

Viwang

E-Newsletter



ISSUE NO: 030 JANUARY - MARCH 2024

TBS, the Home of Standards



The SADCAS Chief Executive Officer, Ms. Eve Christine Gadzikwa (centre, seated) in a group photo with TBS Management and laboratory staff during accreditation ceremony held at TBS, Ubungu, Dar es Salaam.

All TBS laboratories accredited



The SADCAS Chief Executive Officer, Ms. Eve Christine Gadzikwa (right) observes testing facilities in the Electrical Engineering Laboratory during her visit to present accreditation certificates at TBS, Ubungu, Dar es Salaam.

By Neema Mtemvu

The Textile, Leather and Packaging Technology laboratories of the Tanzania Bureau of Standards (TBS) have finally been recognized internationally after receiving accreditation certificates.

The certificates issued recently in Dar es Salaam by the Southern African Development Community Accreditation Service (SADCAS) are a proof that the results of the laboratory tests are internationally recognized. With this development, all TBS laboratories are now internationally recognized.

Speaking during the event, Acting Director General, Mr. David Ndibalema said SADCAS conducted an assessment on the organization's laboratories in accordance with ISO 17025 and issued accreditation certificates to confirm the competence of those laboratories.

He said the certificates are a proof that the testing services provided by the laboratories are recognized internationally and that getting certificates of competence

builds more confidence for customers. all its laboratories have been accredited.

“As we all know; Tanzania is a member of the East African Community where our cooperation is focused on promoting business in those countries. We are also members of the Southern African Development Community (SADC) and are members of the African Union (AU) where at the level of the African Continental Free Trade Area (AfCFTA), obtaining accreditation is one of the steps to make it easier for products to compete in those markets,” said Mr. Ndibalema.

On his part, the Acting Director of Testing and Metrology, Mr. Ridhiwani Matange said the directorate was very happy that now

“It is a very important thing and we all deserve to be proud of this success, because the process of obtaining accreditation is not a one-day task, it requires investment in the sense of human resources, providing them with skills, having modern equipment, a better testing environment and other measures to improve testing,” he said.

The Acting Head of Textile and Leather Laboratory, Mr. Habib Hamis, said getting a certificate of accreditation will help the laboratory in being recognized internationally and promote the Bureau for having competent laboratories where once tested, products are accepted everywhere.

***“Quality is remembered
long after the price is
forgotten. Always use
TBS-certified products”***

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TBS, the Home of Standards



The SADCAS Chief Executive Officer, Ma Eve Christine Gadzikwa (middle sitting) in a group photo with TBS Management and TBS Laboratory Staffs during accreditation ceremony held at TBS Ubungu-Dar es Salaam

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TBS urges stakeholders in roofing sheets to abide by standards

By Rhoda Mayugu

Tanzania Bureau of Standards (TBS) has urged stakeholders in roofing sheets and coils in the country to consider importing and manufacturing products that are complying with the national standards to avoid losses.

The motive came as the Bureau found out that most imported iron sheets in the market were found with challenges including colour change of galvanized steel after a short time; as a result, those products are not eligible for usage.

TBS Import and Export Control Manager, Mr. Gervas Kaisi made the remarks during the meeting with stakeholders in roofing sheets and coils held in Dar es Salaam recently.

"Products might be seen as of high quality in the thickness parameters and gauges but the colour fades after a year. This is quite a challenge... we are reminding you to consider products and materials that comply with the national standards to avoid being penalized during inspections," said Mr. Kaisi.

"Another challenge to these imported iron sheets is the difference of the actual gauges. In some cases, the product is labelled 28 gauges but after testing you find it 30 gauge. This is not good for clients," he said.

Mr. Kaisi added that, TBS has the mandate to ensure that consumers are benefitting from using the products they purchase, thus, those who are caught importing or manufacturing substandard products shall face punishments including returning the products at their own expenses or suspension of their licences.

"The law indicates that if the importer cannot return the product to where it was manufactured, then they must bear the expenses of destroying the products under the supervision of TBS. TBS will come up with a plan to ensure all manufacturers and importers issue warranty so that they can be responsible to their clients" he added.



Laboratory accreditation a highly commendable achievement

On 24th January, 2024, Tanzania Bureau of Standards officially received accreditation certificates for the Textile and Leather and the Packaging Technology laboratories. The certificates were issued by the Southern African Development Community Accreditation Service (SADCAS) as a proof that the results of the tests of the laboratories in question are internationally recognized.

This achievement ensured that all TBS laboratories are now accredited and internationally recognized. The laboratories are the Chemistry Laboratory, the Food Chemistry Laboratory, the Microbiology Laboratory, the Textile and Leather Laboratory, the Packaging Technology Laboratory, the Building

and Construction Laboratory, the Mechanical Engineering Laboratory and the Electrical Engineering Laboratory.

Speaking during the event on behalf of the TBS Director General, the Director of Standards Development, Mr. David Ndibalema said SADCAS conducted an assessment on the two laboratories in accordance with the requirements of ISO 17025 and issued accreditation certificates to confirm their competence. He said the certificates are a proof that the testing services provided by the laboratories are recognized internationally.

Accreditation is a procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks.



For the case of a testing or calibration laboratory, it is a formal recognition by an independent body, generally known as an accreditation body, that the laboratory operates in accordance with ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories.

ISO/IEC 17025 is an international standard specifying requirements for quality and competence in testing and calibration laboratories. The standard requires that such laboratories prioritize excellent quality practices and develop a reliable quality management system to establish and demonstrate their competence.

Accreditation is an assurance to the public that a laboratory meets accepted standards of quality and integrity. It represents an approval of confidentiality, safety, and professionalism. Accreditation ensures that laboratories are technically competent to produce reliable, accurate results, promoting market confidence and ensuring the safety of patients, staff, and the environment. In effect, an accredited laboratory inspires confidence in its customers.

We congratulate the TBS Management and employees on achieving the accreditation for the last two laboratories. This accreditation

is a testament on Management's unwavering commitment to excellence and dedication to upholding the highest standards in the field of testing and calibration. Further, this accomplishment reflects the culmination of the laboratory employees' hard work and determination.

By earning this accreditation, we demonstrate to our clients, partners, and stakeholders our steadfast commitment to quality, accuracy, and reliability in every aspect of our operations. It reinforces their trust in our capabilities and affirms our credibility as a leader in the field.

We would like to express our sincere appreciation to each member of the team for their contributions, expertise and teamwork throughout this journey. It is through collective efforts that we have achieved this significant milestone.

As we move forward, let us continue to uphold the standards of excellence that have earned us this achievement. Let us remain vigilant in maintaining the highest level of quality in everything we do, ensuring that we continue to deliver exceptional service to our clients and contribute to the advancement of the country's economy and the people's wellbeing.

***“Misuse of TBS quality
mark is a criminal offence
punishable under the
Standards Act No. 2
of 2009”***

Five Eastern African countries counselled on food safety management



Participants of the Regional Training of Trainers on Food Safety Management (ISO 22000) from five East African countries pose with the TBS leadership and ISO Coordinator during a four-day training conducted at Ramada Hotel in Dar es Salaam.

By Rhoda Mayugu

Tanzania Bureau of Standards (TBS) has said African countries have a huge opportunity to penetrate international markets by ensuring food products meet the required standards thus boosting export revenue.

Speaking at the opening of a four-day training to trainers on food safety management systems

which brought participants from five Eastern African countries that was held in Dar es Salaam recently, the TBS Director General Dr. Athuman Ngenya said that the training aimed at imparting knowledge and skills on food safety management systems so that food products produced locally can easily penetrate global markets.

He said the training was organized by the International Organization for Standardization (ISO) and brought together delegates from Tanzania as the host country, Kenya, Uganda, Somalia and Ethiopia. The other participants were from Mauritius, India and Switzerland.

He said the training aimed at imparting knowledge



and skills to African experts in the food sector on the benefits of the standards on food safety management.

Dr. Ngenya said the training on food standards has immense benefits to both consumers and business people.

“When food products meet the required standards, they can easily penetrate wide markets, both domestic and international,” he said, adding that the training will equip participants with an understanding of the standards of food products.

To achieve food safety objectives, food standards are

based on risk analysis using the best, most up-to-date and robust scientific advice. Tanzania food standards are prepared using a risk-based approach, relying on existing international standards such as Codex and ISO standards and use of available published studies.

The principles enshrined in the standardization process work to ensure that food standards contribute to protecting public health and ensuring fair practices in the food trade.

Food standards ensure food safety and quality by addressing all food-related issues such as quality and

hygienic requirements, contaminants including toxins, heavy metals, residues of veterinary drugs and pesticides, hygienic practices such as Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP), additives, nutrition, food packaging and labelling and methods of sampling and analysis.

Management standards such as Hazard Analysis and Critical Control Points (HACCP) and Food Safety Management (FSM) systems provide a solid foundation for food business operators to ensure the safety of the food produced across the entire value chain.

TBS explores Ghana Expo to create public awareness

By Staff Reporter

Tanzania Bureau of Standards (TBS) has taken advantage of the Ghana Expo 2024 to create awareness on the Bureau's mandate regarding importation procedure.

Addressing journalists in Dar es Salaam recently, the TBS Marketing Officer, Ms. Rhoda Mayugu, said TBS has provided

awareness education to visitors from Ghana, many of whom asked about the procedures for importing products into the country to meet the national standards requirements.

“The education has been provided to the participants, many of whom commended TBS, because even when

they brought their products from Ghana for the exhibition, they received good service without any inconvenience,” said Ms. Mayugu.

In addition, she said the local SMEs who visited the TBS booth were told about the procedures for certifying their products that will help them expand the scope



TBS Inspection Officer, Mr. Adam Mitumba educates the visitors of the TBS pavilion on importation procedures during the Ghana Expo held in Dar es Salaam.

of their markets in the country and in the African continent.

Ms. Mayugu asked the consumers of the products in the country to read the information found on the product packaging to identify the expiration date and the quality mark so that they can be sure of the safety of the product in question, calling on producers and importers of products in the country to

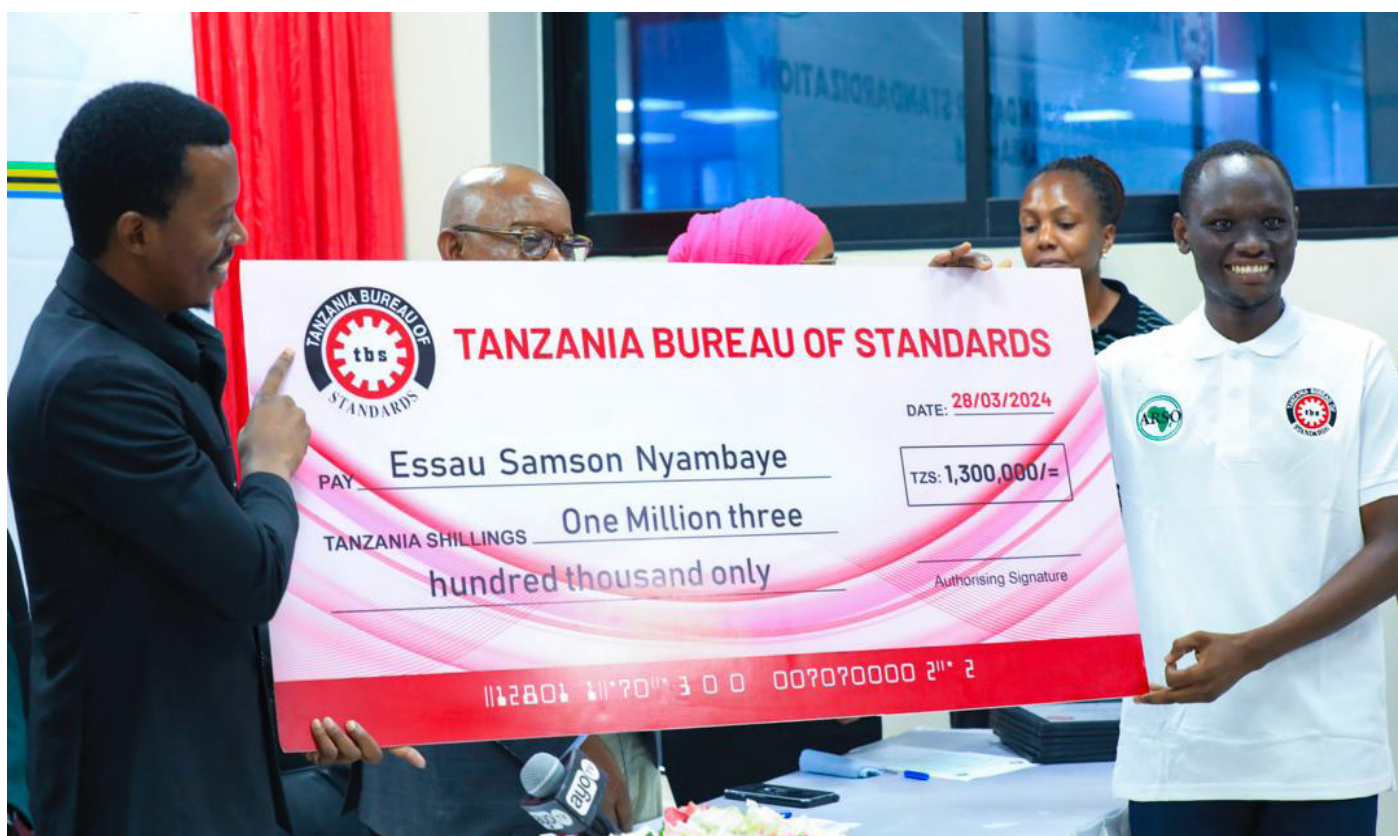
produce and import products that meet the requirements of national standards.

On his part, TBS Inspection Officer, Mr. Adamu Mitumba, said importers should submit samples of food and cosmetics products at TBS for testing before being imported into the country.

“Cosmetics and food products need to be registered by TBS,

if the trader is importing these products, samples must be submitted to TBS for testing and quality ascertainment prior to importing. For products other than cosmetics and food, the importer should follow the procedures of Pre-Shipment Verification of Conformity (PVoC),” said Mr. Mitumba.

TBS hailed for investing heavily in controlling products quality



Ubungo District Commissioner, Mr. Hassan Bomboko issues a dummy cheque to the overall winner of the 11th National Essay Writing Competition for 2023/2024, during the commemoration of the African Day for Standardization held at TBS offices, Ubungo, Dar es Salaam.

By Neema Mtemvu

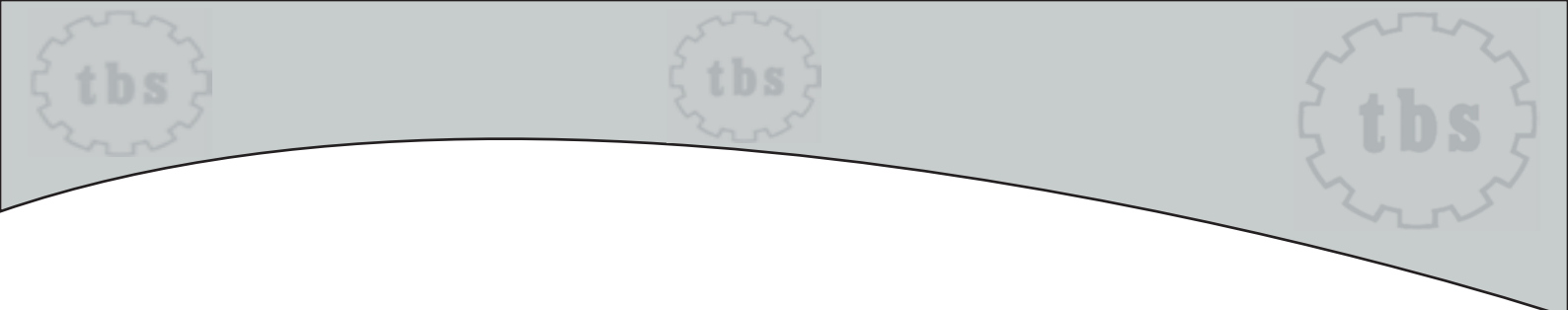
Tanzania Bureau of Standards (TBS) has been hailed for its efforts and robust investment to control the quality of products in the country thus protecting public health.

Ubungo District Commissioner, Mr. Hassan Bomboko made the remarks in Dar es Salaam recently during the commemoration of the African Day for Standardization which went along with the provision of awards to

10 students from higher learning institutions who won an essay competition on standards.

He said the sixth phase government recognizes the good work done by TBS in supervising standardization and quality assurance matters, thus protecting the country from substandard products.

He said the government will continue to



invest more efforts to uplift the organization which include channeling more funds to improve monitoring of products.

“In the next financial sector, the government will continue to encourage entrepreneurs to send their products to TBS for quality check in order to expand their businesses and reach a wider population both locally and outside the country,” he said.

He said as production of various products increases globally, it is important for entrepreneurs to be creative to produce quality products in order to compete well in the market.

“To achieve this, the government through the Small Industries Development Organization (SIDO) and TBS implements a plan to ensure that small-scale entrepreneurs improve the quality of their products to meet standards requirements,” he added.

On the essay competition, DC Bomboko commended the students for responding well where the number of participants has increased from xxx last year to a total of 390 this year.

TBS Director General, Dr. Athuman Ngenya said the day aimed to strengthen industrial growth in Africa enabling member countries to participate in the celebration to raise awareness to quality control authorities, manufacturers, entrepreneurs, higher learning institutions, consumers and other stakeholders on the importance of standards

and quality of products for sustainable economy.

He said the major objective of the African Organization for Standardization (ARSO) which organizes essay competitions each year is to harmonize African standards and conformity assessment procedures in order to reduce technical barriers to trade, to enhance intra-African and international trade as well as industrialization and integration in Africa.

He urged entrepreneurs dealing with processing, packaging and selling of food products to take into account standards, quality and safety of their products as a way to increase productivity and incomes.

The principles enshrined in the standardization process work to ensure that food standards contribute to protecting public health and ensuring fair practices in the food trade.

Since 2013, ARSO has been organizing the Annual ARSO Continental Standardization Essay Competition aimed at empowering the African Youth to understand the role and importance, as well as the benefits of standardization in facilitating sustainable development in Africa. The theme for the 2023/2024 competition was “Empowering consumers through standardization to achieve their rights to safe quality goods & services”.

“When you buy a product always look for the TBS mark which assures you of quality, reliability and safety”

TBS urges manufacturers, importers and distributors of butter, flour to comply with standards



The TBS Director General, Dr. Athuman Y. Ngenya addresses manufacturers, importers and distributors of peanut butter, maize flour and composite flour during a stakeholders meeting held at TBS, Ubungu, Dar es Salaam.

By Rhoda Mayugu

Tanzania Bureau of Standards (TBS) has urged manufacturers, importers and distributors of peanut butter, maize flour and composite flour to comply with standards requirements to ensure the safety of the consumers and to avoid penalties and losses.

The urge was issued recently by the TBS Director General, Dr. Athuman Ngenya during a stakeholders meeting between TBS and manufacturers, importers and distributors of peanut butter, maize flour and composite flour

held in Dar es Salaam.

“We are fully aware of the importance of products derived from grains, especially maize flour and other grains; thus, we are reminding you about observing guidelines on the quality production requirements

so that you can produce, import, and distribute products that meet national standards' requirements on safety and quality," said Dr. Ngenya.

"These products can simply be contaminated by poisonous substances when good practices are not adhered to, beginning from farms, stores and manufacturing processes, therefore we call upon producers, importers and distributors to consider good manufacturing practice and good hygiene practice when dealing with this products," stressed Dr. Ngenya.

Commenting on the training, Mr. Baraka Nyerenda, a

flour producer in Songwe Region said the training will increase their confidence since they will be aware of the requirements and will enable them to be competent in markets due to the trust gained.

"Through this training TBS reminded us on things to consider when producing flour so that even if we go to the market, we deliver to the consumer a product that is safe and good," said Mr. Nyerenda.

He said the training provided by TBS is an opportunity for them to be able to find reliable markets and continue to produce products that meet standards requirements so that they can

sell them locally and abroad.

Additionally, Ms. Janeth Shile, a manufacturer of composite flour said that participation in the training and being visited by TBS officials to inspect the products produced gave them the strength and courage to enter the market with high competition.

She advised her fellow producers to share the training knowledge to other manufacturers who did not get a chance to attend the meeting so that they produce quality products and reduce the number of substandard grain products in the market.



A section of manufacturers, importers and distributors of peanut butter, maize flour and composite flour during a stakeholders meeting.

Standardization of energy-efficient products for sustainable energy



Mohamedi Kaila

In today's world, where energy conservation and sustainability are paramount, standardized energy efficiency products (such as refrigerators, air conditioners, light bulbs, and electronics) emerge as essential tools in achieving Global Sustainable Energy Goals by environmental and economic improvements. From reducing global carbon footprints to cutting utility bills, energy-efficient products offer a multitude of benefits for both consumers and the environment.

Energy conservation is an effort made to reduce the consumption of energy so that energy sources can be saved for future uses. However, energy conservation is achievable either

by using energy-efficient products or by reducing the amount of service usage.

Nowadays we have World Energy Conservation Day that is celebrated on 14th

December globally to highlight the significance of energy consumption and its use in our day-to-day lives, its scarcity and its impact on sustainability of global ecosystems



Understanding efficient

An energy-efficient product is a product designed to consume less energy while still providing

energy-products

the same level of functionality. These products are typically designed with features that minimize energy waste during their operation. For example, energy-efficient appliances

like refrigerators, air conditioners, light bulbs and electronics are built with advanced technologies that reduce energy consumption without sacrificing performance. Energy-efficient products are beneficial because they help reduce

energy bills for consumers and decrease overall energy usage, which is good for the environment by reducing greenhouse gas emissions and dependence on finite energy resources.



Examples of some energy-efficient products available in the market

Identification of energy-efficient products in the market

Identifying energy-efficient products involves a combination of understanding energy labels, ratings and manufacturers energy consumption

information.

Energy labels and ratings:

Many countries have programmes for standardizing and establishing energy labelling to help consumers identify energy-efficient products. Look for labels such as ENERGY STAR in

the United States, EU energy labels in Europe, Energy Rating labels in Australia, and others. These labels typically display an energy rating or efficiency class, allowing buyers to compare the energy efficiency of different products within the same category.



Comparative labels – (A): EU Energy Label, (B): Chinese Energy Label, (C): Australian Energy Label, (D): Japanese Energy Label, (E): US EnergyGuide, (F): Canadian EnerGuide.

Energy labels are affixed to the visible areas of products to facilitate consumers in swiftly recognizing items that are energy-efficient. This practice

aims to provide clear and easily accessible information to consumers regarding the energy performance of the product they are considering to

purchase. By visibly displaying these labels, consumers can make more informed decisions about which products align with their energy-saving goals.



Energy consumption information: Manufacturers always provide information about the energy consumption of their products in product specifications or documentation. Look for details such as energy consumption in kilowatt-hours (kWh), annual energy consumption estimates, or energy efficiency ratios (EER, SEER, and COP for air conditioners, for example). Compare this information across different products to identify the most energy-efficient option.

Standardization in the context of energy efficiency products involves the establishment of uniform criteria and performance metrics for evaluating products' energy-saving capabilities. Whether through government regulations, industry standards, or voluntary certification programmes, standardization ensures that energy-efficient products are

credible and comparable across different products.

To make sure products perform consistently well in terms of how much energy they use and how efficient they are, standards set a uniform criterion which helps consumers' decisions based on reliable information. When products meet these standards, it builds trust because customers know what to expect in terms of quality and performance.

The proliferation of energy-efficient products can often overwhelm consumers, making it challenging to compare different options effectively. Standardization simplifies this process by providing a common framework for comparison. Whether it is ENERGY STAR certification or energy bar certification, standardized labels offer clear and brief information about a product's energy efficiency. This enables

consumers to make side-by-side comparisons, facilitating informed purchasing decisions.

Standardization plays a crucial role in driving market transformation towards sustainability. By establishing uniform energy efficiency standards, governments and regulatory bodies can create incentives for manufacturers to innovate and develop more efficient technologies. This raises competition in the market and accelerates the adoption of energy-efficient products. As consumers increasingly demand greener solutions, standardized energy efficiency products become the norm rather than the exception.

By reducing energy consumption, these products help mitigate greenhouse gas emissions and alleviate pressure on natural resources. Moreover, standardized products often

undergo rigorous testing and certification processes to ensure compliance with environmental regulations. This ensures that the manufacturing and disposal of these products adhere to sustainable practices, minimizing their ecological footprint throughout their lifecycle.

One of the most compelling reasons for choosing standardized energy efficiency products is the potential for **cost savings**. While energy-efficient products may have a higher upfront cost, they have long-term savings in energy bills than the initial investment. Standardization ensures that consumers can trust in the advertised energy savings, providing assurance that the product will deliver

on its promised efficiency. Standardized energy efficiency products represent a cornerstone of sustainable consumption and environmental goal. By providing consistency, reliability and environmental benefits, they empower consumers to make informed choices that align with their values and contribute to a greener future. As we struggle towards a more sustainable society, standardized energy efficiency products serve as catalysts for positive change, driving innovation, reducing emissions and fostering a culture of responsible consumption.

To advance towards a **sustainable energy society**, the Tanzania Bureau of Standards, through its Electro-

technical Divisional Standards Committee, has initiated the development of national standards for Minimum Energy Performance (high efficiency) on electrical appliances for the Tanzanian market. This proactive step aims to establish guidelines and criteria that electrical appliances must meet to ensure they consume energy efficiently. By implementing such standards, Tanzania can promote the adoption of energy-efficient technologies, reduce energy consumption and contribute to the country's sustainable development goals.

Mr. Mohamedi Kaila is a Standards Officer at Tanzania Bureau of Standards (TBS).

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

Public health risks associated with street vended food



Mary Ottaru

With the grip of sudden and unprecedented urban growth, and an increase in the size of the labour force, the demand for non-traditional services has gained momentum. The street food trade has shed its disorganized, lower class image and is becoming a viable, important informal-sector industry.

Street-vended foods refers to foods and beverages prepared and/or sold by vendors in streets and other public places for immediate consumption or consumption at a later time without further processing or preparation. Popular street vended food in Tanzania include chipsi mayai whereby its main components are French fries and eggs, nyama choma (grilled meat), ugali, wali maharage (rice with beans), urojo, mishikaki, chapati, vitumbua, maandazi seafood dishes and many more



Example of street vended food in Tanzania

Street vended foods are becoming an indispensable component of the food system in many cities of developing countries, increasingly emphasized by the rapid urbanization process, and significantly contribute to the food security of people who rely on their daily and widespread availability. Rapid urbanization and population growth are expected to continue and street-vended foods, which are largely but not exclusively an urban phenomenon, will expand accordingly.

Street vended foods are not only appreciated for their unique flavours, convenience and the role which they play in the cultural, and social heritage of societies, they have also become important and essential for maintaining the nutritional status of the populations. Street vended food businesses play economic and social roles in developing countries through provision of employment, allowing individuals to start their own small businesses with minimal capital investment,

availability of food at affordable prices and accessibility of a wide range of food choices that suit different social communities and classes. Street vending provides income and livelihood opportunities for vendors, many of whom are micro-entrepreneurs and small business owners. It supports economic empowerment, poverty reduction, and socio-economic inclusion, particularly for marginalized communities, women, and informal workers.

Despite the above benefits,

street food vending has become an important public health issue and a great concern to everybody. This is due to widespread food borne diseases, due to the mushrooming of wayside food vendors who lack an adequate understanding of the basic food safety issues.

Street foods are perceived to be a major public health risk due to lack of basic infrastructure and services, difficulty in controlling the large numbers of street food vending operations because

of their diversity, mobility and temporary nature.

Street-vended food may be prepared and served in environments with limited access to clean water, proper sanitation facilities, and hygiene practices. This increases the risk of contamination from bacteria, viruses, parasites, and other pathogens, leading to foodborne illnesses such as diarrhea, vomiting, and food poisoning.



Unhygienic environment for street vended food production (Picture by FAO)

According to WHO, food-handling personnel play an important role in ensuring food safety throughout the chain of food production, processing, storage and preparation. Street vendors often lack proper

training and education on safe food handling practices, leading to improper storage, preparation, and serving of food. Cross-contamination between raw and cooked foods, inadequate cooking

temperatures, and poor hygiene practices can contribute to the spread of foodborne pathogens. Furthermore, lack of periodic medical checkup for street food vendors can lead to food contamination with different

microbiological hazards.

Street vendors may have limited access to handwashing facilities and sanitation supplies, making it challenging to maintain proper hygiene standards. Inadequate handwashing, improper glove use, and unsanitary conditions can increase the risk of food contamination and transmission of infectious diseases.

Moreover, the use of proper utensils for cooking and storage of prepared food is often critical to the safety of street vended foods. Poor quality of materials coupled with improper practices may lead to toxin formation, pathogen growth or recontamination. The design,

construction and maintenance of equipment and utensils is very important to food safety, as their poor maintenance may lead to the inability to effectively clean and sanitize surfaces. This may then result in the buildup of residues of food, facilitating microbial growth, leading to an increased likelihood of contamination. The appropriate use of equipment is also important to prevent the cross contamination from raw materials.

Improper waste disposal and wastewater management from street-vended food operations can contribute to environmental pollution and public health hazards. Food waste, packaging

materials, and wastewater may contaminate soil, water sources, and air quality, posing risks to environmental and human health.

Street vending often operates within the informal economy, with limited regulatory oversight and enforcement of food safety standards. Many street food vendors operate in prohibited areas and public spaces such as roadside that are not designed for vending. Non-compliance with regulations may result in unsafe food practices, substandard hygiene conditions, and increased health risks for consumers.

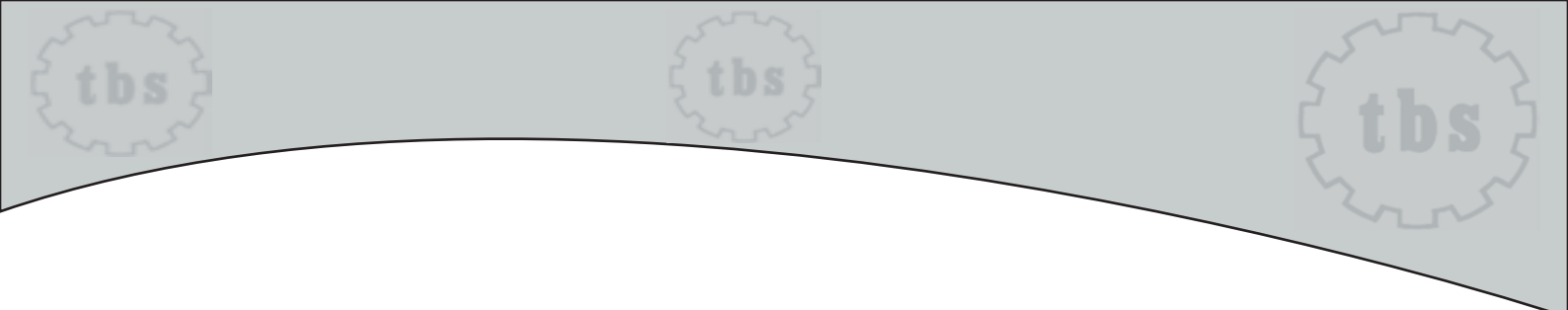


Roadside street vending (Picture KNA)

Addressing the public health risks associated with street-vended food requires multi-faceted approaches

involving collaboration among government authorities, public health agencies, vendors, consumers, and community

stakeholders. Strategies may include strengthening regulatory frameworks and enforcement mechanisms to



ensure compliance with food safety standards and hygiene regulations; and providing training and capacity-building programs for vendors on safe food handling practices, hygiene, and sanitation.

Strategies may further include improving access to clean water and sanitation facilities in street vending areas; implementing regular inspections and monitoring of street-vended food operations

to assess compliance with food safety standards and identify areas for improvement; promoting consumer education and awareness about safe food handling practices and the importance of patronizing vendors who adhere to food safety standards; and encouraging collaboration between government agencies, non-governmental organizations, and community groups to address the challenges affecting street food vendors.

By addressing these risks through collaborative efforts, it is possible to promote safe, hygienic, and sustainable street-vended food environments that protect public health and support the livelihoods of vendors.

Ms. Mary Ottaru is a Standards Officer at Tanzania Bureau of Standards (TBS).

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

Importance of carbon credit in Tanzania's economy



Masumbuko Noha

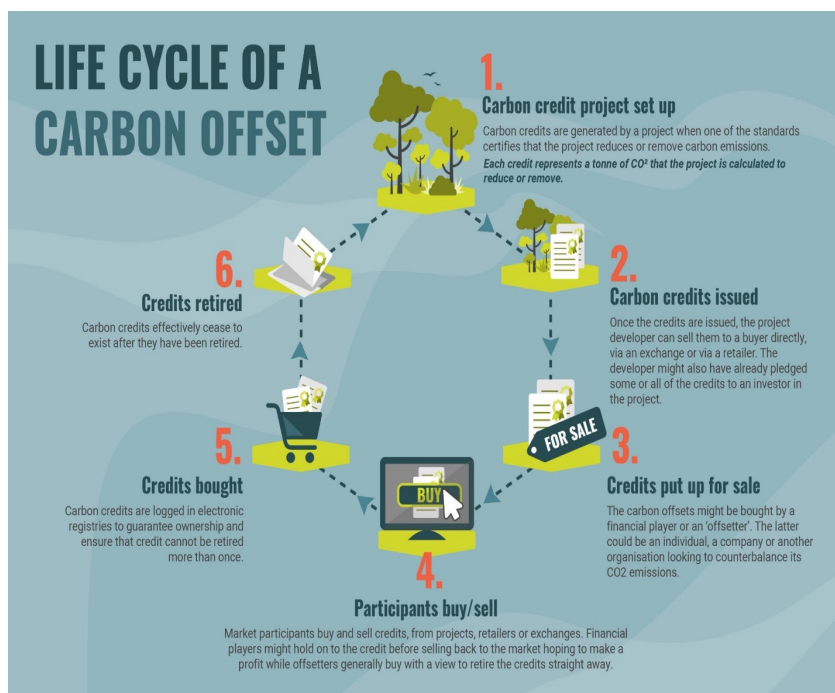
In recent decades, concerns over climate change and the need for sustainable development have prompted the introduction of innovative mechanisms to reduce greenhouse gas emissions. One such mechanism is the carbon credit system, which aims to incentivize carbon dioxide reduction efforts.

Carbon credits, also known as emission-reduction credits or carbon offsets, were introduced as part of the Kyoto Protocol, an international agreement aimed at tackling global warming. This mechanism allows countries or entities to reduce their carbon dioxide emissions or invest in projects that do so, effectively

balancing their carbon footprints. By effectively trading these credits, emission-reducing activities are financially rewarded. **Objectives of carbon credits in Tanzania**

Emission reduction: The primary objective of carbon

credits is to facilitate the reduction of greenhouse gas emissions in Tanzania. This includes projects focused on renewable energy, energy efficiency, and afforestation, among others. By incentivizing emission reductions, carbon credits encourage



Carbon credit life cycle



sustainable practices while mitigating the country's contribution to climate change.

Attracting investment:

Another objective of carbon credits is to attract investment in Tanzania's green economy. Through participation in emission reduction initiatives, projects gain access to international funding and investors interested in supporting sustainable development initiatives. This additional investment aids in the growth of the renewable energy sector, creating new employment opportunities and enhancing economic resilience.

Advantages of carbon credits in Tanzania's economy

Economic growth: Carbon credit projects contribute to the diversification and expansion of Tanzania's economy. The financial resources gained through the sale of carbon credits can be channeled into various sectors, such as renewable energy, waste management, and sustainable agriculture. This diversification helps reduce dependence on traditional industries, fostering sustainable economic growth.

Poverty alleviation: The implementation of carbon credit projects often generates employment opportunities and benefits local communities.

For instance, the development of renewable energy installations requires a skilled workforce, providing a boost to employment rates and income generation. Moreover, projects focused on sustainable agriculture and afforestation can provide income for local farmers and communities, lifting them out of poverty.

Economic incentives: Carbon credits allow Tanzania to generate revenue by selling the carbon credits earned through various projects. This can provide a source of income for local communities, businesses, and organizations involved in sustainable projects.

Sustainable development: By earning carbon credits, Tanzania can attract international investment in renewable energy, forest conservation, and other sustainable projects. This promotes economic growth while also ensuring the sustainable use of resources and protecting the environment.

Energy access and affordability:

Carbon credit projects, such as those involving solar home systems and biogas digesters, increase access to clean and affordable energy for rural households. This reduces reliance on expensive and polluting energy sources like kerosene, diesel, and charcoal, positively impacting

household budgets and reducing indoor air pollution.

Environmental conservation and climate change mitigation:

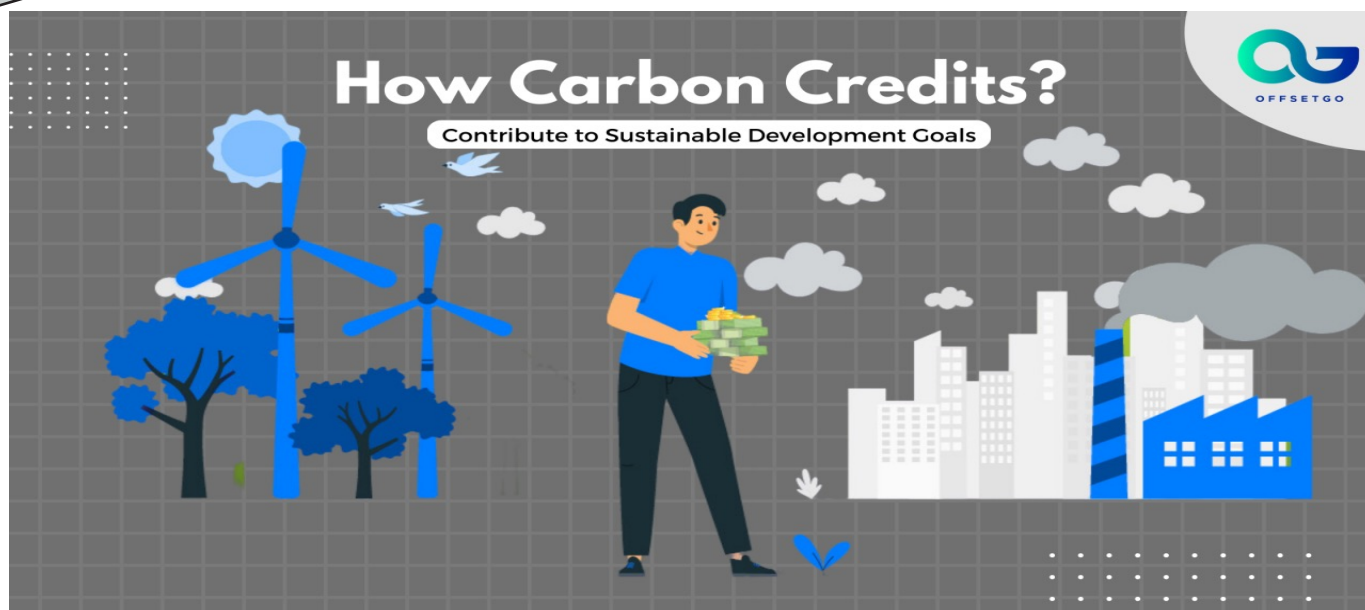
Carbon credits contribute to mitigating climate change by reducing greenhouse gas emissions. Projects focused on forest conservation, renewable energy, and sustainable agriculture help conserve natural resources, enhance biodiversity, and protect ecosystems, supporting Tanzania's environmental sustainability goals.

International reputation and climate commitments:

By actively participating in carbon credit projects and initiatives, Tanzania demonstrates its commitment towards addressing climate change and reducing greenhouse gas emissions. This can enhance the country's international reputation and strengthen its position in global climate negotiations.

Carbon credits on Sustainable Development Goals (SDGs) outlined by the United Nations

Carbon credits have a significant influence on achieving several Sustainable Development Goals (SDGs) outlined by the United Nations. Some examples:



SDG 7: Affordable and Clean Energy - Carbon credit projects often focus on the development and promotion of renewable energy sources such as wind, solar, and hydropower. By incentivizing and funding these projects, carbon credits contribute to increasing access to affordable, reliable, and sustainable energy sources.

SDG 13: Climate Action - The primary objective of carbon credits is to reduce greenhouse gas emissions and combat climate change. By engaging in emission reduction initiatives and promoting sustainable practices, carbon credits directly align with SDG 13, which aims to take urgent action to combat climate change and its impacts.

SDG 15: Life on Land - Carbon credit projects related to afforestation, reforestation, and sustainable land management help protect and restore terrestrial ecosystems. These initiatives contribute to SDG 15, which focuses on preserving biodiversity, combating desertification,

and ensuring the sustainable use of terrestrial ecosystems.

SDG 8: Decent Work and Economic Growth - Carbon credit initiatives often generate employment opportunities, particularly in sectors such as renewable energy and sustainable agriculture. By providing jobs and fostering economic growth, carbon credits help achieve SDG 8, which aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

SDG 1: No Poverty - The implementation of carbon credit projects can have a positive impact on poverty alleviation. Through the creation of employment opportunities and income generation, carbon credits contribute to reducing poverty and achieving SDG 1, which seeks to end poverty in all its forms everywhere.

SDG 14: Life Below Water - Carbon credits indirectly contribute to SDG 14 by mitigating climate change, which in turn

helps preserve marine ecosystems and reduce the impacts of ocean acidification and rising sea levels caused by increasing greenhouse gas emissions.

SDG 11: Sustainable Cities and Communities - Carbon credits support the development of sustainable infrastructure, particularly in the renewable energy sector, contributing to SDG 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable.

These examples illustrate how carbon credits can play a significant role in supporting multiple SDGs simultaneously. By addressing climate change and promoting sustainable practices, carbon credits contribute to the broader agenda of achieving sustainable development and creating a better future for all.

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