needs for animal feed and to supplement food requirements.

2018.08.10 | [JANNE HANSEN](#)



**SEAWEED (240 TABLETS)  
FREE SHIPPING**

223 DKK incl. VAT



## b. Fertilizers

*- Typical Farm Biogas plant -*



Thorsø Farm plant, Black-smith plant



c. Research Institutions



**4. Permission:**

Tariff faced and tariff advantage in Denmark. Table below shows the details

	Market Share in Denmark Market	Tariff faced	Tariff regime	
Tanzania	24.3%	0	MFN Duties (applied)	
Competitors in the target market (Denmark)	Share in Denmark market (%)	Tariffs faced in Denmark (%)	Tariff regime	Tanzania has a tariff advantage over the competitor?
Chile	21.6	0	MFN Duties (applied)	No
Indonesia	12.5	0	MFN Duties (applied)	No
Italy	12	0	European Union (EU)	No

Requirements that Tanzania must comply with when exporting to Denmark include but not limited to a certificate of origin which is presented at the boarder as indicated on ANNEX 17. Overall, there are 21 requirements specified in Denmark's legislation which include; Packaging requirements materials, registration as importer, traceability, Authorization requirement, inspection requirement etc. From the origin provision, De Minimis and Accessories spare parts.

## 5. Packaging and Labelling Regulations

To understand packaging and labelling requirements for seaweed exports to Denmark, we visited Zanzibar Seaweed Company located at Beit-Ras Zanzibar. The company exports seaweed to Denmark annually, and during packaging three steps are considered<sup>11</sup>;

- A. Removing the seaweed from local old bags which were used at harvesting sites. Picture below shows the first step.



- B. Classification of seaweed in grades/quality and selection for seaweed that is ready for shipping (dried/undried).
- C. The seaweed is finally packed into new bags with weigh of 70 per each bag for shipment.



## 6. Price:

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<sup>11</sup> Picture were taken by the reporter of this work in Zanzibar on 22 May 2019.

The price has not been recorded by ITC tools. However, to make sure this report remains accurate and reflects seaweed trade activities between Tanzania and Denmark, a face-to-face interview with Mr Zubeir Juma Khamis, Manager at ZANEA Seaweed Company in Zanzibar was conducted. Mr. Zubeir noted the current price as follows:

- Seaweed is bought from local farmers at the price of TZS 800/kg =USD 0.4
- Packing roughly costs TZS 42,000 = USD 20
- For a metric ton, price in Denmark is = USD 640
- For one container (25 tons), price in Denmark is = USD 16,000
- Freight costs at the port of Zanzibar ranges between USD 1,500 to 1,700 per container

The Food and Agriculture Organization (FAO, 2018) indicated the price of 1 ton of seaweed from China to Japan at USD 16,000. This could be a basis for estimating that seaweed produced in Tanzania could potentially fetch good value in the Danish market. However, absence of reliable sources has led to challenges in estimating the accurate price of seaweed in the Danish market.

## 7. Prospects

Seaweed trade between Tanzania and Denmark has all feasible features for success attributed to outstanding friendship and cooperation between the two countries. It adds to the portfolio of products that Tanzania and Denmark trade. Tanzania needs Denmark for trade and development projects in the same manner that Denmark needs Tanzania.

In the Danish market, the total trade recorded reached an average of USD 1.1 m with an export potential of 71.8k per year. Nonetheless, Tanzania has export potential in the Thai and French market, with the potential to realize USD 413.1k and USD 299.5k, respectively. Another serious contender for consideration in the long term is China due to its high demand potential. China has an untapped potential of USD 4.8 m to explore.

## SWOT ANALYSIS

### - Strengths

- The varieties of seaweed available in Tanzania are of high standard due to annual temperature and climate season.
- Water bodies in Tanzania are still intact and less contaminated with chemicals in comparison with competitors who have contaminated ocean/sea due to high number of advanced industrial waste and unsustainable fishing practices.
- The sea level is conducive for the cultivation and harvest of seaweed. In other words, the depth of the sea is good enough to allow farmers to farm without problems.

### - Weaknesses

- Low production capacity implies failure in meeting the market demand.
- Unreliable and unpredictable production volumes resulting from poor knowledge and inadequate tools for cultivating and harvesting.
- Government has designated few areas for seaweed production.

### - Opportunities

- Tanzania has huge percentage of market share in trading seaweed with Denmark. This firmly plants Tanzania in a good position to maintain market share
- Chronological records show that Denmark has been importing seaweed from Tanzania since it meets the demand of its industries.

### - Threats

- The gap between production and market share for Tanzania and its competitors is not huge. Rivals might capitalize on Tanzania's failure to produce efficiently

- There is a need for Tanzania to continuously revise human rights and freedom of the press. In fact, violations of human could lead to temporary interruption of trading activities between Denmark and Tanzania.

### **Limitations, Recommendation and way forward.**

#### For limitations.

In the context of this report, the focus is on seaweed HS-code 121226 (Seaweed and other algae, fresh, chilled, frozen or dried, whether ground, unfit for human consumption) in Tanzania. In other words, it only references algae species, which are strictly not for human consumption. Due to this specification, the report ignores other forms of seaweed, which need to be explored to uncover the benefits for the Tanzanian economy.

Also, it is important to stress that preparation of this report was hindered by missing data. Missing data could be caused by a lack of reporting by concerned authorities. Thus, it is better to stress that the conclusions drawn in this report may have elements of bias.

### **Recommendation and Way forward.**

- i. The Revolutionary Government of Zanzibar and the Union government need to re-think and re-structure organs and departments responsible for regulating seaweed production. It appears that the work of producing enough seaweed for international exports requires competent experts capable of finding better and cost-efficient ways to boost production.
- ii. Given the differences between mirror and reported data, there should be a better way of collecting data that could be more reliable and valid.
- iii. Tanzania needs to encourage research institutions to conduct multiple experiments that would make the product best in value and large in terms of quantities.
- iv. Education and capacity building programs need to be provided to enhance SMEs ability to take advantage of market opportunities.
- v. The Danish and Tanzanian governments may consider establishing a formal bilateral trade agreement for seaweed trade in order to have a more secure trade partner.

***“Making Tanzania the largest exporter of seaweed in the world is very possible, let’s do it then!”***

#### Further references.

- i. ITC’s Market Analysis Tools
- ii. FAO seaweed reports.
- iii. Ikulu journal No. 037, Mei 2018
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