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## E-Newsletter



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TBS, the Home of Standards



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## TBS rallies plastics manufacturers on standards observance



*TBS Director General, Dr. Athuman Y. Ngenya addresses non-woven bags stakeholders during a meeting held in Dar es Salaam.*

**By Gladness Kaseka**

**T**anzania Bureau of Standards (TBS) has conducted a meeting with non-woven bags stakeholders on the proper implementation of the standards.

The meeting, which was held in Dar es Salaam recently under the chairmanship of the TBS Director General, Dr. Athuman Ngenya, was partly a response to the recent concern expressed by the National Environment Management Council (NEMC) on the flooding of substandard non-woven bags in the market.

Speaking during the meeting, Dr. Ngenya advised the stakeholders to comply with the country's

standards in order to preserve the environment. He said plastic packaging and non-woven bags are important in business but TBS has been receiving several complaints claiming those products are below standard, thus the need to convene the sensitization meeting.

The Director General also called upon the public to consider checking the TBS standard mark of quality when they are purchasing those products.

"I urge the buyers to shun from buying packaging and alternative plastic bags which have no TBS mark," he added.



*A section of non-woven stakeholders during meeting between TBS and plastic bags stakeholders held at TBS offices, Ubungu, Dar es Salaam.*

The NEMC Environment Management Officer, Eng. Redempta Samuel, congratulated TBS for convening the meeting with the stakeholders to educate them more about quality production, noting that the meeting will enable the producers to consider producing quality products.

“Though TBS is mandated to set standards for plastic packaging and non-woven bags, there are challenges that call for cooperation between TBS, NEMC and the stakeholders to find solutions,” Eng. Samuel said.

Speaking during the meeting, the Foreign Marketing Manager of A to Z Textile Mills Ltd. in Arusha, Mr. Sylvester Kazi, said the meeting will enable the stakeholders to understand more about the procedures of making quality products including the plastic packaging and the non-woven bags. He added that A to Z as a stakeholder takes it as an opportunity

to penetrate into the African market since they have been operating mostly in the local market.

The introduction of the non-woven polypropylene carrier bags in the market was meant to replace the banned polythene bags. However, this has since been misused by traders and manufacturers who have introduced low-quality carrier bags and due to the rising need of the non-woven bags in the market, it has been noted that over time, the manufacturers of these bags are producing substandard non-woven bags which cannot be used multiple times but are disposed of after single usage.

TBS Director General explained the importance of having such meetings and said the same meetings will be conducted in Mwanza, Arusha, Mbeya, Mtwara, Kigoma and Dodoma regions.





## TBS urged to strengthen vigilance at entry points

By Mussa Luhombero

**T**anzania Bureau of Standards (TBS) has been urged to strengthen vigilance at the country's numerous border entry points to save the country from becoming a dumping place for poor quality products.

The call was made recently by the Chairman of the TBS Board of Directors, Prof. Othman Chande Othman, when Board members paid a familiarization visit to the TBS offices in the Northern Zone regions including Tanga, Kilimanjaro and Arusha.

The Chairperson noted that TBS was implementing its mandate by conducting conformity assessment to both local and imported products, but urged the Bureau to be more watchful as some unscrupulous traders may try to smuggle substandard products in the market for their own gains.

He said the Board members made the visit to examine inspection activities at border entry points and handle challenges that may hinder the implementation of the Bureau's activities.

On the issue of inadequate staff, Prof. Chande said TBS is planning to recruit more employees to guarantee a good performance that will enhance the fulfilment of the Bureau's obligations.

"TBS has a shortage of workers but we are sure that the Bureau will hire others," he added.

On his part, the Director of Quality Management, Mr. Lazarus Msasalaga, speaking on behalf of the TBS Director General, said the imported products are inspected under two systems, namely Pre-shipment Verification of Conformity (PVoC) to standards and Destination Inspection. Under PVoC, TBS uses outsourced agents to verify different products countries of origin, he explained.

Mr. Msasalaga said TBS conducts routine and market surveillance inspections for both local and imported products in the market to see if they are complying with the

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## TBS, ZBS collaboration highly commendable

The Zanzibar House of Representatives Committee on Agriculture, Trade and Tourism, on a visit to Tanzania Bureau of Standards (TBS) recently, expressed satisfaction by the existing collaboration between TBS and the Zanzibar Bureau of Standards and recommended the strengthening of the cooperation for the wider interests of both sides of the Union.

The Committee was led by its Chairman, Hon. Yusuf Hassan Iddi. Others in the delegation were the Zanzibar Minister for Trade and Industrial Development, Hon. Omary Said Shaaban, the Deputy Minister for Investment, Trade and Investment (Tanzania), Hon. Exaud Kigahe, the ZBS Director General and Board members.

The visit is a commendable step as it highlights the efforts by both the gov-

ernments of the two sides of the Union on the one hand and the Zanzibar Legislature on the other hand, in ensuring continued cooperation and collaboration in matters that benefit the people of Tanzania collectively. It also underscores the commitments of the two sides of the Union in maintaining the Union and honoring its founders, the late Mwalimu Julius Nyerere and Sheikh Abeid Amani Karume.

The cooperation between TBS and ZBS started right at the onset of ZBS in 2012. It was cemented by the signing of the Memorandum of Understanding (MoU) on 24th July, 2020, which specifies the purpose, scope and areas of cooperation including technical assistance in standardization, quality assurance, metrology and testing (SQMT) matters, exchange of experts and expertise, informa-

tion sharing and standards harmonization.

As industry and trade blossom and markets expand, the need for effective collaboration in standards development and implementation becomes even more important as it plays a crucial role in promoting standardization and conformity assessment activities across the industry, commerce and service sectors in the country.

Through cooperation, the standards bodies share important information on SQMT issues. Moreover, collaboration helps in developing and improving standards as per emerging and established market requirements; addressing new and emerging issues in SQMT; resolving international and regional issues of mutual concern; and building a shared understanding of SQMT needs and priorities at national, regional and international levels. Cooperation also helps to build a strong national position in regional and international standards development processes, thus improving the requirements in standards for the benefit of the nation.

Standards usually require input from multiple stakeholders with different interests and requirements. Cooperation strengthens the process of consensus building, where stakeholders from both sides work together to develop standards that are agreeable to all parties involved. This consensus-building process fosters inclusivity, reduces conflicts, and increases the likelihood of widespread adoption and implementation.

Cooperation is particularly important for regional and international standards development and implementation. Global cooperation enables the harmonization of standards across bor-

ders, facilitating cross-border trade, market access, and the exchange of goods and services. Through collaboration between TBS and ZBS, the standards harmonized at various regional and international levels are easily adopted and implemented across the two sides of the Union.

In a nutshell, collaboration is essential for standards development and implementation in Tanzania as it leverages expertise, fosters consensus, improves adoption, promotes harmonization, encourages innovation, and facilitates inter-Union cooperation. By and large, cooperation helps to remove technical barriers to trade through harmonized procedures, thus creating a free-flow of trade benefiting the Tanzanian public at large.

The importance of the Union cannot be over-emphasized. First and foremost, the Union brings political stability and national unity. It further creates a larger and more diverse economic base for Tanzania through a combination of resources. Overall, the Union provides numerous benefits which contribute to the development and prosperity of the people, fostering unity and cooperation for a better future.

We commend the cooperation and collaboration between TBS and ZBS and echo the commendation voiced by the Zanzibar House of Representatives Committee on Agriculture, Trade and Tourism on the matter. The cooperation surely contributes to the strengthening of trade between the two parties to the Union, thus further strengthening the unity and cooperation among the people of the United Republic of Tanzania.

***“TBS mark of quality: An assurance that you are buying a quality product”***



## Dealers of metal products urged to adhere to standards



*A section of steel and metal products stakeholders who attended a workshop organized by TBS*

By Deborah Haule

**M**anufacturers, importers and distributors of corrugated iron sheets and pipes have been asked to adhere to standards in order to protect the users of these products and ensure the products are fit for their intended purposes.

The call was made recently in Dar es Salaam by the Tanzania Bureau of Standards (TBS) Acting Director for Compliance and

Enforcement, Dr. Candida Shirima, when opening a one-day meeting between the Bureau and steel products manufacturers, importers and suppliers.

Dr. Shirima tasked stakeholders to ensure that they bring in the market products that meet standards and that are value for money and win the competitive market within and outside the country.

“Let everyone here be responsible for what we produce, import and distribute and make sure we comply with quality requirements,” she said, noting that stakeholders should focus on quality to ensure fair competition in the market, protect the environment, and enable buyers to find products that match the value of their money.



She stated that in order to improve the quality of metal products, the producers should ensure that they meet national and international standards.

“Every producer and importer of these products should ensure that all the necessary information is written, where according to standards, the products must be labelled with the grade, name of the producer, measurements and version numbers,” she said.

According to Dr. Shirima, TBS will continue to fully manage the responsibility of ensuring the quality of these products in this country, including conducting inspections and laboratory tests before allowing them entry into the country, including conducting regular inspections on factories that produce these products to verify the quality of the products produced.

“TBS is also responsible for regular monitoring, providing qual-

ity education to stakeholders and taking appropriate action against all those who are found to be violating the requirements of the law, that is why TBS has decided to organize the meeting with the aim of promoting the understanding of the stakeholders regarding the requirements of the Standards Act Cap. 130, and the various international standards,” she said.

## TBS, ZBS impress House of Reps Committee

By Neema Mtemvu

**T**he Zanzibar House of Representatives Committee on Agriculture, Trade and Tourism has expressed satisfaction by the existing collaboration between Tanzania Bureau of Standards (TBS) and Zanzibar Bureau of Standards and advised continued cooperation for the wider interests of both sides of the Union.

The remarks were made in Dar es Salaam recently by the Committee's Chairman, Hon. Yusuf Hassan Iddi (MP) during a visit to TBS to learn about the Bureau's activities. Others in the delegation led by the Zan-

zibar Minister for Trade and Industrial Development, Hon. Omary Said Shaaban (MP) included ZBS Director General and ZBS Board members.

“In truth, we have learnt a lot and we thank TBS for assisting ZBS officials who are now performing better than it was in the past,” said Hon. Yusuf as he called for the continuation of the cooperation.

He said during the visit, they toured TBS offices at the Port of Dar es Salaam to observe the procedures for the inspection of imported goods un-

der the Pre-Shipment Verification of Conformity (PVoC) and that of Destination Inspection (DI) programmes.

He also commended the President of the Revolutionary Government of Zanzibar, His Excellency Dr. Hussein Ali Mwinyi for improving ZBS services whereby over 8bn/- has been invested in the Isles' Bureau for the laboratories unit in order to make sure goods produced locally are examined as per standards requirements.

On his part, the Deputy Minister for Investment, Industry





*The Deputy Minister for Investment, Industry and Trade, Hon. Exaud Kigahe (MP) addresses members of the Zanzibar House of Representatives Committee on Agriculture, Trade and Tourism, during their visit at TBS.*

and Trade, Hon. Exaud Kigahe (MP) said the visitors have been able to learn about the various activities performed by TBS and see for themselves various laboratories used to examine various products.

“We as the ministry are happy for our Zanzibar brothers and sisters coming here to learn about TBS activities but more importantly to boost the relationship between the two parties of the Union,” Hon. Kigahe

said, adding that the cooperation will build a foundation in making sure they improve the quality of their products in order to compete in both the EAC and SADC markets.

“Now we have ratified the East African Free Trade Zone protocol and we now can compete in the entire African continent, as we can now introduce all goods made in the country as Tanzanian goods, and not Zanzibar or Mainland goods,” he said.

Speaking during the visit, the Zanzibar Minister for Trade and Industrial Development, Hon. Omary Said Shaaban said the aim of their visit was to learn, increase their understanding and exchange experience between ZBS and TBS.

## TBS destroys low quality products worth 400m/-



*The TBS Acting Eastern Zone Manager, Mr. Francis Mapunda addresses the media during the destruction of substandard products seized by TBS inspectors in the markets.*

By Deborah Haule

**T**he Tanzania Bureau of Standards (TBS) has impounded and destroyed at least 20 tonnes of low-quality products worth 400m/-.

The substandard products impounded from various area in the Eastern Zone were destroyed recently in Mkuranga, Coast Region.

Speaking during the exercise, TBS Acting Manager for the Eastern Zone, Mr. Francis Mapunda said the substandard products including cosmetics, motorcycle helmets and expired food items which had been kept in stores ready to be sold against the law, were seized by TBS inspectors during their operations in Dar es Salaam, Coast and Morogoro regions.

Mr. Mapunda noted that the products destroyed did not meet the requirements of the respective Tanzania standards and that the action was carried out as per the Bureau's establishing Act, the Standards Act Cap. 130.

"These products and the imported ones that have not followed the country's procedures, are both seized and destroyed since they have not met standards requirements," Mr. Mapunda said.

He further called upon the local traders to stop selling products that do not meet standards requirements and also not to sell banned or expired cosmetics, saying the inspectors are always at work.

"We urge traders to stop sell-

ing products that do not meet national standards, banned cosmetics and expired products. Our inspectors are ensuring that products in the market meet the respective specifications," he added, urging traders not to engage in selling such products to avoid unnecessary losses when they are destroyed.

TBS Inspector in the Eastern Zone, Mr. Aron Nzara said the effect of using the banned cosmetics include cancer and other health problems and also the economic damage. He also urged the public to make sure that they only purchase certified and registered products and check for expiring dates when buying.



# TBS calls for food vendors to comply with standards



*The TBS Acting Food Risk Assessment Manager, Dr. Ashura Katunzi opens a one-day awareness training for food vendors in Dar es Salaam.*

**By Rhoda Mayugu**

The number of verified food services providers in Dar es Salaam is not satisfactory, hence posing a risk to the health of the consumers, Tanzania Bureau of Standards has said.

Assessment Manager, Dr. Ashura Katunzi made the remark recently, while opening a one-day awareness training for the food vendors in Dar es Salaam, on behalf of the TBS Director General.

providers such as food caterers, food transporters and millers of various grains verified by the TBS is not satisfactory compared to the number of service providers in Dar es Salaam,” Dr Katunzi said.

The TBS Acting Food Risk “The number of food service She said to reverse the trend,



TBS was now embarking on a special campaign to educate the service providers on the importance of abiding by food standards, laws and regulations so as to ensure that the community gets safe food.

The training was centred on raising awareness to food vendors and small grain millers in Dar es Salaam, on the importance of compliance with standards, rules and regulations.

“Since food is health, business, and also the country’s economy, it is important that stakeholders comply with the rules and regulations so that they produce safe food,” said Dr. Katunzi.

Dr. Katunzi also said the government aims to ensure that it has a large network that deals with the quality and safety of

food, which is why the Bureau provides such training to local government officials.

“We do not do these tasks alone, we collaborate with health and business experts from various areas and since we are in Dar es Salaam today, those who participated in the training are from here.

“TBS will continue conducting same training in Coast and Morogoro regions, therefore we call upon those who attended training today to become TBS ambassadors and influence other food vendor to attend training in other regions,” she added.

Presenting a topic on guideline in food production, TBS Standards Officer, Ms. Stephanie Kaaya said farmers should consider good agricul-

tural practice and processors should consider good practice in food processing in order to have safe and healthy food.

She said that caterers should also adhere to the best system of health regulation starting from cleanliness of equipment, environment, storage, staff and waste disposal.

“It is good that food vendors adhere to the standards to meet consumer expectations whether in domestic or foreign market,” she noted.

Mr. Ally Shaban, one of the training attendees, said the course will help mostly the food vendors since they will be giving service to the community by complying with the national standards.



*A section of food vendors who attended a workshop organized by TBS*

## TBS campaigns reach over 6,500 people in Mbeya



*TBS Marketing Officer, Mr. Mussa Luhombero, disseminates information on standards and quality assurance during a community awareness campaign in Mbeya.*

### By Staff Reporter

Tanzania Bureau of Standards (TBS) has reached over 6,500 citizens in Mbeya Region in a community awareness campaign to impart education on the need to buy certified products being part of the efforts to ensure that sub-standard and expired products are not sold in markets.

The TBS Marketing Officer, Ms. Deborah Haule made the state-

ment during the awareness campaign conducted in public places including markets, auctions and bus stations which aimed at giving the public awareness of the quality of products.

“It is a good thing for the public to know about the quality of products before purchasing. The purpose is to make sure that low-quality products are not becoming

part and parcel of our daily purchases,” said Ms. Haule.

She also called upon the public to become good brand ambassadors to others who are still unaware.

Ms. Haule also urged the public to continue reporting to the TBS authorities whenever they come across expired products in the market or see prohib-





ited products including second-hand undergarments, so that TBS can take measures.

Mbeya Regional Administrative Secretary, Mr. Rodrick Mpogolo commended TBS for educating the public, say-

ing it will help the public to be aware of expired products thus helping eradicate substandard products from markets.

This campaign was conducted in Mbeya City, Chunya, Busokelo and Mbarali districts.

During the campaign, the Bureau also advised the traders to register their food and cosmetics stores with TBS as per the regulations governing their businesses.

## Bricks, culverts makers told to abide by standards

By Neema Mtemvu

**B**ricks and culverts makers in the country have been advised to produce quality products by complying with the country's standards, which will in turn help in implementing high quality construction projects.

The advice was given by the Tanzania Bureau of Standards (TBS) Director General, Dr. Athuman Ngenya during a meeting between TBS and stakeholders in Dar es Salaam recently.

He said the construction industry is essential in raising the country's economy, so it is better for the stakeholders to understand that the services they provide are directly used by the government, thus it is vital to comply with standards.

Dr. Ngenya added that the culverts are often used in various construction projects in the country including

the building of road bridges, schools, hospital premises and also government buildings.

"Your products and services must comply with the country's standards reflecting customers' value for money. Many of us purchase these products, so producing quality products is vital for the country's economy," said Dr. Ngenya.

According to the Director General, the number of brick manufacturers certified by TBS is not sufficient, therefore the seminar is also aiming at encouraging others who have not verified their products to act upon them. He added that TBS is determined to provide education on standard requirements to enable every person who engages in any business to produce quality products to meet customer satisfaction.

Ms. Noor Meghji, representing the Director of Compliance and Enforcement at TBS, said the purpose of the meeting was to make sure that the stakeholders are abiding by the law during production.

"The main goal for the seminar is to enable you the manufacturers to follow the guidelines to succeed in business because whatever is done in standards helps in improving the business while ensuring that the public gets quality products," said Ms. Meghji.

The TBS Acting Eastern Zone Manager, Mr. Francis Mapunda stressed that the meeting was to encourage the stakeholders to prove the quality of their products and ensure customer satisfaction.



## TBS commits to provide public awareness on standards



*TBS Marketing Officer, Ms. Deborah Haule, attends visitors to the Bureau's pavilion during the Zanzibar Trade Fair.*

By Deborah Haule

**T**anzania Bureau of Standards (TBS) has vowed to continue providing public awareness on the need to purchase quality goods to make sure that it becomes part and parcel of Tanzanians' lives.

The remark was made recently by the TBS Marketing Officer, Ms. Deborah Haule at the Maisara grounds in Zanzibar during the 9th business festival intended to

reach the citizens including the local manufacturers, traders, suppliers and importers.

"This event is an opportunity for TBS to educate the public on its activities including product certification, food and cosmetics products and premises registration, testing services and inspection of imported products," she said.

She added that TBS is man-

dated to check the quality of the local and imported products, thus calling upon local manufacturers, traders and importers to abide by the conformity assessment procedures implemented by the Bureau to ensure that only quality products reach the markets.

Ms. Haule said the public should check and verify the products before buying them since they are the final con-



sumers, thus the ultimate decision-makers in buying.

“Since the public is the final consumer and also the primary victim to low-quality products, people should build a tendency of checking the condition of the products first,” she said, adding that it is through this quality culture that the local market will be free from substandard products.

Ms. Haule said that the responsibility of ensuring the quality of products in our country is not only for TBS only, but for the whole public including the manufacturers, import-

ers, suppliers, and consumers.

She added that the government through TBS will ensure the necessary guidelines relating to the quality and safety of the products are given in time to ensure products that do not meet standard requirements are removed from the market.

On the other hand, entrepreneurs can reap immense benefits by producing goods that meet standards including building consumers' confidence and fetching high market prices, she noted, adding that the government has been putting more

effort to build a strong economy which is sustainable and it is from this backdrop that TBS is continuing to provide education to producers and consumers on the need to abide by standards.

TBS has been providing various awareness and training to different groups to prepare the participants to be more oriented and educated in considering the requirements of relevant standards as well as the services they provide to the community.

***“The bitterness of poor quality remains long after low price is forgotten! Always use TBS-certified products”***

## TBS urged to enhance awareness among SMEs



*Mbeya District Commissioner, Mr. Beno Malisa addresses the audience during the African Standards Day Celebrations held on March 28, in Mbeya.*

By Rhoda Mayugu

**T**BS has been urged to enhance awareness among the small and medium scale entrepreneurs (SMEs) and help them to comply with standards to fulfil their set goals including capturing local and foreign markets.

The call was made by the

Mbeya District Commissioner, Mr. Beno Malisa, during the African Standards Day Celebrations (ARSO) held on March 28, in Mbeya region.

Speaking on behalf of the Mbeya Regional Commissioner, Mr. Malisa said despite the efforts made by the

Government, if manufacturers ignore quality and safety issues in their production, they will not fulfil their set goals.

“The Government, through SIDO and TBS, is implementing a programme to ensure that Small and Medium Entrepreneurs (SMEs) products



are certified to meet set standards free of charge as it allocates the fund every year to serve the entrepreneurs in the quality verification of their products,” said Mr. Malisa.

“TBS must enhance its awareness by conducting educational seminars regularly to SMEs to encourage them to comply with standards requirements, so that they can produce productively and capture local and foreign markets, while protecting consumers and the environment,” he added.

On his part, the Director of Standards Development (TBS), Mr. David Ndibalema said ARSO day celebration is to honor the efforts of African heads of state who signed the Free Trade Agreement in Kigali, Rwanda, on March 28, 2018. The goal of this agreement is to build a

free market for Africa countries to stimulate sustainable development for the entire continent.

“For TBS, today (March 28) is an important day as we use the opportunity to remind manufacturers, service providers and citizens in general about the importance of adhering to quality standards in their daily lives,” said Mr. Ndibalema, who was representing the TBS Director General.

He said standards are important for quality and safety of the products and services, as they help provide information that helps consumers make the right decisions in their daily activities.

“Therefore, standards are a very important ingredient in our daily lives and without standards things will be a mess,” said Mr. Ndibalema.

Mr. Ndibalema said in line with the theme of this year’s African Standards Day celebration, “The role of standardization in promoting the growth of Micro, Small and Medium-sized Enterprises (MSMEs) for sustainable, inclusive and diversified industrial and economic development in Africa”, TBS conducted various workshops to SMEs countrywide.

He said as part of the activities to mark the climax of ARSO celebrations, TBS conducted a workshop for entrepreneurs engaged in the production and processing of grains, fruits and vegetables in the Mbeya Region, to remind them of the importance of considering the requirements of quality and safety in their production.



*A section of MSMEs who attended a workshop organized by TBS.*

# Compliance index model for compliance evaluation: The case of assessment of beef transportation infrastructure in Tanzania



**Dr. Joseph Mwashuiya**

## 1. Introduction

Compliance index model (CIM) is a Likert scale-based tool with a unidimensional scale for compliance assessment that gives a much clearer score than a simple pass/fail, by giving different degrees of opinion. Assessors in regulatory authorities often use this psychometric model to assess the compliance of multi-factored infrastructure unit to a given managerial specification (Mwashuiya et al., 2018a; 2018b; 2019). Studies have shown that CIM is one of the most preferable models in subjective assessments as it allows the consideration of multifactor analysis of a given unit; transparency; wide degree of opinions; overall sentiment

measurements; and both extremes of the assessed feature (Hallstedt, 2017; Mwashuiya et al., 2019).

Quality assessment of the multi-factored unit in managerial specification is difficult as it involves multiple attribute dimensions, and assessor's capability to infer attributes. In this context, this article highlights the means at which CIM was used to assess beef transportation infrastructure through quality factors across the post-slaughtering chain in Mbeya and Dar es Salaam cities. It bridges the gap on the questionability of the quality of beef consumed after transportation in the poorly developed infrastructure which may result into contamination and bacteriological infection. This gap was addressed by testing the main hypothesis, that is, the beef transporting infrastructure in the Tanzanian cities does not comply with the food quality specification.

## 2. Methodology of the study

A total of 18 beef quality impacting factors (BQIFs) were

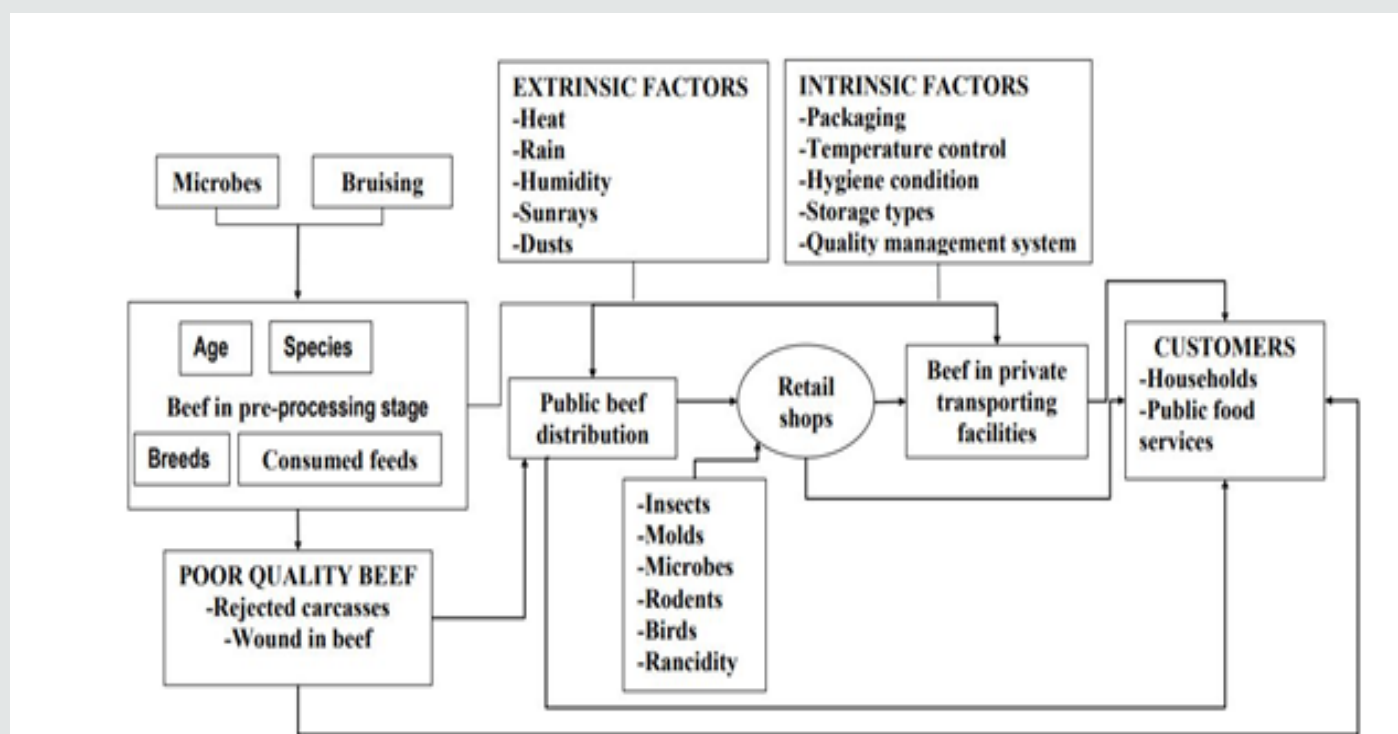
established based on the literature reviewed quality technical requirements (Koutsoumanis and Taoukis, 2005); Ntanga et al., 2014; Lulietto et al., 2016) and the gap observed in actual situation (Figure 1). The conceptual model expresses the detail of the study areas on the beef distributing vehicles specifically on the main components of both infrastructural features and the respective processes to the beef quality.

This assessment study involved data collection through observation of the BQIFs in the beef distribution infrastructure by using a structured checklist that was designed for recording points on responses on the Likert statement. The designing was carried out to purposively identify beef transporting facilities in the conveniently selected slaughtering facilities. In connection to this, Dar es Salaam and Mbeya cities were purposively selected based on the reflection of the potential market of beef in connection to both general population and their respective exporting international airports. Based on this

information, together with the specification, the BQIFs from the identified Likert items were analyzed. The total compliance indices were constructed by comparing the infrastructural requirements for beef qual-

ity management against data gathered along the beef distribution chain only. Each of the listed requirements was given a unique number, for instance,  $vi$ , ( $i = 1, 2, \dots, 18$ ) indicating requirement number one and

so on. As in the past studies, on compliance to the requirement (Siyanbola et al., 2014), this study adopted an ascending scoring system at 0, 0.25, 0.50, and 1 compliance levels.



**Figure 1 — Conceptualized model that indicates beef quality impacting factors during beef transportation to retailing shops**

The analyzed results from the survey are presented in tables, clustered columns of total observed scores against expected scores and frequency distribution curves that were analyzed based on the established compliance index. The assessment of compliance index in the beef transporting vehicles was based on four compliance index levels: very weakly applied, weakly applied, semi strongly applied and strongly applied, having percentages of 20% -

39%, 40% - 49%, 50% - 69% and 70% - 100%, respectively. The four compliance index levels are also categorized as A, B, C, and D, respectively.

### 3. Findings of the study

Results obtained for a total of 180 observations in the beef retailing premises in Mbeya and Dar es Salaam, are summarized in Figure 2. In this study, the topmost slaughtering facilities with vehicles that scored

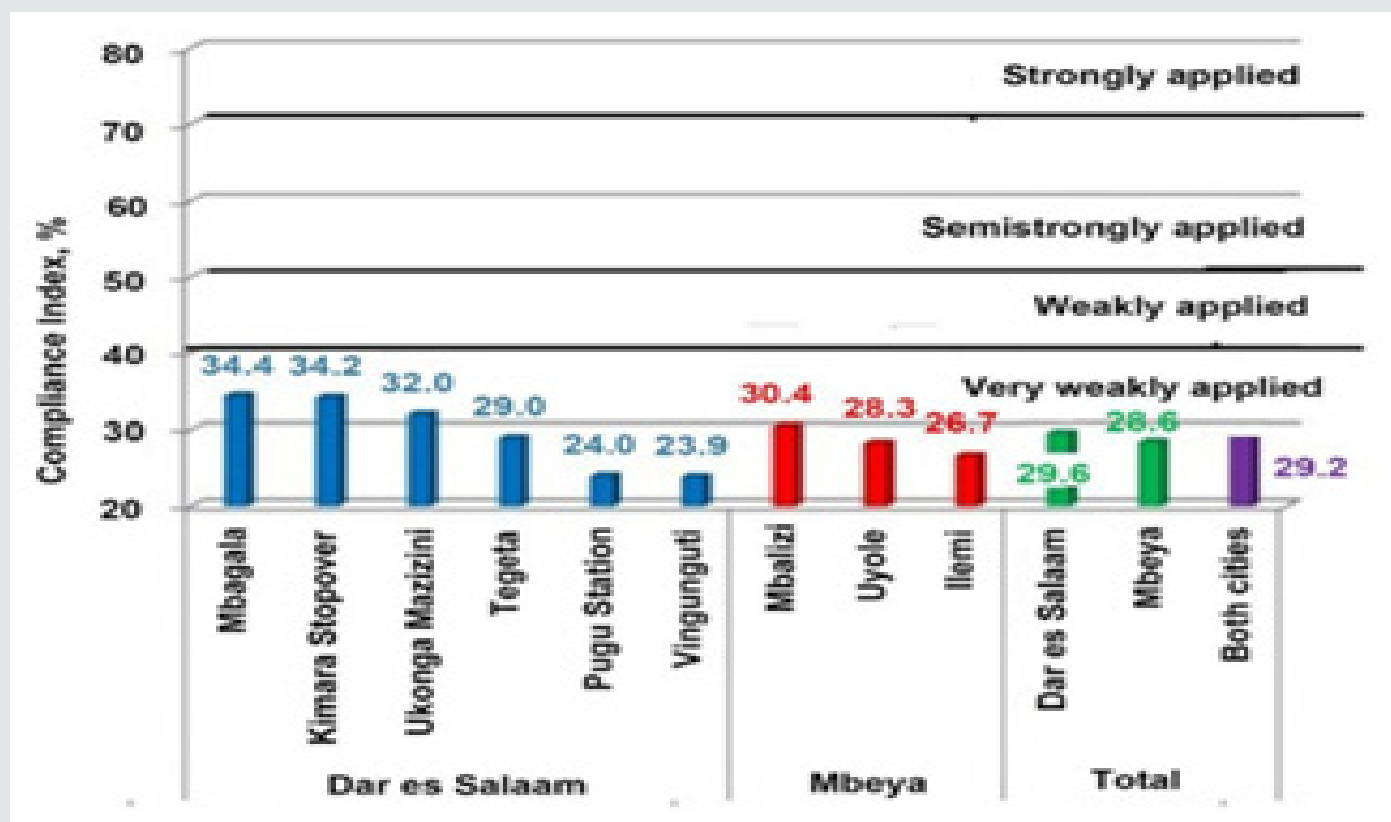
34.4% and higher compliance indices in descending orders were Mbagala (34.4%), Kimara Stopover (34.2%), Ilomba (32.0%) and Mbalizi (30.4%). On the other hand, Ilemi was the lowest scored slaughtering facility at 26.7% compliance index. The total scored level for both cities was 29%, the compliance index that deduced from 28% and 30% compliance indices scored from the surveyed butchers in Mbeya and Dar es Salaam. The scored levels in



Dar es Salaam ranged between 34.4% and 23.9% with Vingunguti being at the lowest side

while Mbagala was revealed to be the highest scored slaughtering facility. On the other

hand, the range in Mbeya was between 30.4% and 26.7%, where Mbalizi was at the highest



**Figure 2 — Compliance of the meat transporting vehicles in the surveyed slaughtering facilities in Dar es Salaam and Mbeya (N = 6 for Dar es Salaam and N = 3 for Mbeya)**

The assessment of beef transporting facilities in the surveyed slaughtering facilities in connection to the hypothesis of this study (beef transporting vehicles comply with the specification), indicted very weakly compliance with the requirements. This can be interpreted that, the null hypothesis, that the beef distributing vehicles observed in the surveyed slaughtering facilities do not comply with the technical measures for food

quality is accepted. The level of compliance observed from the test hypotheses was lower than that observed in other studies on compliance in developed countries. This is explained based on the fact that incentives for beef production as per hygienic and safety requirements are higher in developed countries than in the developing world.

#### 4. Conclusion and recommendation

Results have in this article suggested that the claim that assessment of compliance of multi-factored infrastructure unit to given managerial specification is a complex phenomenon and not objectively determined is not always correct. Applicability of the designed CIM is useful as it avoids mistakes and misunderstanding resulting from the desire of measuring the quality of object. The study has proposed the development of other com-

pliance index-based models in regulation of other products.

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***“For safety and higher efficiency, always buy TBS-marked/certified electrical appliances”***

## Food safety systems: A shared responsibility



Dr Angelo Teikwa Nyonyi

**J**une 7 each year is World Food Safety Day. The theme for 2023 was Food standards save lives, which means all food systems, food safety measures, food risks assessment and management, food monitoring and evaluation and other measurements need transformation to reach specific standards which assure safe food and consequently ensure public health.

The main concept in this theme is that standards guide and direct how food safety will be attained by applying the standards. A standard is defined as a document, established by consensus and approved by a recognised body, that provides, for common and repeated use, rules, guidelines or characteristics for activi-

ties or their results aimed at achieving the optimum degree of order in a given context.

Standards provide a reliable basis for sharing common expectations regarding specific products, services or process characteristics. The theme tells us that food standards can ensure food safety and quality when addressing all food-related issues of food quality, hygiene, and safety. Also, this year's theme shows that standards can guide inspection and certification requirements for food products to ensure the production of safe food by producers.

Safe food is a primary determinant of human health and growth. It is a fundamental human right to have access to safe food and healthy food, and in seeking to guarantee this right, the government and all stockholders must ensure that all available and accessible food in the markets must meet food standards requirements. Therefore, the theme is clear: how food standards contribute to saving human lives.

The theme is sending a strong message to all food stakeholders that let safe food be the

global campaign from individuals, companies, organisations, and nations worldwide. This is important in ensuring food safety through implementing food standards regardless of the nature, size, or type of food in the food chain system.

Food standards save lives and give an alert and strong message that we should be aware of and use food standards at all levels, as the general public is subjected to different hazards from the farm to the table, i.e. food chain.

Government regulators in the food chain system, being the policy-makers, practitioners and business community, are urged to ensure enforcement or application of food standards respectively so that safe food is made available from the production, food selling point, food processing, food marketing, food trading, food consumption, food supply, food inspection, food auditing, food regulation and food registration. Ultimately, this will ensure food products are safe in the market, as they will be outcomes of application or use of food standards in the food chains.





To realise their full potential for safe food, food safety systems must achieve a three-dimensional scope: economy, social and environment. From the economic dimension, a food system is considered sustainable if the activities conducted by each food system actor or support service provider have adhered to food standards and are commercially or fiscally viable. The exercises should generate benefits, or economic value, for all categories of stakeholders: wages for workers, taxes for governments, profits for enterprises, and food supply improvements for consumers.

For the social dimension, a food safety system is considered sustainable when there is equity in the distribution of the economic value added, considering vulnerable groups categorised by gender, age, race and so on. Fundamentally, food safety system activities must contribute to advancing important socio-cultural outcomes, such as nutrition and

health, traditions, labour conditions, and animal welfare.

For the environmental dimension, sustainability is determined by ensuring that the impacts of food safety system activities on the surrounding natural environment are neutral or positive, taking into consideration biodiversity, water, soil, animal and plant health, the carbon footprint, the water footprint, food loss and waste, and toxicity.

Food safety systems are the shared responsibility involving the whole food supply chain, from producers to consumers and in this context, most food-borne diseases can be prevented by using the proper food handling techniques, improving essential infrastructures, food safety practices, health education, mapping the role, influence and power of all stockholders who are involved in the food chain at all levels and analysing the connectivity on operations.

Food systems require a more

holistic and coordinated approach due to complexities whose solutions are contested and which transcend disciplinary, divisional and institutional boundaries. These challenges in increasingly globalised food safety systems result from interactions across different scales and levels. They require integrated actions taken by all stakeholders at local, national, regional and global levels by both public and private sectors across multiple fronts in agriculture and trade, policy, health, environment, gender, norms, education, transport and infrastructure.

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***“Quality does not only begin with a letter Q. It must be followed by U”***



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