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The Minister for Industry and Trade, Hon. Dr. Selemani Jafo (right) gets introduced to the activities performed in the TBS Food Chemistry Laboratory during his familiarization visit at the Bureau's headquarters in Dar es Salaam.

Vision: “Sustainable standardization for high quality livelihood society”.

Mission:
“To promote standardization , safety and quality assurance in industry and commerce through standards development, certification, registration, inspection, testing and metrology services for sustainable socio-economic development”.

Core Values

Customer Focus

We prioritize customers’ needs first therefore committed to responding timely and proactively to their expectations.

Team work

We work together by sharing experiences while respecting each other to realize institutional goals.

Accountability

We shall be responsible to our actions, decisions and outcomes in executing our functions.

Transparency

We ensure open sharing of information and proper provision of feedback to our stakeholders in equal treatment.

Quality Policy

“Tanzania Bureau of Standards (TBS) is committed, as mandated, to deliver quality products and services in standardization, safety management, conformity assessment and metrology. TBS strives to meet legal requirements and customer needs and expectations, even exceeding them so as to retain customer loyalty.
TBS provides resources and continually improves its processes to ensure that employees are capable of timely and consistently providing quality products and services.”

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LET US MAKE CLEAN COOKING A REALITY FOR EVERY HOUSEHOLD

On various occasions, the President of the United Republic of Tanzania, H.E. Dr. Samia Suluhu Hassan has emphasized on the need for the country to switch from traditional cooking fuels to clean cooking fuels. This is in line with the government's cooking energy campaign, cemented by the launching of the National Clean Cooking Energy Strategy for 2024–2034 in May, 2024. In her directives, the President has always underscored the critical importance of promoting clean cooking energy solutions, so as to prevent the deaths of millions of women and children affected by the use of traditional fuels.

Reflecting on Tanzania's commitment to addressing the challenges posed by traditional cooking methods, President Samia has constantly highlighted the multifaceted benefits of clean cooking energy, underscoring its potential to mitigate climate change effects, reduce respiratory diseases, and enhance national productivity. She has expressed her optimism in achieving the ambitious goal of 80 per cent clean cooking energy usage by 2034 stipulated in the strategy, emphasizing the collective efforts required for a sustainable and prosperous future for Tanzania.

In Tanzania, clean cooking fuels are essential to improving health, environmental sustainability, and economic growth. A significant portion of the population relies on traditional fuels like firewood and charcoal for cooking, which leads to indoor air pollution, deforestation, and health problems, especially respiratory illnesses.

Efforts to promote clean cooking in Tanzania focus on alternative fuels and efficient cooking stoves. Alternative clean fuels include Liquefied Petroleum Gas (LPG), which is touted as a clean source of energy due to its efficiency, lower emissions, and convenience, despite challenges like affordability and access especially in rural areas. Biogas is another option. Derived from organic waste, biogas has been promoted for rural communities and agricultural households. It is sustainable and reduces dependency on wood, although initial setup costs and maintenance can be barriers.

Other alternatives include ethanol and biomass briquettes. Ethanol fuel, made from locally sourced materials like sugarcane, and biomass briquettes made from agricultural waste, are gaining traction. They produce fewer pollutants compared to traditional biomass but still face issues around supply chains and production scale. Others are solar or grid electricity, and biomass cooking stoves which are designed to burn wood and charcoal more efficiently, reducing emissions and fuel consumption by up to 50%.

The National Clean Cooking Energy Strategy for 2024–2034, which was launched by the President, focuses on reducing the country's dependency on firewood and charcoal as cooking fuels. This initiative aims to bring clean cooking solutions to 80% of the population by 2034, addressing both environmental and public health concerns linked to traditional cooking methods. It aligns with Tanzania's broader development vision, recognizing clean cooking energy as essential for sustainable growth and improved public health. This approach aligns with Sustainable Development Goal 7 and the African Union's Agenda 2063, focusing on sustainable, affordable, and reliable energy solutions to enhance public health, reduce environmental degradation, and empower communities economically.

In line with the government's endeavour to get rid of traditional unclean cooking fuels, Tanzania has implemented several standards and policies to promote clean cooking fuels, focusing on health, environmental sustainability, and economic development. Tanzania Bureau of Standards (TBS) being the national standards body has a role in ensuring the realization of the National Clean Cooking Energy Strategy. The role is mainly played through establishment of national standards

and overseeing their implementation. Specifically, the development and implementation of standards for ethanol fuels and cooking stoves will be a significant step in reducing the country's reliance on traditional biomass fuels like wood and charcoal.

Currently, the Bureau has managed to develop a number of standards on clean fuel, including TZS 3119, Denatured ethanol for use as cooking and appliance fuel — Specification, which specifies requirements for denatured ethanol fuel (bioethanol) for use as cooking fuel; and TZS 2911, Ethanol fueled cooking appliances — Specification, which stipulates the requirements for ethanol-fueled appliances for cooking. Other standards developed and under implementation by various stakeholders include standards for liquefied petroleum gas, biomass fuels, and domestic gas stoves for use with LPG. These standards, combined with other initiatives, reflect Tanzania's strong commitment to transitioning to cleaner and more accessible cooking fuels across the country.

Being the national overseer of observance of standards, TBS is at a pivotal position to transform cooking practices countrywide for the betterment of public health, environmental sustainability, and economic development. Every year, the harmful emissions from traditional cooking methods cause respiratory illnesses, premature deaths, and significant environmental degradation. Yet, the adoption of clean cooking fuels, such as LPG, biogas, electricity, and ethanol, offers a powerful solution.

In complementing the government's efforts, we call upon private sector players, financial institutions and other stakeholders to support the shift to clean cooking. By investing in infrastructure, creating favorable policies, and raising awareness, we can make clean cooking options accessible and affordable for all. We urge for prioritization and enhanced advocacy, innovation and funding to ensure that the government's vision becomes a reality.

Together, we can promote healthier lives, reduce carbon footprints, and empower communities economically. Let us make clean cooking a reality for every household.

LET US MAKE CLEAN COOKING A REALITY FOR EVERY HOUSEHOLD

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 comply with national standards to avoid losses.

The motive came as the Bureau found out that some imported iron sheets in the market had challenges, including colour change of galvanized steel after a short time.

TBS Imports and Exports 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-gauge 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 will face punishments including returning the products at their own expenses or suspension of their licences.

"The law provides 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," said Mr. Kaisi, adding that TBS will come up with a plan to ensure all manufacturers and importers issue warranty so that they can be responsible to their clients.

Collaboration between TBS, ZBS bolsters product safety

By Deborah Haule

Collaboration between Tanzania Bureau of Standards (TBS) and Zanzibar Bureau of Standards (ZBS) has significantly reduced movement of substandard products between Mainland Tanzania and Zanzibar.

TBS Director General Dr. Athuman Ngenya revealed this during the Zanzibar International Trade Fair (ZITF) which went along with marking of the 60th anniversary of the Zanzibar Revolution.

Dr. Ngenya said the Bureau participated at the exhibition to sensitize the public on TBS achievements for the past 60 years, saying one of the major accomplishments was collaboration with ZBS.

"It was important to have this cooperation because trade between Zanzibar and Tanzania Mainland is huge and involves various products that are regulated by the two organs," he said.

He said the cooperation has made it possible to remove from the market products that do not meet standards requirements between the two sides of the Union.

Dr. Ngenya added that the quality of products traded between the two sided has improved considerably.

Mr. Issa Njoka, a nutrition expert and leader of the Tanzania Small Industries Association (WAJATA), applauded TBS for serving Tanzanians and strengthening industries to ensure the quality of products and protect consumers.

Mr. Njoka, who visited the TBS pavilion, said that as a producer of agricultural products, he received very detailed instructions from the Bureau's officers who were providing education to the public.

"Every citizen and producers in particular should come to TBS to be informed on how they can produce and get quality products," he said.

"It is important for Tanzanian citizens to be patriotic when we want to buy products; we must check if they bear the TBS quality mark to avoid buying products that are harmful to our health."

He said there are aflatoxins and other toxins in some foods, urging that every Tanzanian has the responsibility to take care of their health.

"I call upon every Tanzanian to notify TBS when in doubt of any product so that all of us are safe," he urged.

Entrepreneurs drilled on goods verifications

By Deborah Haule

More than 200 entrepreneurs have been trained on the best ways to verify the quality of their products before getting into the market.

The training was provided by Tanzania Bureau of Standards (TBS) to traders, producers, distributors, and the general public who visited the standards body's booth at the 48th Dar es Salaam International Trade Fair (DITF 2024).

Mr. Francis Mapunda, the TBS Acting Manager for Eastern Zone told reporters that in Saba Saba exhibition TBS has achieved great success in terms of providing education to stakeholders and resolving the various challenges they were facing.

He said stakeholders have been educated about the various services TBS provides, including confirming the quality of products, management systems, testing services, and many more.

Mr. Mapunda also said that people who visited the TBS pavilion were educated about inspections that are carried out by the organization, including products from abroad.

"To all who wanted to import products from abroad, when they arrived at our booth, they got information about the procedures for importing products from abroad," Mr. Mapunda said, adding: "We also provide calibration of equipment in our laboratories to help people who want to get the services for their equipment."

Ms. Neema Mtemvu, the TBS Public Relations Officer said more than 200 entrepreneurs visited the TBS pavilion during the exhibition. She added that during their visit, TBS encouraged them to aim for quality in the products they produce in order to expand their market scope in the country as well as in the East African Community (EAC).

She said the service of certifying products for entrepreneurs' is paid for by the Government, and that they only need to go through the Small Industries Development Organization (SIDO) and get an introduction letter.

According to Ms. Mtemvu, once the entrepreneurs get an introduction letter from SIDO, TBS starts the process of verifying their products for free.

She urged Tanzanians to make sure that the products they buy are those bearing the TBS standards mark of quality and that those who do food and cosmetics businesses should ensure they register their premises.

TBS officers educate entrepreneurs on standards during the 48th Dar es Salaam International Trade Fair

Minister directs TBS to facilitate rapid SMEs growth

By Neema Mtemvu

The minister for Industry and Trade, Hon. Dr. Selemani Jafo has directed the Tanzania Bureau of Standards (TBS) to expedite its facilitation role to achieve rapid growth of the SMEs sector for it to contribute to national development.

Dr. Jafo issued the directive during his recent visit at TBS headquarters in Dar es Salaam to inspect how the Bureau implements its role in boosting trade and business facilitation in the country.

"Supporting entrepreneurs in producing quality goods that can sustain domestic and global market competition will increase employment, national income, and overall economic growth," he said.

He said TBS should provide all necessary support to entrepreneurs which will guarantee them accessibility to regional and global markets.

He insisted on the need for the Bureau to maintain diligence and professionalism, ensuring it does not hinder service delivery to traders.

Furthermore, he highlighted TBS's role in facilitating rapid private sector growth and achieving the government's objectives in fostering a competitive industrial economy.

He called on the need for TBS to collaborate with the Small Industries Development Organization (SIDO) and other institutions to ensure widespread use of the TBS standards mark of quality by entrepreneurs.

Dr. Jafo highlighted the importance of monitoring businesses to prevent producers from compromising product quality and endangering consumer health.

He said TBS is responsible to ensure that correct nutrient fortification of food products like maize flour, wheat, and cooking oil is observed; and that compliance to correct nutrients is one of significant roles that the Bureau should uphold in safeguarding public health and preventing health issues that could undermine economic strength.

He said his ministry will continue to put more efforts in creating an enabling environment for business operations, enhancing employment, thus boosting the country's gross domestic product, which is renown indicator for economic development.

The Minister for Industry and Trade, Hon. Dr. Selemani Jafo (right) gets introduced to the activities performed in the TBS Food Chemistry Laboratory during his familiarization visit at the Bureau's headquarters in Dar es Salaam.

The Minister for Industry and Trade, Hon. Dr. Selemani Jafo (left) gives his views after witnessing tests in the Food Chemistry Laboratory during his familiarization tour at TBS.

TBS education campaign reaches over 6,500 in Arusha districts

By Staff Reporter

Tanzania Bureau of Standards (TBS) has successfully extended its awareness campaign on quality issues to 6,597 people, including 97 entrepreneurs, across fiv districts in Arusha Region.

The campaign, which began on August 16th and ended on August 29th 2024 covered Karatu, Ngorongoro, Monduli, Longido, Arumeru and Arusha.

The TBS Public Relations and Marketing Manager Ms. Gladness Kaseka reported that the education was delivered in open spaces such as markets and bus stations, where large numbers of people gather for travelling and various activities.

The campaign aimed to educate the public about the importance of using certified products, how to report substandard or expired products, and the significance of carefully reading packaging information before purchasing.

Ms. Kaseka emphasized that combating substandard products is a collective responsibility involving all Tanzanians.

She urged the public to avoid buying products out of habit and to check expiration dates before purchase. If they encounter substandard or expired products, they should contact TBS through its free customer service number, she insisted.

Additionally, the campaign provided entrepreneurs with guidance on the procedures for certifying their products. Ms. Kaseka highlighted that the sixth-phase government under President Samia Suluhu Hassan recognizes the role of entrepreneurs in economic growth and has therefore made the certification process free for small-scale entrepreneurs.

She encouraged entrepreneurs to take advantage of this opportunity by presenting an introductory letter from SIDO to begin the free certification process.

Certified products, according to Ms. Kaseka, assure consumers of safety and compliance with standards, facilitating their sale domestically, regionally and abroad without barriers.

She noted that the campaign has reached about 97 districts nationwide and will continue in the future.

Entrepreneurs who participated in the campaign hailed TBS for its outreach and educational efforts.

“I now know that once my products have the quality mark, I can sell them anywhere without obstacles, as buyers will trust them being certified by TBS,” said Anna Swai, entrepreneur.

TBS Public Relations and Marketing Manager (left) educates an entrepreneur during community awareness in Arusha.

TBS urges public to adopt smart shopping habits

by Staff Reporter

The Tanzania Bureau of Standards (TBS) has urged the public to prioritize safety in their purchasing decisions to minimize the risk of foodborne illnesses and other health complications.

The TBS Senior Marketing Officer, Ms. Deborah

Haule said in Kigoma recently that this proactive approach not only protects individuals but also alleviates the financial burden on healthcare systems.

"Such illnesses not only affect individuals' health but can also strain healthcare systems and contribute to economic losses due to increased medical expenses and decreased productivity," she said.

Ms. Haule said a healthy population translates to lower healthcare costs and a more productive society, fostering overall public health.

She said this shift in consumer behaviour encourages companies to invest in better practices, resulting in improved product safety and quality across the board.

"When consumers demand safer and more reliable goods, manufacturers are incentivized to adhere to rigorous quality requirements," she said on the conclusion of a public awareness campaign in Kigoma Region, where 2,730 citizens, including 110 entrepreneurs were reached.

The public awareness campaign that was delivered in open areas, including markets, bus stations, and other crowded places covered Kigoma Ujiji Municipality and the districts of Buhigwe, Uvinza and Kasulu.

She said investing more in standards can lead to increased exports, as international markets often favour countries known for their high-quality goods.

She said as businesses invest in maintaining high standards, this does not only boost local economies but also enhances the reputation of Tanzanian products in international markets, leading to potential growth in exports.

She said TBS's initiative to foster this behaviour is crucial for creating a safer, more prosperous and sustainable future for all Tanzanians.

Ms. Haule added that a culture of conscientious consumption leads to more efficient use of resources, as individuals are less likely to buy items they do not need or that will expire before use.

Additionally, the TBS Senior Quality Assurance Officer, Mr. Peter Musiba urged business owners to register their food and cosmetic premises for ensuring public health and safety.

"This process involves verifying that facilities adhere to established health and safety standards, which are crucial for preventing contamination and ensuring the quality of products," he said.

TBS urges Singida entrepreneurs to adhere to standards

By Maryam Abdulaziz

Entrepreneurs have been urged to ensure their products meet national standards requirements to compete effectively in the East African Community (EAC) market.

This call was made by Mr. Sileja Lushibika, a Quality Assurance Officer from the Tanzania Bureau of Standards (TBS), during a seminar for 46 entrepreneurs and local residents at the Seventh Economic Empowerment Programme Fair held in Singida from 8th to 14th of September, 2024.

Mr. Lushibika highlighted that, under agreements between EAC countries' standardization bodies, once a product is certified in one partner state, it does not need to be re-tested when entering other EAC markets.

"Everyone who participated in these exhibitions received education on how to achieve quality certification. We provided them with best practices for processing since there are essential guidelines to follow for a product to be of high quality," said Lushibika.

He added that TBS is committed to supporting entrepreneurs through this learning process and that by adhering to these guidelines and utilizing available resources, entrepreneurs can enhance their product quality and increase their market competitiveness.

He said the Bureau's goal is to empower local businesses to meet international standards and take advantage of opportunities within the

EAC market; emphasizing that the government is currently covering all costs for small entrepreneurs to certify their products' quality for three years, with the expectation that they will have developed sufficiently by then.

TBS plans to continue educating entrepreneurs on obtaining quality marks and addressing SMEs concerns about the difficulty of achieving certification.

Mr. Lushibika encouraged entrepreneurs to take advantage of the free product certification opportunity, noting that the application process has been simplified and can now be completed online.

Applicants are required to provide an identification letter from the Small Industries Development Organization (SIDO) when submitting their certification requests.

TBS Quality Assurance Officer, Mr. Sileja Lushibika, educates entrepreneurs during the 7th Economic Empowerment Programme Fair in Singida.

TBS urges quality adherence for safer roads

By Maryam Abdulaziz

Tanzania Bureau of Standards (TBS) has emphasized that car parts importers must adhere to standards to prevent road accidents and improve overall vehicle safety.

TBS's Standards Manager, Eng. Yona Afrika said non-compliance with standards can lead to the use of substandard parts which increases the risk of mechanical failures, posing serious dangers to both drivers and passengers.

"Ensuring that car parts are up to standard not only protects lives but also contributes to the longevity and reliability of vehicles on the road," he said during the road safety week celebrations in Dodoma.

He said TBS is mandated to ensure that all imported car parts are tested for quality standards to maintain road safety.

Speaking about motorcycles, Eng. Africa highlighted that they must meet specific standards requirements, including the requirement for rearview mirrors that do not hinder navigation.

He emphasized that helmets must be made from durable materials conforming to standards to protect the wearer in the event of an accident, adding that even plastic helmets should have impact-absorbing properties with soft padding inside to prevent direct contact with the plastic.

Eng. Africa noted that motorcycle helmets should cover the ears, with the minimum standard being a three-quarter helmet that covers the head, ears, and chin. He also mentioned the full helmet, which extends coverage to the chin.

However, he stressed that helmets permitted in Tanzania must cover the head down to the chin, and both helmet types must fit securely to avoid coming off during an accident.

He explained that helmets covering the ears have a strap underneath to ensure they remain in place.

"The other type covers the chin directly, meaning when you fasten it, it grips the chin. A person can avoid head injuries if they wear the helmet correctly and use the right type of helmet," he said.

"All road products, including speed bumps, road signs, and asphalt used in construction, are

regulated by TBS. This highlights TBS's crucial role in road safety," he said.

He said they used the event to educate the public, emphasizing, among other things to ensure that all vehicles entering the country are safe and significantly contribute to road safety.

TBS embarks on developing AI safety, security standards

By Rhoda Mayungu

The Tanzania Bureau of Standards (TBS) has embarked on developing standards to address safety and security issues associated with Artificial Intelligence (AI).

Speaking on during Annual Engineers' Day, Eng. Mohamed Kaila emphasized that AI represents the future trajectory of global technological advancements and that TBS is committed to ensuring consumer safety.

"This year's celebration is unique because we are showcasing how we are prepared to uphold the quality of all products including those used in engineering projects," Kaila said.

He highlighted that this year's Engineers' Day theme centres around artificial intelligence and that TBS engineers have proactively begun developing standards to manage the associated safety and security concerns.

Mr. Kaila also noted that TBS has made substantial investments in the state-of-the-art equipment for product quality testing.

He provided examples of these investments, including the solar simulator machine capable of testing various types of solar panels without the need for sunlight, which enhances the accuracy and reliability of the tests; and hydrostatic pressure testing machine capable of testing plastic pipes with a diameter from 12 mm to 800 mm.

"As TBS, we are well-prepared and extend an invitation to engineers and consultants to utilize our laboratories for testing the quality of their products. This will ensure that when these products are used in various projects, their performance will meet expectation," he added.

Additionally, Mr. Kaila emphasized TBS's readiness to collaborate with contractors, engineers, and manufacturers in the development of engineering standards.

He also encouraged engineers to adhere to national standards developed by the Bureau in collaboration with various stakeholders, to ensure consistency and excellence across the industry.

The ongoing development of AI standards is part of TBS's broader commitment to advancing technology while safeguarding public interests.

By addressing emerging challenges and fostering collaboration, TBS aims to support the safe and effective integration of AI technologies into various sectors.

TBS Quality Assurance Officer, Eng. Evance Jeremia, educates engineers during the 21st Annual Engineers Day 2024 at Mlimani City, Dar es Salaam.

Jafo urges producers to prioritize standards

By Deborah Haule

The government has called on producers in the country to prioritize standards as a key strategy to enhance the competitiveness of locally-made products in domestic and global markets.

Speaking at the World Quality Day celebrations in Dar es Salaam recently, the Minister for

Industry and Trade, Hon. Dr. Selemani Jafo said by maintaining quality, locally manufactured products will become competitive in regional and international markets including Europe, India and China.

The Minister highlighted that TBS initiatives have enabled local companies to improve their standards and access wider markets adding that Tanzania is highly regarded for producing internationally compliant products.

“Producers must ensure their production adheres to standards to add value to our products for global markets while doing justice to our nation and consumers,” he urged.

Dr. Jafo praised TBS for its role in upholding standards and recognized companies excelling in quality enhancement stating that their achievements demonstrate the value of self-promotion and commitment to excellence.

He noted Tanzania’s vast opportunities with a population exceeding 62 million, and its membership in regional blocs like the East African Community (EAC), the Southern African Development Community (SADC) and the African Continental Free Trade Area.

For her part, the TBS Director General Dr. Ashura Katunzi, explained that the World Quality Day celebrations align with the Quality Week, observed in November every year, during which TBS educates the public on quality issues.

“This year’s theme, ‘From Compliance to Performance,’ underscored the importance of going beyond adherence to standards by implementing them in every aspect of business operations,” said Dr. Katunzi.

She applauded the government’s efforts under President Samia Suluhu Hassan’s leadership in building a competitive industrial and trade sector and enabling local products to compete globally.

“These efforts ensure that our products and services remain competitive, especially when products from other countries are allowed into our markets,” she said.

The event included the presentation of national quality awards to winners of the fifth (2024) season, celebrating excellence in quality adherence and innovation.

The winners of the best company of the year award for big enterprises was Said Salim Bakhresa Company Limited, followed by Kilombero Sugar Company Limited (runner-up) and Raphael Logistics (T) Limited (second runner-up); while CAPS Limited was nominated the best company of the year under SMEs category, followed by Zaidat Products (runner-up) and Simba Pipes Industries Limited (second runner-up). Meanwhile, the best product of the year award for big enterprises went to Brown Sugar produced by Kilombero Sugar Company Limited. For SMEs, the award for the best product of the year was won by Coconut Butter Petroleum Jelly produced by Zaidat Products, followed by HDPE Pressure Pipe for Buried Application manufactured by Simba Pipes Industries Limited and Supa Sembe processed by Mwangaza.

The award for the best service of the year for big enterprises was taken by Raphael Logistics while Ampola Tasakhta Hospital came out as runners-up. For SMEs, the best service of the year award was taken by CAPS Limited. Meanwhile, Zaidat Products became the winner of the best seller of the year (international) award for SMEs. Likewise, Prof. Bendantunguka Phillibert Tiisekwa won the award for the best individual who did well on issues related to quality, followed by Mr. Idrissa Ali Mussa (runner-up) and Mr. Hafidh Mohamed Salim (second runner-up).

Minister for Industry and Trade, Hon. Dr. Selemani Jafo (MP) addresses participants during the 2024 World Quality Day celebrations in Dar es Salaam.

TBS urges farmers to adopt best agricultural practices

By Deborah Haule

Farmers in the country have been urged to adopt best agricultural practices to combat food-borne diseases with a particular focus on reducing contamination risks.

Senior TBS Quality Assurance Officer, Mr. Kaiza Kilango highlighted the importance of hygiene, effective crop management and safe handling techniques at a training session for farmers in Kilosa, Morogoro Region, recently.

“By prioritizing these practices, farmers can safeguard their livelihoods and protect consumer health,” he stated.

This initiative aims to cultivate a culture of safety and quality within the agricultural sector, ensuring that Tanzanians produce meets the requirements of both national and international standards. Key practices recommended by Mr. Kilango include timely land preparation, using quality seeds, appropriate planting and spacing, proper fertilization and harvesting at the right time.

He warned against placing harvested crops on the ground where fungi can thrive, advising, instead, drying of crops on raised platforms and transporting them carefully to avoid moisture exposure, which can lead to issues like aflatoxin contamination.

Furthermore, Mr. Kilango stressed the need for protective gear against unpredictable rainfall during harvesting, especially given the challenges posed by climate change.

Once crops such as maize and groundnuts are brought home, they should be dried on tarpaulins or raised platforms and processed using machines that minimize breakage, as broken grains are more prone to contamination, the expert explained.

“Proper storage is crucial. Once adequately dried, maize should be stored in pest-resistant bags or treated with approved insecticides to prevent moisture buildup,” said the Senior Quality Assurance Officer, further recommending sorting out of any maize showing signs of aflatoxin contamination during processing.

“If we implement these measures effectively, we will significantly reduce, if not eliminate, aflatoxin and other foodborne challenges in our country,” he concluded.

On his part, the TBS Senior Quality Assurance Officer Mr. Gerald Magola noted that farmers from 15 out of 40 wards in Kilosa District, which produce abundant maize and groundnuts have received training on avoiding foodborne diseases like aflatoxins.

This effort aims to help communities produce safe crops and access markets both locally and internationally, he said, adding that similar training sessions have been conducted in other districts, including Itilima in Simiyu and Urambo in Tabora as part of a broader initiative to enhance food safety across the country.

TBS Senior Quality Assurance Officer, Mr. Kaiza Kilango educates farmers in Kilosa on best agricultural practices.

ARSO technical committee advised to observe standardization guidelines

By Neema Mtemvu

The African Organization for Standardization (ARSO) Technical Committee for Health Services has been urged to observe all the guidelines on preparing standards that will boost African economies.

This was said by the Trade Development Director of the Ministry of Industry and Trade, Mr. Sempeho Manongi, when opening the meeting of the Technical Committee which was hosted by Tanzania through the Tanzania Bureau of Standards (TBS).

“Committee members should take an active part in the discussions so as to improve health services standards to ensure that people have access to quality health services in the continent,” he said.

He said consumers of health products and services are the main producers and service providers of health services and therefore have a huge contribution to the African economies.

“Harmonization of the African standards will spur businesses among countries without barriers, thus penetrating huge global markets,” he said.

On his part, the ARSO Secretary General, Dr. Hermogene Nsengimana said the meeting was of paramount importance for setting and improving health sector standards in the continent.

He thanked experts from various African countries for taking part in the meeting with the ultimate goal of improving health services standards in the continent.

“We have an obligation to make huge changes in the life of the people through standards reflected in the quality health services,” he said, adding that the continent faces face many challenges related to issues of quality, safety and availability of health services.

Dr. Nsengimana said experts have the primary objective to ensure that strong standards systems are put in place as a way to address the challenges facing the delivery of health services.

The ARSO Technical Committee for Health Services harmonizes standards in the field of healthcare organization management including classification, terminology, nomenclature, informatics, management practices and metrics that comprise the non-clinical operations in healthcare entities. The ARSO Member States participating in the committee are Burkina Faso, Cameroon, Chad, Ghana, Egypt, Ethiopia, Kenya, Malawi, Niger, Nigeria, Rwanda, South Africa, South Sudan, Sudan, Tanzania, Togo, Uganda and Zimbabwe and is chaired by Dr. Ahmed Adel Elsayed Abdelgawad from Egypt.

The Director of Trade Development of the Ministry of Industry and Trade, Mr Sempeho Manongi (fourth left, seated) poses with members of the ARSO Technical Committee on Health Services during a meeting held in Dar es Salaam. Also present are the Secretary General of the African Organization for Standardization, ARSO, Dr. Hermogene Nsengimana (third right, seated) and the TBS Director General, Dr. Athuman Ngenya (fourth left, seated).

"Apply correct measurements to protect public health"

By Mussa Luhombero

Tanzania Bureau of Standards (TBS) has called on the need for applying correct measurements in various sectors of the economy to protect health of consumers and boost economic development.

The Chairman of the TBS Board of Directors Prof. Othman Chande Othman made the call during the World Metrology Day held nationally in Mbeya Region.

"There is need for users of measurements in various sectors to upskill their knowledge with latest technology to ensure that they provide correct results," he said.

He said users should develop deep and correct understanding of the measurement equipment as a way to address climate change challenges, growth of technology and economic development.

He said correct measurements are fundamental in boosting productivity and efficiency in business.

"I call upon manufacturers, quality control authorities, hospitals, business people and the public to make correct use of measurements in order to enhance our economic environment," he said, adding that TBS has the mandate to safeguard national measurements and thus it is their obligation to make and maintain correct measurements in various sectors in the country.

On his part, the Acting TBS Director of Testing and Metrology Services, Mr. Ridhiwan Matange said the commemoration of the World Metrology Day reminds the public on the significance of correct measurements in day to day life.

He said TBS through its metrology laboratories has the mandate to safeguard measurement standards nationally and traceability of measurements as well as representing the country in calibration services globally.

The World Metrology Day is observed on 20 May each year, celebrating the International System of Units, commemorating the signing of the Metre Convention in 1875. The theme for the 2024 World Metrology Day was "Sustainability," which was specifically designed to raise awareness on the need for accurate measurements in the development of a sustainable global economy and environment.

Food safety:
prepare for
The unexpected

Standardization Matters

a) Finalized standards

During the financial year 2023/2024, a total number of 1,174 National (Tanzania) standards were finalized in nine (9) different standardization sectors namely Agriculture and Food; Chemical and Medical Devices; Electro-technical; Mining and Minerals; Textile and Leather; Mechanical and Metallurgy Engineering; Environmental Management; Building and Civil Engineering; and General Techniques.

Under the Agriculture and Food Sector, 386 standards were finalized in various fields, including food hygiene and safety management; labelling, packing and packaging; general sampling and test methods; fats and oils; foods additives; nutrition and foods for special dietary uses; spices, culinary herbs and condiments; microbiology; animal feeding stuffs; fertilizer and soil conditioners; biotechnology; processed fruits and vegetables; alcoholic and non-alcoholic beverages; bakery and confectioneries; cereal, pulses and legumes; sugar and honey; tobacco and its products; meat, poultry, eggs and their products; fish and fish products; coffee and its products; fresh fruits and vegetable products; and cocoa and cocoa products.

Under the Chemical and Medical Devices Sector, 170 standards were finalized in various fields, including soap and detergents; cosmetics and related products; glass products; gases; stationery and paper products; plastic and plastic products; paints and varnishes; rubber and rubber products; petroleum and petroleum products; pharmaceuticals; lubricants and oils products; housekeeping, entertainment and sports equipment; and medical devices.

Under the electro-technical standardization sector, 131 standards were finalized in various fields, namely electrical equipment; alarm and electronic security systems; and communication equipment. Likewise, 37 standards were finalized in various fields under the Mining and Minerals Sector, including exploration; solid mineral fuels and related products; mining and earth moving equipment; ores and concentrates; jewelry, lapidary, gemstones and precious metals; and minerals processing and equipment.

Moreover, during the period under review, 94 standards were finalized in the various fields under the Textile and Leather Sector, including apparel; sampling procedure and test methods; yarns and twines; hospital textiles; mechanical contraceptives; leather and leather products; and technical textiles; while 97 standards were finalized in the various fields under the Mechanical and Metallurgy Engineering Sector, namely basic standards; metals and structures; automotive components; farm implements and agricultural equipment; and pumps and flow measurement.

Under the Environmental Management Sector, 70 standards were finalized in various fields, namely waste water; air quality; noise and vibration; radiation; and solid waste. Likewise, 116 standards were finalized under the Building and Civil Engineering Sector. The fields under which the projects were initiated are aggregates, sand and concrete; masonry; cement, lime and clay products; sawn timber, sawn logs and wood based components; sanitation structures and sanitary appliances; and doors and windows. Moreover, 73 standards were finalized in various fields under General Techniques, which cuts across various sectors. The fields under which the projects were initiated are quality management and quality assurance; packaging; and tourism and related services.

b) New projects

During the financial year 2023/2024, a total number of 709 standardization projects were initiated in nine (9) different standardization sectors namely Agriculture and Food; Chemical and Medical Devices; Electro-technical; Mining and Minerals; Textile and Leather; Mechanical and Metallurgy Engineering; Environmental Management; Building and Civil Engineering;

and General Techniques.

Under the Agriculture and Food Sector, 189 projects were initiated in various fields, namely food hygiene and safety management; labelling, packing and packaging; general sampling and test methods; fats and oils; foods additives; nutrition and foods for special dietary uses; spices, culinary herbs and condiments; microbiology; animal feeding stuffs; fertilizer and soil conditioners; biotechnology; processed fruits and vegetables; alcoholic and non-alcoholic beverages; bakery and confectioneries; cereal, pulses and legumes; sugar and honey; tobacco and its products; meat, poultry, eggs and their products; fish and fish products; coffee and its products; fresh fruits and vegetable products; and cocoa and cocoa products.

Under the Chemical and Medical Devices Sector, 137 standardization projects were initiated in various fields, namely soap and detergents; cosmetics and related products; glass products; gases; stationery and paper products; plastic and plastic products; paints and varnishes; rubber and rubber products; petroleum and petroleum products; pharmaceuticals; lubricants and oils products; housekeeping, entertainment and sports equipment; and medical devices.

Under the electro-technical standardization sector, 38 standardization projects were initiated in various fields, namely electrical equipment; alarm and electronic security systems; and communication equipment. Likewise, 34 standardization projects were initiated in various fields under the Mining and Minerals Sector, namely exploration; solid mineral fuels and related products; mining and earth moving equipment; ores and concentrates; jewelry, lapidary, gemstones and precious metals; and minerals processing and equipment.

Moreover, during the period under review, 34 standardization projects were initiated in the various fields under the Textile and Leather Sector, namely apparel; sampling procedure and test methods; yarns and twines; hospital textiles; mechanical contraceptives; leather and leather products; and technical textiles; while 105 standardization projects were initiated in the various fields under the Mechanical and Metallurgy Engineering Sector, namely basic standards; metals and structures; automotive components; farm implements and agricultural equipment; and pumps and flow measurement.

Under the Environmental Management Sector, 57 standardization projects were initiated in various fields, namely waste water; air quality; noise and vibration; radiation; and solid waste. Likewise, 49 standardization projects were initiated under the Building and Civil Engineering Sector. The fields under which the projects were initiated are aggregates, sand and concrete; masonry; cement, lime and clay products; sawn timber, sawn logs and wood based components; sanitation structures and sanitary appliances; and doors and windows. Moreover, 66 standardization projects were initiated in various fields under General Techniques, which cuts across various sectors. The fields under which the projects were initiated are quality management and quality assurance; packaging; and tourism and related services.

c) Gazetted standards

During the year 2024, the following Tanzania Standards were gazette by the Minister for Industry and Trade as required by law, ready for use by stakeholders:

i) Government Notice No. 190 Published On 22/03/2024

- **Chemical Standards**

1	TZS 3293:2022/ISO 3585:1998	Borosilicate glass 3.3 - Properties	Compulsory
2	TZS 3294:2022/ISO 1769:1975	Laboratory glassware - Pipettes - Color coding	Compulsory
3	TZS 3300:2022/ISO 384:2015	Laboratory glass and plastics ware - Principles of design and construction of volumetric instruments	Compulsory
4	TZS 3301:2022/ISO 383:1976	Laboratory glassware -Interchangeable conical ground joints	Compulsory
5	TZS 3302:2022/ISO 835:2007	Laboratory glassware - Graduated pipettes	Compulsory
6	TZS 3303:2022/ISO 3819:2015	Laboratory glassware – Beakers	Compulsory
7	TZS 3304:2022/ISO 648:2008	Laboratory glassware - Single-volume pipettes	Compulsory
8	TZS 3305:2022/ISO 4788:2005	Laboratory glassware -Graduated measuring cylinders	Compulsory
9	TZS 3325:2022/ISO 19378:2003	Lubricants, industrial oils and related products (class L) - Machine-tool lubricants	Compulsory
10	TZS 3326:2022/ISO 24254:2007	Lubricants, industrial oils and related products (class L) - Family E (internal combustion engine oils) -Specifications for oils for use in four-stroke cycle motorcycle gasoline engines and associated drivetrains (categories EMA and EMB)	Compulsory
11	TZS 33271:2022/ ISO 65211:2019	Lubricants, industrial oils and related products (Class L) - Family D (compressors) - Part 1: Specifications of categories DAA and DAB (lubricants for reciprocating and drip feed rotary air compressors)	Compulsory
12	TZS 33283:2022/ ISO 65213:2019	Lubricants, industrial oils and related products (Class L) - Family D (compressors) — Part 3: Specifications of categories DRA, DRB, DRC, DRD, DRE, DRF and DRG (lubricants for refrigerating compressors)	Compulsory
13	TZS 33293:2022/ ISO 67433:2003	Lubricants, industrial oils and related products (class L) - Classification - Part 3: Family D (Compressors)	Compulsory
14	TZS 33091:2022/ ISO 58321:2016	Implants for surgery - Metallic materials - Part 1: Wrought stainless steel	Compulsory
15	TZS 33092:2022/ ISO 58322:2018	Implants for surgery - Metallic materials - Part 2: Unalloyed titanium	Compulsory

16	TZS 33093:2022/ ISO 58323:2021	Implants for Surgery-Metallic materials-part 3: Wrought Titanium 6-Aluminium 4Vanadium alloy	Compulsory
17	TZS 33094:2022/ ISO 58324:2014	Implants for surgery-Metallic materials-Part 4: Cobalt-Chromium Molybdenum casting alloy	Compulsory
18	TZS 33095:2022/ ISO 58325:2022	Implants for Surgery-Metallic Materials-Part 5: Wrought Cobalt-Chromium-Tungsten-Nickel alloy	Compulsory
19	TZS 33096:2022/ ISO 58326:2022	Implants for Surgery-Metallic Materials-Part 6: Wrought Cobalt-Nickel-Chromium Molybdenum alloy	Compulsory
20	TZS 33097:2022/ ISO 58327:2016	Implants for Surgery-Metallic Materials-Part 7: Forgeable and cold-formed Cobalt Chromium-Nickel-Molybdenum-Iron alloy	Compulsory
21	TZS 33099:2022/ ISO 58329:2019	Implants for surgery-Metallic materials-Part 9: Wrought high nitrogen stainless steel	Compulsory
22	TZS 3309 11:2022/ISO 583211:2014	Implants for Surgery-Metallic Materials-Part 11: Wrought Titanium 6-Aluminium 7Niobium alloy	Compulsory
23	TZS 3309- 12:2022/ISO 583212:2019	Implants for Surgery-Metallic Materials-Part 12: Wrought-Cobalt-Chromium-Molybdenum alloy	Compulsory
24	TZS 3309- 14:2022/ISO 583214:2019	Implants for Surgery-Metallic Materials-Part 14: Wrought Titanium 15-Molybdenum 5Zirconium 3-Aluminium alloy	Compulsory
25	TZS 3310- 1:2022/ISO 116071:2019	Packaging for terminally sterilized medical devices-Part 1: Requirements for materials, sterile barrier systems and packaging systems	Compulsory
26	TZS 33111:2022/ISO 68921:2019	Metallic materials-Tensile testing-Part 1: Method of test at room temperature	Compulsory
27	TZS 3312:2022/ISO 14971:2019	Medical devices-Application of risk management to medical devices	Compulsory
28	TZS 3313:2022/ISO 15675:2016	Cardiovascular implants and artificial Organs-Cardiopulmonary bypass systems-Arterial blood line filters	Compulsory
29	TZS 3314:2022/ISO 14155:2020	Clinical investigation of medical devices for human subjects - Good clinical practice	Compulsory
30	TZS 3315:2022/ISO 14630:2012	Non-active surgical implants-General requirements	Compulsory

- **Electrical Engineering Standards**

S/N	TZS NUMBER	TITLE	CATEGORY
1	TZS 3290:2022/ IEC 60507:2013	Artificial pollution tests on high-voltage ceramic and glass insulators to be used on a.c. systems	Compulsory
2	TZS 3286-8:2022/IEC 600998:2017	Surge arresters - Part 8: Metal-oxide surge arresters with external series gap (EGLA) for overhead transmission and distribution lines of a.c. systems above 1 kV	Compulsory
3	TZS 3291-1:2022/IEC 608311:2014	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1 000 V - Part 1: General - Performance, testing and rating - Safety requirements - Guide for installation	Compulsory
4	TZS 3291-2:2022/IEC 608312:2014	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1 000 V - Part 2: Ageing test, self-healing test and destruction test	Compulsory
5	TZS 1628-11:2022/IEC 6205211:2020	Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment	Compulsory
6	TZS 1628-21:2022/IEC 6205321:2020	Electricity metering equipment - Particular requirements - Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)	Compulsory
7	TZS 3284111:2022/ IEC 62271-111:2019	High-voltage switchgear and control gear - Part 111: Automatic circuit reclosers for alternating current systems up to and including 38 kV	Compulsory

- **Environmental Standards**

1	TZS 2500-2:2022/ISO 146882:2017	Geotechnical investigation and testing - Identification and classification of soil - Part 2: Principles for a classification	Compulsory
2	TZS 3322:2022	Decentralized wastewater treatment systems - General tolerance limits to the environment	Compulsory
3	TZS 3173:2022	Fecal sludge management - Permissible limits for use and disposal	Compulsory
4	TZS 3324:2022/ ISO 7205:1986	Radionuclide gauges - Gauges designed for permanent installation	Compulsory
5	TZS 3323:2022/ ISO 2919:2012	Radiological Protection -Sealed radioactive sources -General requirements and classification	Compulsory

ii) Government Notice No. 191 Published On 22/03/2024

- **Chemical Standards**

1	TZS 3476-1	Plastic sanitary appliances – Specification-Part 1: Squatting pan	Compulsory
2	TZS 3476-2	Plastic sanitary appliances – Specification-Part 2: Sitting pan.	Compulsory
3	TZS 1075-2/ISO 7203- 2:2019	Fire extinguishing media – Foam concentrates - Part 2: Specification for medium- and high-expansion foam concentrates for top application to water-immiscible liquids (1st Edition)	Compulsory
4	TZS 1075-3/ISO 7203- 3:2019	Fire extinguishing media – Foam concentrates - Part 3: Specification for low-expansion foam concentrates for top application to water-miscible liquids (1st Edition)	Compulsory
5	TZS 3477	Hand wash Kit – Specification	Compulsory
6	TZS 868	Sodium dichloroisocyanurate-Specification	Compulsory
7	TZS 3448	Chemicals used for treatment of water intended for human consumption – Aluminum Sulfate	Compulsory
8	TZS 3449	Black lead pencil – Specification	Compulsory
9	TZS 3450	Bamboo drinking straw - Specification	Compulsory
10	TZS 3451/ISO 22843:2020	Rubber bands – General requirements and test methods	Compulsory
11	TZS 3452	Molded rubber heels and soles - Specification	Compulsory
12	TZS 3398	Face packs - Specification	Compulsory
13	TZS 1080/ISO 7202:2018	Fire extinguishing media - Powder (2nd Edition)	Compulsory
14	TZS 1081/ISO 3941:2007	Classification of fire (2nd Edition)	Compulsory
15	TZS 1075-1/ISO 7203- 1:2019	Fire extinguishing media – foam concentrate - Part 1: Specification for low expansion concentrates for top application to water-immiscible liquids (2nd Edition)	Compulsory
16	TZS 3400	Shoe cream – Specification	
17	TZS 3401	Surface polish – Specification	
18	TZS 3523	Plastic films for laminations	
19	TZS 3525	Plastics- Thermoplastic silage films and tubes- Specification	

- **Food and Agriculture Standards**

S/N	TZS NUMBER	TITLE	CATEGORY
1	TZS 3335	Packaging materials and articles in contact with food – General requirements	Compulsory

2	TZS 3383/ISO 11163:1995	Dried basil (Ocimum basilicum L.) - Specification	Compulsory
3	TZS 3393	Cassava sorghum composite flour - Specification	Compulsory
4	TZS 3394	Orange fleshed sweet potato flour - Specification	Compulsory
5	TZS 3395	Orange fleshed sweet potato, sorghum and soya compositeflour- Specification	Compulsory
6	TZS 3391	Ginger garlic Paste - Specification	Compulsory
7	TZS 3392	Chili Oil – Specification	Compulsory
8	TZS 2786	Ginger Paste - Specification	Compulsory
9	TZS 2685	Garlic paste - Specification	Compulsory
10	TZS 3390	Spice paste - Specification	Compulsory
11	TZS 831	Brown Sugar- Specification	Compulsory
12	TZS 2083	Icing Sugar – Specification	Compulsory
13	TZS 3471	Spiced Honey-Specification	Compulsory
14	TZS 1578	Sunflower seeds for oil extraction - Specification	Compulsory
15	TZS 3419	Pumpkin seeds Flour – Specification	Compulsory
16	TZS 3421	Mustard seeds for oil extraction - Specification	Compulsory
17	TZS 3422	Raw Walnut kernels - Specification	Compulsory
18	TZS 3409	Coffee drinks - Specification	Compulsory
19	TZS 3608	Creamer - Specification	Compulsory
20	TZS 3518	Asparagus - Specification and test methods	Compulsory
21	TZS 312	Instant tea – Specification	Compulsory
22	TZS 3498	Flavoured black tea – Specification	Compulsory
23	TZS 839	Green tea - Specification	Compulsory
24	TZS 3500	Tea trade - glossary of terms	Compulsory
25	TZS 352	Black tea - Specification	Compulsory
26	TZS 3504	Green tea - Vocabulary	Compulsory
27	TZS 3478	Crystallized ginger - Specification	Compulsory

- **Electrical Engineering Standards**

1	TZS 3429/ISO/IEC24745:2011	Information technology - Security techniques – Biometric information protection	Compulsory
2	TZS 3432-1/ISO/IEC 14443-1:2018	Cards and security devices for personal identification - Contactless proximity objects - Part 1: Physical characteristics	Compulsory
3	TZS 3577-1	Hybrid telecommunication cables - Part 1: Generic specification	Compulsory

4	TZS 3578-6	Connectors for electrical and electronic equipment - Part 6: Detail specification for 2-way and 4-way (data/power), shielded, free and fixed connectors for power and data transmission with frequencies up to 600 MHz	Compulsory
5	TZS 3579	DC Power supply for notebook computers	Compulsory
6	TZS 3581	Set Top Box specifications for digital terrestrial television (DVB - T2)	Compulsory
7	TZS 3582-1	Mobile Handsets - Part 1: Safety Requirements	Compulsory
8	TZS 1953-23	Information technology equipment - Safety - Part 23: Large data storage equipment	Compulsory
9	TZS 3588-1	Fixed capacitors for use in electronic equipment - Part 1: Generic specification	Compulsory
10	TZS 3595-1/IEC 62670-1:2013	Photovoltaic concentrators (CPV) - Performance Testing-Part 1: Standard conditions	Compulsory
11	TZS 1952-7-4/IEC 62257-7-4:2019	Recommendations for renewable energy and hybrid systems for rural electrification- Part 7-4: Generators- Integration of solar with other forms of power generation within hybrid power systems	Compulsory
12	TZS 3598-1/IEC 61400-1:2019	Wind energy generation systems- Part 1: Design requirements	Compulsory
13	TZS 3598-2/IEC 61400-2:2013	Wind turbines - Part 2: Small wind turbines	Compulsory
14	TZS 3598-4/IEC61400-4:2012	Wind turbines -Part 4: Design requirements for wind turbines gearboxes	Compulsory
15	TZS 3598-5/IEC 61400-5:2020	Wind energy generation systems- Part 5: Wind turbines blades	Compulsory
16	TZS 3598-6/IEC 61400-6:2019	Wind energy generation systems- Part 6: Tower and foundation design requirements	Compulsory
17	TZS 3595-2/IEC 62670-2:2015	Photovoltaic concentrators (CPV) -Performance Testing- Part 2: Energy measurement	Compulsory
18	TZS 3599-1/IEC 60745-1:2006	Hand-held motor-operated electric tools - Safety - Part 1: General requirements.	Compulsory

19	TZS 3599-2-1/IEC 60745-2-1:2003+AMD1:2008	Hand-held motor-operated electric tools - Safety - Part 2-1: Particular requirements for drills and impact drills.	Compulsory
20	TZS 3599-2-3/IEC 60745-2-3:2006+AMD1:2010+AMD2:2012	Hand-held motor-operated electric tools - Safety - Part 2-3: Particular requirements for grinders, polishers and disk-type sanders.	Compulsory
21	TZS 1223-4-1/IEC 60947-4-1:2018	Low-voltage switchgear and control gear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters.	Compulsory
22	TZS 448-2-100/IEC 60335-2-100:2002	Household and similar electrical appliances – Safety – Part 2-100: Particular requirements for handheld mains operated garden blower, vacuums and blower vacuums.	Compulsory
23	TZS 448-2-31/IEC 60335-2-31:2012+AMD1:2016+AMD2:2018	Household and similar electrical appliances - Safety - Part 2-31: Particular requirements for range hoods and other cooking fume extractors.	Compulsory
24	TZS 3599-2-2/IEC 60745-2-2:2003+AMD1:2008	Hand-held motor-operated electric tools - Safety - Part 2-2: Particular requirements for screwdrivers and impact wrenches.	Compulsory

- **Environmental Standards**

1	TZS 3361-4/ISO 24516-4:2019	Guidelines for the management of assets of water supply and waste water systems - Part 4: Waste water treatment plants, sludge treatment facilities, pumping stations, retention and detention facilities.	Compulsory
2	TZS 3362-1	On-site non-potable water systems. Part 1: Systems for the use of rainwater	Compulsory
3	TZS 3363-2	On-site non-potable water systems. Part 2: Systems for the use of treated grey water	Compulsory
4	TZS 3364-2	Products used for the treatment of water intended for human consumption - Granular activated carbon - Part 2: Reactivated granular activated carbon.	Compulsory
5	TZS 3364-1	Products used for the treatment of water intended for human consumption - Granular activated carbon - Part 1: Virgin granular activated carbon	Compulsory

- **Mechanical Engineering Standards**

1	TZS 11	Cold drawn mild steel wire for general engineering purposes - Specification.	Compulsory
2	TZS 948	Metal roofing tiles - Specification	Compulsory
3	T Z S 9 5 5 / I S O 4990:2015	Steel castings - General technical delivery requirements	Compulsory
4	TZS 2891	Stainless Steel Cookware - Specification	Compulsory

5	TZS 3332/EAS 196:2021	High-Strength Low-Alloy (HSLA) steel for hot rolled sheet and cold rolled sheet — Specification	Compulsory
6	TZS 3331/ISO 404:2013	Steel and steel products - General technical delivery requirements.	Compulsory
7	TZS 3330-2/ISO 3834-2:2021	Quality requirements for fusion welding of metallic materials - Part 2: Comprehensive quality requirements	Compulsory
8	TZS 3330-3/ISO 3834-3:2021	Quality requirements for fusion welding of metallic materials - Part 3: Standard quality requirements.	Compulsory
9	TZS 3330-4/ISO 3834-4:2021	Quality requirements for fusion welding of metallic materials - Part 4: Elementary quality requirements	Compulsory
10	TZS 3339/ISO 9905:1994	Technical specifications for centrifugal - Pumps Class I.	Compulsory
11	TZS 3340/ISO 5199:2002	Technical specifications for centrifugal - Pumps Class II.	Compulsory
12	TZS 3341/ISO 9908:1993	Technical specifications for centrifugal - Pumps Class III.	Compulsory
13	TZS 3338/ISO 14847:1999	Rotary positive displacement pumps — Technical requirements	Compulsory
14	TZS 3337/ ISO16330:2003	Reciprocating positive displacement pumps and pumps units - Technical requirements.	Compulsory
15	TZS 3336/ISO 15873:2002	Irrigation equipment - Differential pressure Venturitype liquid additive injectors.	Compulsory
16	TZS 1307/ISO 11439:2013	Gas cylinders - High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles.	Compulsory

17	TZS 1187-1/ISO 15500-1:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 1: General requirements and definitions.	Compulsory
18	TZS 1187-3/ISO 15500-3:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 3: Check valve	Compulsory
19	TZS 1187-4/ISO 15500-4:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 4: Manual valve	Compulsory
20	TZS 1187-5/ISO 15500-5:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 5: Manual cylinder valve.	Compulsory
21	TZS 1187-6/ISO 15500-6:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 6: Automatic valve.	Compulsory
22	TZS 1187-7/ISO 15500-7:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 7: Gas injector	Compulsory
23	TZS 1187-8/ISO 15500-8:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 8: Pressure indicator	Compulsory
24	TZS 1187-9/ISO 15500-9:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 9: Pressure regulator	Compulsory
25	TZS 1187-10/ISO 15500-10:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 10: Gas-flow adjuster.	Compulsory

26	TZS 1187-11/ISO 15500-11:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 11: Gas/air mixer.	Compulsory
27	TZS 1187-12/ISO 15500-12:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 12: Pressure relief valve (PRV).	Compulsory
28	TZS 1187-13/ISO 15500-13:2012	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 13: Pressure relief device (PRD).	Compulsory
29	TZS 1187-14/ISO 15500-14:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 14: Excess flow valve.	Compulsory
30	TZS 1187-15/ISO 15500-15:2015	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 15: Gas-tight housing and ventilation hose.	Compulsory
31	TZS 1187-16/ISO 15500-16:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 16: Rigid fuel line in stainless steel.	Compulsory
32	TZS 1187-17/ISO 15500-17:2021	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 17: Flexible fuel line.	Compulsory
33	TZS 1187-18/ISO 15500-18:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 18: Filter.	Compulsory
34	TZS 1187-19/ISO 15500-19:2020	Road vehicles - Compressed Natural Gas (CNG) fuel system components - Part 19: Fittings.	Compulsory
35	TZS 3591 /ARS 1370:2021	Transportation of dangerous goods by road.	Compulsory

36	TZS 3594/ARS 1595:2021	Vehicle homologation.	Compulsory
37	TZS 3491-1/ISO 10721-1:1997	Steel structures - Part 1: Materials and design.	Compulsory
38	TZS 3491-2/ISO 10721-2:1999	Steel structures - Part 2: Fabrication and erection.	Compulsory
39	TZS 3489	Specification for Steel wires for staples pins and clips.	Compulsory
40	TZS 3488	Welded steel wire fabric for general use - Specification.	Compulsory
41	TZS 254	Carbon steel cast billet ingots, billets, blooms and slabs for rerolling into steel for general structural purposes - Specification.	Compulsory
42	TZS 3490	Scissors for general purposes - Specification.	Compulsory
43	TZS 3487	Steel framing members for gypsum board systems - Specification	Compulsory
44	TZS 1791-2/ISO 23551-2:2018	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 2: Pressure regulators.	Compulsory
45	TZS 1791-4/ISO 23551-4:2018	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 4: Valve proving systems for automatic shut-off valves.	Compulsory
46	TZS 1791-5/ISO 23551-5:2014	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 5: Manual gas valves.	Compulsory

47	TZS 1791-6/ISO 23551-6:2021	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 6: Thermoelectric flame supervision controls.	Compulsory
48	TZS 1791-8/ISO 23551-8:2016	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 8: Multifunctional controls.	Compulsory
49	TZS 1791-10/ISO 23551- 10:2016	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 10: Vent valves.	Compulsory
50	TZS 1791-9/ISO 23551-9:2022	Safety and control devices for gas burners and gas-burning appliances - Particular requirements - Part 9: Mechanical gas thermostats	Compulsory
51	TZS 3551/ISO 17885:2021	Plastics piping systems - Mechanical fittings for pressure piping systems - Specifications	Compulsory
52	TZS 3552-5/ISO 16486-5:2021	Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing -Part 5: Fitness for purpose of the system	Compulsory
53	TZS 3552-3/ISO 16486-3:2020	Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing -Part 3: Fittings	Compulsory

54	TZS 3552-2/ISO 16486-2:2020	Plastics piping systems for the supply of gaseous fuels - Plasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing -Part 2: Pipes.	Compulsory
55	TZS 2345-3/ISO 21138-3:2020	Plastics piping systems for nonpressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly (vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 3: Pipes and fittings with non-smooth external surface, Type B.	Compulsory
56	TZS 2345-2/ISO 21138-2:2020	Plastics piping systems for nonpressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 2: Pipes and fittings with smooth external surface, Type A.	Compulsory
57	TZS 2345-1/ISO 21138-1:2020	Plastics piping systems for nonpressure underground drainage and sewerage — Structured-wall piping systems of unplasticized poly (vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 1: Material specification and performance criteria for pipes, fittings and systems.	Compulsory

58	TZS 3546-21/ISO/TS 21364-21:2021	Domestic gas cooking appliances - Safety - Part 21: Particular requirements for gas hobs, gas grills and gas griddles.	Compulsory
59	TZS 3546-22/ISO/TS 21364-22:2021	Domestic gas cooking appliances - Safety - Part 22: Particular requirements for ovens and compartment grills.	Compulsory
60	TZS 3545	Solid biofuel - Sustainable charcoal and carbonized briquettes for household and commercial use - Specification.	Compulsory

- **Mining and Minerals Standards**

1	TZS 3343/ISO 24016:2020	Jewellery and precious metals - Grading polished diamonds - Terminology, classification and test methods.	Compulsory
2	TZS 3446	Standard Specification for Activated carbon used for precious metal recovery.	Compulsory
3	TZS 3447–1	Detonators for use in blasting operations - Part 1: Requirements for electronic initiation systems.	Compulsory
4	TZS 3447–2	Detonators for use in blasting operations - Part 2: Requirements for electric initiation systems - Shot exploder based.	Compulsory

- **Packaging Standards**

1	TZS 3526	Polyethylene terephthalate (PET) bottles for packaging liquids products –Specification.	Compulsory
2	TZS 3527-3	Packaging - Steel drums -Part 3: Inserted flange-type closure systems.	Compulsory
3	TZS 3527-2	Packaging - Steel drums - Part 2: Non-removable head drums- Specification.	Compulsory
4	TZS 3547-1	Transport packaging -reusable, rigid plastic distribution boxes - part 1: general purpose application.	Compulsory
5	TZS 3550-1	Series 1 freight containers - Specification and testing -Part 1: General cargo containers for general purposes.	Compulsory
6	TZS 3550-3	Series 1 freight containers - Specification and testing -Part 3: Tank containers for liquids, gases and pressurized dry bulk.	Compulsory
7	TZS 3556	Series 1 freight containers- Classification, dimensions and ratings.	Compulsory
8	TZS 1298	Sharp containers-specification	Compulsory
9	TZS 3527-1	Packaging -Steel drums -Part 1: Removable head (open head) drums.	Compulsory

- **Textile Standards**

1	TZS 3377	Textiles - Specification for Spun Hemp Yarn.	Compulsory
2	TZS 3379	Textiles - Polyester straps – Specification.	Compulsory
3	TZS 3382	Textiles - Specification for high tenacity polyester multifilament yarns - Yarns for fishing twines.	Compulsory
4	TZS 3560	Textiles - Woven High-Density Polyethylene/Polypropylene (HDPE/PP) Shopping bags - Specification.	Compulsory
5	TZS 3563	Textiles- Non-woven fabrics- Specification.	Compulsory
6	TZS 3522/ISO 13998:2003	Protective clothing - Aprons, trousers and vests protecting against cuts and stabs by hand knives.	Compulsory
7	TZS 3559-1	Agro textiles - Shade nets for agriculture and horticulture purposes - specification - Part 1: Shade Nets made from Tape Yarns.	Compulsory
8	TZS 3559-2	Agro textiles - Shade nets for agriculture and horticulture purposes - Specification - Part 2: Shade Nets made from Mono filament yarns	Compulsory

Quality Management Activities

a) Products and premises registration

Premises and products registration are legal requirements that must be fulfilled by all those engaged in the business of food and cosmetics, as per the Standards Act Cap. 130, with the aim of protecting public health. Pursuant to the Act, the Bureau has continued to perform products and premises registration to ensure that only safe and quality products are approved and stored in premises.

During the period of July 2023 to June 2024, a total of 2,648 food products and 723 cosmetics products were registered, making a total of 3,371 registered products. Likewise, 15,309 food premises and 3676 cosmetics premises were registered, totaling 18,985.

b) Food Risk Assessment

Food risk assessment involves evaluation of the hazards associated with food or food ingredients and assessment of potential risk to the population in order to provide scientific evidence that will facilitate formulation of appropriate risk management actions and risk communication messages intended to assure food safety and protecting public health. It forms the scientific basis and key component for effective and efficient food safety control within the Bureau.

During the financial year 2023/2024, TBS conducted two food risk assessments for pesticide residues in vegetables and safe use of food colours. Also, assessment on aflatoxin contamination was conducted under the TANIPAC Project.

c) Product certification

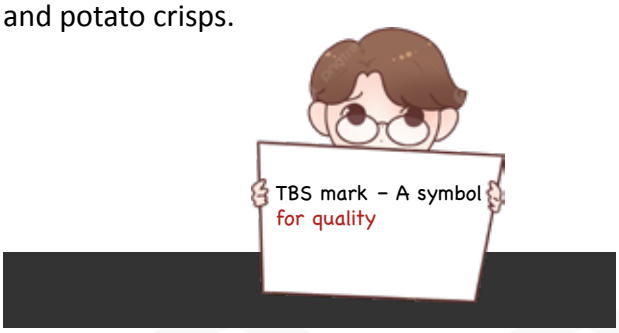
TBS oversees product certification to ensure that goods meet established quality, safety, and regulatory standards. This process not only protects consumers but also supports fair trade practices and enhances the competitiveness of Tanzanian products both locally and internationally. TBS administers several certification schemes namely the Standards Mark of Quality Certification Scheme; the Batch Certification Scheme for Imports; and the Tested Product Certification Scheme.

During the period July 2023 to June 2024, 423 standards mark licences and tested products certificates were issued to various manufacturers including small and medium scale entrepreneurs.

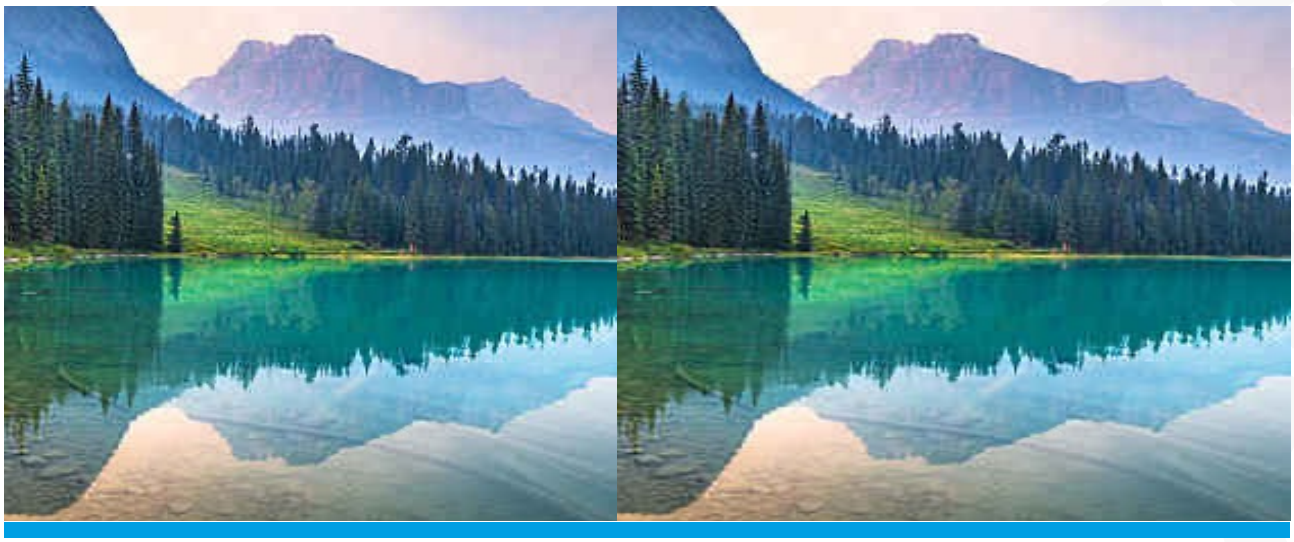
The certified products include milled rice, paper cups, chill sauce, tiles cleaner, vullucare tiles and sink, barbed wire tanzanite, barbed wire, bottled drinking water, coal for cement, roofing sheet, gin, detergent, dairy cultured milk, flour, soap bar, mattress family, honey, sanitary pads, pre-painted metal coated steel sheets and coils, sembe, cooking oil, flexible plastic packaging polythene tubes for agricultural uses/seedling, and flexible plastic packages for storing powdered soap.

Other products are pilau masala, raw cashew nuts, original perfume, non-cereal based alcoholic beverage, virgin coconut oil, milled rice, cashew kernels, plywood, milking jelly, bedsheets, retroreflective registration plate, wood polish, mild steel nail, cultured milk, exercise books, dairies sour milk, black tea, flavoured juice, corrugated medium paper, footwear, kitchen cleaner, ready to drink non-carbonated, non-alcoholic, beverage, potable spirit, roofing sheet and coconut oil.

Other products certified during the period were sanitary pad, disposable baby diapers, hair shampoo, hair creams, peanut butter, liquid soap, farm bacon, gas cooker, ginger, PVC insulated single core electrical cable, disinfectants, treated wood poles, cheddar cheese, toilet paper, maize flour, wall putty, chicken meat, carbonated soft drink, tile cleaner, polypropylene woven bags polybags, two wheeled motorcycle, palm oil, cement, brown sugar, engine coolant, pre-painted roofing sheets, lemongrass tea, royal whiskey, polyethylene tanks, rock blocks, groundnut oil and potato crisps.



International guidance launched to support organizations in navigating ESG challenges



New freely available international guidance was launched on 14th November 2024 at COP29 by the International Organization for Standardization (ISO) to better enable organizations to navigate the complex Environmental, Social, and Governance (ESG) landscape, comply with disclosure requirements and accurately measure, report and communicate their activities.

With ESG regulations reportedly having risen 155% globally in the last decade, including the EU's Corporate Sustainability Reporting Directive (CSRD), the UK's Modern Slavery Act, and the ISSB's IFRS S1 and S2 disclosure requirements, the ISO ESG Implementation Principles aim to enhance understanding, providing actionable guidance to enable more consistent reporting applicable to organizations of all sizes and sectors, from small businesses to multinational corporations including ESG consultants, academia, research institutions, and NGOs.

The principles are designed to support effective and transparent sustainability practices through a standardized structure which provides organizations with all the information needed to achieve their ESG ambitions, regardless of where they are on their journey. The document facilitates the integration of ESG principles into organizational culture, enabling a more effective system for performance and reporting.

By addressing environmental impacts (such as carbon footprinting and waste management), social considerations (like diversity and human rights), and governance practices (transparency and regulatory compliance), organizations can apply a truly holistic approach. This encourages a balanced, sustainable growth strategy, helping to accelerate progress toward a more sustainable world.

Developed through a collaborative cohort of national standards bodies including the British Standards Institution (BSI), the Standards Council of Canada (SCC), and the Brazilian Association of Technical Standards (ABNT), these principles incorporate input from over 1,900 industry experts across 128 countries. They provide a high-level structure to help organizations integrate existing ESG requirements, establish measurable Key Performance Indicators (KPIs), and assess their maturity in ESG practices.

The publication comes in the wake of enhanced scrutiny around ESG performance, and concern being voiced that ESG disclosures globally have suffered from being inconsistent and vary widely across jurisdictions, company sizes and sectors. As a result, the landscape of disclosures can make it difficult for organizations to navigate diverse frameworks, resulting in reporting inconsistencies and hindering comparability across sectors.

The ISO ESG Implementation Principles are

designed to support management of ESG performance; bolster measurement and reporting under existing disclosure frameworks to enable consistency, comparability, and reliability of ESG reporting and practices globally; facilitate interoperability by aligning with existing reporting standards, creating a harmonized approach to ESG compliance across borders; and promote global consistency, enabling clear communication of sustainability efforts worldwide.

Sergio Mujica, Secretary-General, ISO, said: "ISO's ESG implementation principles will foster a lasting culture of ESG that will bring real value to organizations, governments, investors, and consumers. These guidelines will help accelerate the adoption of sustainable business practices, which benefits diverse communities and the environment."

"Importantly, these guidelines can be used by all organizations in all sectors and could particularly benefit SMEs and organizations in developing countries. We are proud of this initiative, and to be launching it today during COP29."

"This is an important opportunity not to be missed by organizations worldwide – to engage key stakeholders, and particularly those responsible for existing and evolving voluntary and regulatory frameworks for ESG reporting and disclosure."

Susan Taylor Martin, Chief Executive, BSI, said: "As world leaders gather at COP29, there is growing recognition of the need for society to respond to global challenges like climate change and social inequality. There is no doubt that Environmental, Social and Governance reporting can be an important tool, but the complex and often-confusing reporting landscape can be a barrier to action."

"I am delighted that BSI has co-led the development of these Implementation Principles to help organizations of all types embed ESG in a measurable and consistent way. This can help society drive real change in areas including emissions, biodiversity protection, mobilizing green investments and fostering inclusivity, and ultimately can help accelerate progress towards a fair society and sustainable world."

Mario William Esper, President of ABNT, said: "ABNT is honored to contribute to the international guidelines to support organizations in addressing ESG challenges, reinforcing our commitment to sustainability and responsible governance. These guidelines provide an essential foundation for organizations to adopt structured practices, meeting global requirements and managing socio-environmental impacts."

"We are confident that this collaboration with BSI, SCC, and ISO will result in a solid foundation, enabling organizations of various sizes and sectors to contribute to a fairer, more inclusive, and environmentally responsible global economy."

"ABNT reaffirms its commitment to implementing these principles, in joint efforts that unite leaders and experts around the world for a better future."

Chantal Guay, Chief Executive Officer, SCC, said: "On a global scale, the climate crisis is amplifying existing inequalities, making it imperative to adopt effective solutions. The ISO ESG implementation principles are a key component of the comprehensive suite of climate action tools designed to address these challenges."

"Organizations of all sizes are key drivers of sustainable development. We understand that many perceive ESG integration as complex and costly. This guidance simplifies the processes for implementing ESG and complements existing standards and disclosure frameworks. This will help us all move beyond disclosure, to drive performance, and build trust in ESG information and practices."

The guidance further aligns with broader sustainability objectives, including the UN Sustainable Development Goals and ISO's commitment to climate action, enabling organizations to position themselves as sustainability leaders in alignment with global priorities (iso.org/ESGprinciples)

Carbon footprint: Measuring and reducing our environmental impact

When Sarah Chen, CEO of GreenTech Solutions, glanced at the real-time energy dashboard in her office, she couldn't help but smile. The large display showed how much renewable energy the company's new solar installation had generated that day. Like many forward-thinking business leaders, Sarah had become increasingly aware of her company's carbon footprint and its intrinsic link to energy use.

But exactly what is a carbon footprint, and how can renewable energy reshape the business landscape? We'll unpack the nuts and bolts of carbon footprints, from the greenhouse gases that make up your company's invisible trail to the innovative strategies for shrinking it. We'll explore how renewable energy is not just a feel-good option, but a smart business move that can slash emissions and boost your bottom line.

A company's carbon footprint is the total amount of greenhouse gases (primarily carbon dioxide) that its operations generate. For most businesses, a significant portion of this footprint stems from energy consumption – powering offices, running manufacturing processes and fuelling transportation fleets.

Carbon footprint examples vary widely across industries. For instance, a tech company's footprint might be dominated by data centre energy use and employee commuting; a manufacturing firm could have significant emissions from production processes and raw material transportation; while a retail chain might find its largest carbon impact comes from its supply chain and customer transportation to stores.

In summary, a company's carbon footprint comes from a blend of direct (Scope 1), indirect (Scope 2) and value chain (Scope 3) emissions. While the first two cover on-site fuel use and purchased energy, Scope 3 – encompassing suppliers, products and customers – often holds the biggest opportunity for reducing the overall carbon impact.

As businesses like GreenTech Solutions grapple with their environmental responsibilities, assessing and working to reduce their carbon footprint has become a key aspect of corporate sustainability efforts. This focus not only contributes to global climate change mitigation, but often leads to improved operational efficiency and cost savings.

Climate scientists have long emphasized the link between business operations and climate change as a unique opportunity for companies to lead in sustainability. By shifting to renewable energy and addressing their reliance on traditional energy sources, businesses can reduce regulatory pressures and compliance costs by proactively adopting greener practices; enhance supply chain resilience by mitigating disruptions caused by extreme weather events; tap into shifting consumer preferences with sustainable products that attract environmentally conscious customers; strengthen brand reputation by positioning themselves as responsible corporate citizens committed to reducing their carbon impact; make a positive impact on climate change by reducing greenhouse gas emissions; realize economic benefits through cost savings from energy efficiency and emission reduction strategies; and enhance quality of life and public health by reducing pollution and its harmful effects. (iso.org)

Setting the standard for responsible artificial intelligence

The International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU) have announced a joint effort to launch the 2025 International AI Standards Summit.

This initiative follows the adoption of the Global Digital Compact by world leaders in September, 2024, and is a direct response to a call to action by the United Nations to enhance Artificial Intelligence (AI) governance through International Standards.

This joint initiative by IEC, ISO and ITU advances the UN's framework for global governance of digital technology and AI, the Global Digital Compact. The Compact, which was adopted last month as part of the "Pact for the Future"

by world leaders convening at the 2024 UN Summit of the Future, highlights the need for increased collaboration among standards development organizations in promoting the development and adoption of interoperable AI standards that uphold safety, reliability, sustainability and human rights.

The launch of the International AI Standards Summit is a tangible example of the strength of collaboration between the three organizations, and directly answers the call to action for an AI summit outlined in the UN's recently published High-level Advisory Body report, 'Governing AI for Humanity'.

As underscored by the UN, AI is already transforming our world, and while it offers tremendous potential for good, if left ungoverned, potential opportunities may not manifest or be distributed equitably.

The International AI Standards Summit aligns with this vision and will serve as a vital platform to address the complex challenges posed by AI, ensuring that standards are developed and remain relevant to foster safe, transparent, and inclusive technologies for all.

ISO Secretary-General Sergio Mujica said there is a critical need for a collaborative approach to effective AI governance through International Standards.

"The adoption of International Standards in a coordinated way is instrumental in ensuring a future of responsible use of AI," Mr Mujica said.

"AI is revolutionizing industries, driving innovation, and building the resilient infrastructure needed to achieve sustainable development all over the world.

"International Standards lay at the heart of this transformation, helping to ensure that AI is developed, deployed and used in a responsible manner across the globe.

"ISO is committed to developing standards that advance the United Nations Sustainable Development Goals. Our ongoing cooperation with IEC and ITU reinforces this mission, including initiatives like the AI and Multimedia Authenticity Standards Collaboration, which we announced in May (2024).

"Standards can support policy goals where global governance is essential, promoting the dissemination of beneficial systems and practices and fostering the efficient development of advanced AI technologies."

By bringing together key stakeholders and experts from around the world, the summit will build a strong foundation for AI governance, advancing the work on creating global standards that promote inclusive and responsible AI development. The 2025 International AI Standards Summit will take place from 2-3 December 2025 in Seoul, hosted by the Korean Agency for Technology and Standards (KATS).

"We have a responsibility to deliver standards that build confidence in the digital world that underpins so much of our society. Our joint standardization work is already bringing benefits in terms of enhanced interoperability, trustworthiness and transparency in emerging technologies like AI. By working together, IEC, ISO and ITU can leverage their unique expertise and provide valuable insights on AI standards to help governments and policymakers make more informed governance decisions." said Philippe Metzger, IEC Secretary-General & CEO.

Seizo Onoe, Director of the ITU Telecommunication Standardization Bureau, reiterated the importance of the partnership: "ITU is proud to host the first edition of the International AI Standards Summit this week in New Delhi together with our longstanding partners IEC and ISO. We are committed to ensuring that standards support responsible AI governance. That is also the aim of our standards collaboration on AI watermarking and multimedia authenticity launched at this year's AI for Good Global Summit. IEC, ISO and ITU are now collaborating to develop an AI standards database, a key priority for the UN Secretary-General's Envoy on Technology."

The launch of the 2025 International AI Standards Summit on World Standards Day is significant. World Standards Day 2024 encourages the building of a world where resilient infrastructure, sustainable industrial growth, and cutting-edge innovation – powered by AI and supported by International Standards – can drive economic transformation, today and for future generations. (www.

worldstandardsday.org)

World-first international guidelines empower businesses and organizations to fast-track SDG success

ISO and the United Nations Development Programme (UNDP) have unveiled the world's first international guidelines to help businesses and organizations expedite their contributions to the UN Sustainable Development Goals (SDGs).

At the ISO Annual Meeting 2024 held in Cartagena de Indias, Colombia, 11-22 November 2024, the ISO/UNDP guidelines for contributing to the UN SDGs were officially released. This first publicly available document will guide organizations of all types and sizes in speeding up their response to the SDGs.

With only six years remaining, calls to intensify efforts and rapidly accelerate progress towards the SDGs are increasing. According to United Nations' The Sustainable Development Goals Report 2024, only 17% of the SDG targets are on track to being achieved globally by 2030.

The new guidelines aim to take organizations from SDG alignment to SDG action. ISO Secretary-General Sergio Mujica highlighted the importance of these guidelines in providing a common approach for both public and private sector entities to align their strategies with the SDGs and document their progress.

"These guidelines allow all types of organizations – large or small, new or well-established – to place SDGs at the core of their operations," said Mr. Mujica.

They provide practical advice for fully integrating sustainable development into all functions and investment decision-making processes.

Sergio Mujica

ISO Secretary-General

This initiative marks a significant milestone in the strategic partnership between ISO and UNDP. In September 2023, both organizations signed a landmark Statement of Intent to enhance standards initiatives that will strengthen sustainability efforts globally. The new guidelines are the first major outcome of this collaboration.

Marcos Neto, UN Assistant Secretary-General, the UNDP Assistant Administrator and Director of the Bureau for Policy and Programme Support, said that achieving the SDG targets by 2030 necessitates collective action from all sectors, including governments, civil society, the private sector, and communities. He highlighted the critical role of the new ISO/UNDP guidelines in helping organizations understand their contributions to the SDGs and how they can be most effective.

"These guidelines will unlock greater contributions to the SDG targets by aligning business purpose, strategy, and results with societal needs," said Mr. Neto.

They provide essential tools for the implementation of national SDG plans, enabling contributions from both the private sector and governments. Furthermore, they reinforce accountability for organizational impacts on people and the planet while simultaneously enhancing business performance.

Marcos Neto

UN Assistant Secretary-General
UNDP Assistant Administrator
Director of UNDP's Bureau for Policy and Programme Support

The guidelines, developed by an international group of experts brought together by ISO member for Denmark, Danish Standards, also offer a broader perspective on sustainable development. "The guidelines showcase different business models and new ways of working, both internally and externally, that will accelerate innovation and allocate resources more effectively," said Tina Helsted Vengsgaard, Director of Standardisation at Danish Standards.

By implementing the recommendations, organizations can anticipate risks and opportunities related to sustainable development earlier and manage them better.

Tina Helsted Vengsgaard

Danish Standards, Director of Standardization

Looking ahead, these guidelines are set to evolve into the first International Standard for the UN SDGs, building on the foundation laid by UNDP's SDG Impact Standards and relevant ISO standards.

As the global community races to meet the SDG targets by 2030, these new guidelines offer a practical tool for businesses and organizations to make meaningful contributions. (iso.org)

IEC and ISO launch new joint technical committee on quantum technologies

The International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO) have announced the establishment of a joint technical committee on quantum technologies, ISO/IEC JTC 3, Quantum technologies.

Quantum technologies have immense potential to address today's global challenges, so it is crucial to build a solid foundation for collaboration. International Standards play a pivotal role in laying an essential common ground to accelerate the development and adoption of quantum advancements in various industries and applications.

"Catalysing the quantum revolution requires a shared language. Standards provide the framework to turn diverse quantum efforts into a unified force, driving progress, ensuring reliability, and paving the way for a quantum future that is secure, interoperable and globally accessible," says Sergio Mujica, ISO Secretary-General.

"While standards are already being developed for some aspects of quantum technologies, there is a pressing need to have a coordinated international approach to streamline technical contributions and maximize their impact, ensuring greater coherence in the market," explains Philippe Metzger, IEC Secretary-General and CEO.

The scope of this new ISO/IEC joint technical committee is to develop standards in the field of quantum technologies, and more particularly quantum computing, quantum simulation, quantum sources, quantum metrology, quantum detectors and quantum communications. South Korea will assume the Chair position. The British Standards Institution (BSI), the IEC and ISO member for the United Kingdom, will hold the Secretariat.

"Quantum technologies can unlock solutions to address the greatest societal challenges. As the secretariat, BSI is looking forward to bringing our wealth of expertise in committee management to this, and we are committed to leading and driving the development of International Standards to guide the evolution and integration of quantum technologies, fostering innovation for the benefit of industries and society globally," says Scott Steedman, Director General, Standards, BSI, Secretariat of ISO/IEC JTC 3, Quantum technologies.

Quantum technology is the second generation of technologies that harness the power of quantum mechanics to create advanced tools and devices that promise to revolutionize how we solve complex problems and secure information across a range of sectors, including information technology, communications, healthcare, energy, trade, sustainability, education and research, ushering in a new era of technological progress while driving rapid financial growth. **(iso.org)**

ARTICLE - BENEFITS

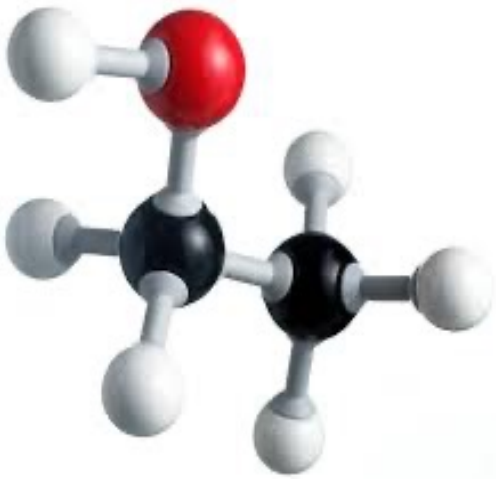
Benefits of bioethanol as a clean cooking fuel

Miraji Kambangwa

Standards Officer

Clean cooking fuels are fuels that meet specific emission rate targets and fuel recommendations to reduce indoor air pollution. Some examples of clean cooking fuels include alcohol/ethanol fuels (bioethanol) electricity, natural gas, liquefied petroleum gas (LPG) and biogas.

Clean cooking fuel is the agenda of the President of the United Republic of Tanzania, Her Excellency Dr. Samia Suluhu Hassan with the government's goal of ensuring that 80 percent of Tanzanians use clean cooking energy by 2034 to protect the environment.



Ethanol **(C_2H_5OH)**

"Ensuring clean cooking access for all in Africa needs adequate, affordable, and sustainable financing for appropriate solutions and innovations; adequate global attention; and smart policies and partnerships. Successfully advancing the clean cooking agenda in Africa would contribute towards protecting the environment, climate, health, and ensuring

Gender equality. This summit underscores our commitment to advancing this agenda and providing a framework towards universal adoption of clean cooking fuels and technologies across the continent," said H.E. Dr. Samia when addressing the summit.

Worldwide, around 2.1 billion people still cook using solid fuels (such as wood, crop waste, charcoal, coal, and dung) and kerosene in open fires and inefficient stoves [2], and it is estimated that each year, 3.2 million people die prematurely from illnesses attributable to the household air pollution caused by the incomplete combustion of solid fuels and kerosene used for cooking. Particulate matter and other pollutants in household air pollution inflame the airways and lungs, impair immune response, and reduce the oxygen-carrying capacity of the blood (WHO 2024a).

(H.E. President Samia Suluhu Hassan (3rd left) in solidarity with other leaders during the 2024 African Clean Cooking Summit (Picture by African News)

Traditional use of biomass for cooking can have harmful effects on people's health and wellbeing, and the environment, leading to increased emissions of greenhouse gases and other air pollutants, poor indoor air quality, and deforestation.

The World Health Organization (WHO) estimates that around 60 people per 100,000 in Tanzania die prematurely each year from household air pollution (HAP).

HAP is a major health hazard caused by the inefficient use of solid fuels, like wood, charcoal,

and coal, for cooking and heating homes. The smoke from these fuels can contain high levels of pollutants that are harmful to health, including small soot particles that can penetrate deep into the lungs.

HAP can cause a range of health issues, including respiratory infections — HAP almost doubles the risk of childhood lower respiratory infections (LRI) and is responsible for 44% of all pneumonia deaths in children under 5. On ischemic heart disease, HAP accounts for over a million premature deaths annually. HAP is also responsible for approximately 12% of all deaths due to stroke and also responsible for 23% of all deaths from chronic obstructive pulmonary disease (COPD) in adults in low- and middle-income countries. Moreover, household air pollution is responsible for approximately 11% of lung cancer deaths in adults. Women and children are especially vulnerable to HAP because they are often exposed to the smoke from cooking (WHO, 2024a).

Bioethanol/ethanol fuel is an alternative energy source derived from various sources such as food crops, biomass, and algae, which is converted into fuel. It has recently emerged as a valuable and widely accepted bioenergy option for clean cooking to replace charcoal (2014 WHO guidelines).

In Tanzania, ethanol fuel, also known as ethyl alcohol is one of the clean cooking fuels used as a renewable fuel. The ethyl alcohol contained in ethanol fuel is the same type of alcohol as found in alcoholic beverages.

The main difference between ethanol fuel and alcoholic beverages is that the fuel is denatured to make it unfit for human consumption. In contrast, alcoholic beverages contain pure ethanol produced when yeast and microbes ferment sugars in plants. Furthermore, ethanol fuel is denatured with a small amount of a denaturing agent, such as petroleum or gasoline, to make it undrinkable.

Women in Haiti with ethanol fuels in bottles and ethanol cook stoves (Photo credit: Project Gaia)

Benefits of bioethanol as a clean cooking fuel

Bioethanol/ethanol fuel is among the few fuels used for cooking that have the potential benefits for positive health [3], climate and environmental benefits [4], gender equality [5], increased employment opportunity, earnings, time, and fuel-saving impacts [6], alongside other wider economic and welfare implications.

- **Health impacts**

Bioethanol fuels produce low emissions when burned and offer greater health benefits that lower diseases caused by HAP. The use of bioethanol/ethanol fuel significantly reduces the negative health effects associated with open-fire cooking.

- **Environmental impacts**

The environmental impacts of cooking using bioethanol include the lowering greenhouse gases and carbon neutrality, indoor and outdoor air pollution, biodegradability, deforestation, and the provision of warmth. Burning bioethanol is widely assessed to be a carbon-neutral activity, in the sense that the amount of carbon dioxide that is emitted during combustion is the same amount emitted by plants during photosynthesis [7].

- **Economic and opportunity cost impacts**

The switching to using clean and modern energy sources for cooking has benefits beyond health

and the environment, including a wide range of economic and opportunity benefits. These include job creation, gender equality/balance, reduced inequalities, reducing rural poverty, and enhancing energy security while at the same time reducing dependency on imported fossil fuels and their associated demand for foreign reserves, as well as wider economic sector growth (e.g., in agriculture productivity and food security).

- **Contribution to SDGs**

Bioethanol as clean cooking fuel can contribute to achieving the sustainable development goals in various ways, including strengthen agriculture (2, 15), improving health (3, 11), empowering women (5,10), improve livelihoods with green jobs (1, 8), reducing carbon emissions (13) and fighting deforestation (13,15).

Sustainable Development Goals (SDGs)

Conclusion

In the performance of its functions, the Tanzania Bureau of Standards (TBS) regards the health, safety, environment, and general welfare of the people of the United Republic of Tanzania (URT) by enforcing the National Compulsory Standards, TZS 3119, Denatured ethanol for use as cooking and appliance fuel — Specification, that specifies requirements for denatured ethanol fuel (bioethanol) for use as cooking fuel and TZS 2911, Ethanol fueled cooking appliances — Specification, which stipulates the requirements for ethanol-fueled appliancfor cooking.

To align with the agenda of the President of the United Republic of Tanzania on clean cooking fuels, everyone is responsible for supporting, raising awareness, and understanding of the benefits of using more bioethanol as a domestic fuel, which results in positive impacts on human health, environment, and the country's economic development.

Reference

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ARTICLE - BLUE ECONOMY

Tanzania's blue economy: A catalyst for sustainable development

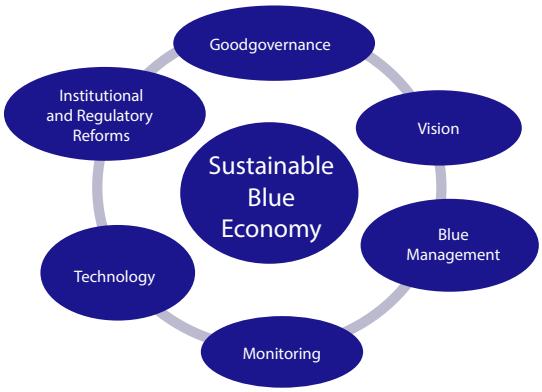
Masumbuko Noha

Standards Officer

The blue economy is a term that encompasses all economic activities related to the ocean, seas, and coasts. It includes sectors such as fisheries, aquaculture, marine tourism, renewable energy, and maritime transport. It has emerged as a promising avenue for sustainable development and poverty alleviation in Tanzania.

According to the World Bank, the blue economy is "the sustainable use of ocean resources for economic growth, job creation, and improved livelihoods, while preserving the health of the ocean ecosystem." This definition highlights the importance of balancing economic development with environmental protection.

Tanzania, with its extensive coastline and rich marine resources, possesses immense potential to harness the economic benefits of the blue economy. By leveraging its marine wealth, Tanzania can contribute significantly to the achievement of the Sustainable Development Goals (SDGs).



Six pillars of the blue economy. Source: Attri (2016), Blue economy: The past and present from the world and future directions for Thailand

The potential of Tanzania's blue economy

Tanzania's blue economy offers a diverse range of opportunities. One such opportunity is in the area of fisheries and aquaculture. The country's abundant fisheries resources can provide food security, generate employment, and contribute to export earnings. Sustainable fishing practices and aquaculture development can ensure the long-term viability of these sectors.

Tourism is another opportunity in Tanzania's blue economy. The country's pristine beaches, marine parks, and coral reefs attract millions of tourists annually. By promoting responsible tourism and investing in marine conservation, the country can capitalize on this sector while protecting its natural assets.

Maritime transport can also be exploited to build the country's blue economy. Tanzania's strategic location along major shipping routes makes it a potential hub for maritime transport. Developing modern port infrastructure and improving maritime services can enhance trade and connectivity.

Another opportunity in this aspect is renewable energy. Ocean-based renewable energy sources, such as tidal and wave power, offer a sustainable and clean energy alternative. Harnessing these resources can reduce dependence on fossil fuels and mitigate climate change.

Marine biotechnology is another opportunity that can be harnessed in blue economy. Research and development in marine biotechnology can lead to innovations in pharmaceuticals, cosmetics, and other industries which can ultimately contribute to the country's economic development.

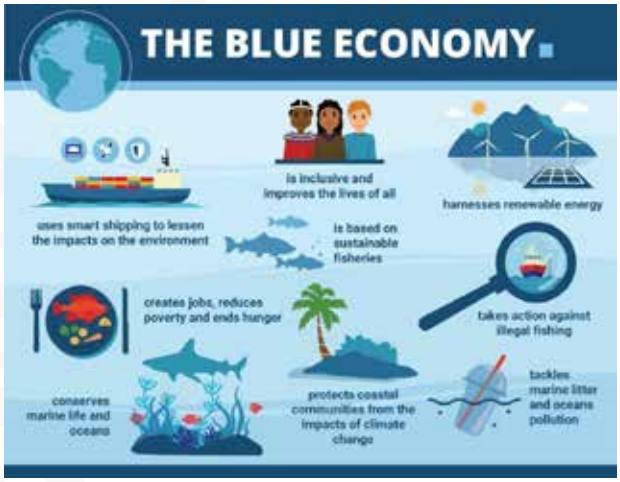
Contributions of the blue economy to the SDGs

The blue economy aligns closely with several SDGs. By creating jobs and generating income, the blue economy can help lift people out of poverty, especially in coastal communities, thus responding to SDG 1: No Poverty, while sustainable fisheries and aquaculture can contribute to food security and nutrition, thus addressing SDG 2: Zero Hunger.

Moreover, the blue economy can generate employment opportunities and promote

economic growth, thus realizing SDG 8: Decent Work and Economic Growth. Likewise, investing in marine infrastructure and promoting innovation in sectors like marine biotechnology can drive economic development, thus contributing to the realization of SDG 9: Industry, Innovation, and Infrastructure.

Furthermore, sustainable management of marine resources and conservation efforts are essential for protecting ocean ecosystems and biodiversity, in line with SDG 14: Life Below Water; whereas the blue economy can contribute to land-based conservation by reducing pressures on terrestrial ecosystems, thus realizing SDG 15: Life on Land.



Challenges and opportunities of the blue economy

Tanzania possesses a significant potential in the blue economy. However, several challenges hinder its full realization. The challenges include unsustainable fishing practices which deplete fish stocks and damage marine ecosystems; land-based pollution and plastic waste which degrade coastal environments and threaten marine biodiversity; and climate change, i.e. rising sea levels and ocean acidification which pose significant risks to coastal communities and marine ecosystems.

Despite the challenges, there are opportunities and solutions. To harness the full potential of the blue economy, Tanzania must adopt a comprehensive and integrated approach which include sustainable resource management and infrastructure development. Under this strategy, the country needs to implement effective fisheries management plans and promote sustainable aquaculture; to invest in modern ports, transportation infrastructure, and renewable energy facilities; and to utilize specified fishing equipment, such as gill nets, adhering to relevant Tanzania standards including TZS 3001/EAS, Textile — Fishing gill nets — Specification.

The country can also strengthen marine conservation efforts by establishing and managing marine protected areas; reducing pollution and mitigating climate change impacts; and adopting and implementing relevant standards, such as TZS 3042/ISO 16304, Ships and marine technology — Marine environment protection — Arrangement and management of port waste reception facilities, to improve port waste reception facilities.

Other opportunities can be tapped through research and innovation in marine biotechnology and other blue economy sectors, while enhancing cooperation with regional and international partners to address shared challenges and promote sustainable development.

By embracing the blue economy, Tanzania can create a more sustainable, prosperous, and resilient future for its people and its coastal ecosystems.

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Article - Quality management principles

Quality management principles: The foundation for success

In today's hyper-competitive business landscape, excellence isn't just an aspiration – it's a necessity for survival. At the heart of organizational excellence lies quality management, a systematic approach that has transformed how businesses operate, compete and thrive. The ISO quality management principles, developed through decades of collective expertise and real-world implementation, serve as a fundamental framework that guides organizations from proficiency to peak performance.

To achieve this, they must be able to lean on a rock-solid foundation, with core principles for quality management built into their processes and culture at every level. These principles enable continual improvement for the benefit of the organization, its people, its stakeholders and its customers.

This article explores how quality management principles can help businesses large and small to:

- Elevate their ambition
- Encourage people at every level of the organization to strive for excellence in their work
- Meet internationally recognized principles of quality management – such as those defined in ISO 9000

What are the quality management principles of ISO 9001?

Embedded at the core of any quality management system (QMS), quality management principles (or QMPs) are a set of universally applicable principles, distilled from years of theoretical development and practical application. Their structured approach provides guidance for organizations to define objectives, establish processes and develop systems to manage quality.

Outlined in ISO 9000, which is part of the broader ISO family of quality management standards, these principles of quality management introduce key concepts that are essential for the successful implementation of a QMS. They are designed to be adaptable and flexible, making them applicable across various industries, including manufacturing, services, non-profits and government agencies.

For organizations seeking further details, ISO 9001 gives specific requirements for a quality management system, building upon the principles described in ISO 9000.

The seven principles of quality management

Developed and updated by ISO/TC 176, ISO's dedicated group of quality experts, the following core principles of quality management serve as your organization's blueprint for performance improvement. Note that this list has no set priority order. The relevance of each quality management principle will vary from one organization to another and can be expected to change or adjust over time, as the journey of the organization evolves.

To successfully navigate the path to excellence, organizations can draw upon these seven foundational principles of quality management:

1. **Customer focus:** At the heart of quality management lies one critical mission – to meet and exceed customer expectations at every turn.
    - Why? Satisfied customers are the passionate brand advocates who fuel your growth and market success. Strong customer focus doesn't just build loyalty; it creates a competitive edge that is hard to beat.
    - How? Take action through voice-of-customer programmes, empower your team to deliver exceptional service, and weave customer insights into every business decision.
2. **Leadership:** Great leaders don't just guide, they inspire. They create an environment

where excellence thrives and teams are energized to achieve quality goals.

- Why? When leadership aligns your organization's strategies and resources, you unlock new levels of efficiency and breakthrough performance.
- How? Share a compelling vision, spark collaboration across teams, and invest in your people's growth to drive remarkable results.

3. **Engagement:** Success happens when every team member feels invested in your organization's journey to excellence.
   - Why? Engaged employees drive innovation, elevate performance, and create an organizational culture where quality naturally flourishes.
   - How? Put your people in the driver's seat of improvement initiatives, celebrate wins, and chart clear paths for growth that ignite their potential.
4. **Process approach:** Think of your organization as a finely tuned machine where every part works in harmony toward consistent, outstanding results.
   - Why? Well-designed processes boost performance, maximize resources and build rock-solid trust with stakeholders.
   - How? Create clear process maps, eliminate bottlenecks, and constantly fine-tune your systems for peak performance.
5. **Improvement:** The best organizations never stand still – they are always reaching for the next level of excellence.
   - Why? Continuous improvement keeps you ahead of the curve, ready to seize opportunities while others play catch-up.
   - How? Dig deep into root causes, embrace both small wins and big breakthroughs, and turn every lesson learned into fuel for innovation.
6. **Evidence-based decision making:** Reliable data lights the way to your best business decisions.
   - Why? Hard facts cut through confusion, revealing clear paths to success and helping you make bold moves with confidence.
   - How? Build robust data systems, measure what matters, and create a culture where insights drive action.
7. **Relationship management:** Success isn't a solo journey. It is built on strong partnerships with everyone who is related to your business.
   - Why? Powerful stakeholder relationships open doors to new opportunities and help you navigate challenges with ease and assurance.
   - How? Align with stakeholders on shared goals, create win-win partnerships, and keep communication channels wide open.

For a deeper dive into the transformative power of quality management, check out ISO's publication Quality management principles. This invaluable resource offers detailed insights and practical guidance that can inspire your organization to elevate its quality initiatives.

Why are QMS principles important?

The cornerstones of building and sustaining excellence, QMS principles are essential for several reasons:

- To establish a quality management culture. Driving quality mindsets empowers every member of the business to understand, value and contribute to the pursuit of quality.
- To foster consistency. Applying quality principles across an organization promotes uniformity in product design, development and delivery. This builds customer trust and public engagement.
- To facilitate continuous improvement. Highlighting areas for ongoing improvement helps an organization stay relevant in an increasingly competitive global landscape.

- To promote customer orientation. Translating quality into increased loyalty and market growth turns satisfied customers into brand advocates.
- To encourage team engagement. Motivating people across all sectors to achieve their highest quality work results in greater workplace satisfaction, team spirit, productivity and staff retention.
- To reduce risks. Proactively identifying potential problems early limits the likelihood of costly mistakes, customer dissatisfaction and reputational damage.
- To support competitiveness. Cementing a quality foundation that strengthens an organization's competitive positioning. This, ultimately, supports the delivery of high-quality products or services.

The QMS principles are not just guidelines – they are the heartbeat of a thriving organization. Their holistic approach seamlessly weaves together customer focus, visionary leadership and a commitment to continuous improvement, while providing a robust framework for managing processes. By embracing these principles, organizations can not only achieve their immediate goals, but also lay a strong foundation for long-term growth and success.

How should organizations embed QMS principles in their processes?

ISO's quality management principles are set in place to help organizations develop high-quality products and services that are safe and effective. The QMS principles found in ISO 9000 have been designed to be adaptable and easily tailored to the unique blueprint and challenges of each organization. While the process of integration will differ, they are applicable to organizations of all sizes and types, across different cultures, locations and social conditions.

As the world's top quality management standard, ISO 9001 describes the basic requirements of a quality management system. Its QMS requirements include a quality manual, quality objectives, organizational structure and responsibility, data management, internal processes, customer satisfaction, improvement opportunities, and quality instruments for measuring progress. It's about building a solid foundation that allows all processes to come together to ensure quality across a whole organization.

Although adopting QMPs requires an investment of time, effort and discipline, the returns are substantial. They include enhanced performance, heightened customer satisfaction and market success. Organizations that commit to these principles establish a culture of quality that not only improves their products and services, but simultaneously enhances their customer base and safeguards their reputation.

In a world facing global supply chain issues, quality management is a cornerstone of success. It assures customers that even during times where external disruptions are possible, it's safe to invest their trust in a given product or service. The delivery of exceptional quality requires effective and empowered leadership, high employee engagement and satisfaction, enhanced relationship management and resilient decision making.

- ISO 9000:2015ISO 9000 - Quality management fundamentals and vocabulary
- ISO 9001:2015Quality management systems — Requirements

The road to excellence

Organizations that strategically integrate quality management principles into their operational DNA gain more than just a robust foundation; they secure a powerful engine for sustainable growth. These principles drive the delivery of exceptional quality, strengthen organizational integrity, and build an enduring reputation for excellence that resonates across markets.

QMPs have proven their worth far beyond their humble origins. In today's volatile global marketplace, they serve as a strategic compass, guiding organizations through complexity while accelerating performance. But the true power of quality management lies in its transformative impact. Organizations leveraging these principles don't just meet market expectations, they

exceed them, drive innovation and consistently outperform competitors. By mastering these fundamentals, they transform operational excellence into sustained market leadership. (iso.org)

a) Training

i) Long-term training

During the financial year 2023-2024, a total number of 18 members of staff were facilitated to attend long term training in the country. The members of staff that attended training, their courses and training institutions in brackets are Mr. Oliver Onesmo Machange (Master of Information Security, IAA), Mr. Issack Raphael James (MSc in Maintenance Management Engineering, DIT), Mr. Anthony Adamson Mwakasaka (MEM, UDSM) Mr. Joackim George Kajigili (MSc in Sustainable Engineering, DIT), Mr. Arnold Severine Mato (Masters of Mechanical Engineering in Transportation Machinery, NIT, Ms. Mbumi Brown Mwampeta (MSc in Integrated Environment Management, UDSM) and Mr. Vicent Justin Mabula (Master of Science in Integrated Food Security, UDSM).

Others are Mr. Jeremiah Abednego Mhamba (MSc in Petroleum Engineering, UDSM), Ms. Sarah Anyigulile Mwaijibe (MSc. in Integrated Food Security, USDM), Ms. Sarah Fredrick Maro (MSc. in Integrated Food Security, UDSM), Mr. Thomas Elisha Mwamkinga (MPA, Mzumbe University), Mr. Peter Martine Tarimo (MSc. in Oil and Gas Technology, UDSM), Mr. Emmanuel Charles Shilinde (MEM, UDSM), Ms. Angela Kanausha Charles (MEM, UDSM), Mr. Riziki Billy Sinkwai (MSc. in Applied Statistics, Mzumbe University and Ms. Magdalena Maliaki Sademaki (MPH, UDSM), Mr. Rodney Obadiah Alananga (MPH, MUHAS) and Ms. Aziza Ramadhan Marley (MEM – Project Management, UDSM).

i) Short-term training

During the period under review, a total number of 542 members of staff were facilitated to attend group training inside the country. The training courses attended include capacity building workshop for RAAWU leaders; induction course for newcomers to the Bureau; training on risk management for budget officers; training workshop on risk register for TBS own source projects; training on ISO 37001:2016 anti-bribery management systems (implementation and auditing); and ISO 9001:2015 lead auditor course.

Others courses attended are awareness course on e-Mrejesho; training on public procurement process and practices; training on implementation of ISO/IEC 17025:2017, method validation and uncertainty of measurement; seminar on African Association for Public Administration and Management; Engineers Registration Board course; risk management training for officers-in-charge; and awareness training on principles and procedures for the development of East African Standards

Moreover, a total number of one hundred seventy-six (176) members of staff were facilitated to attend short term training inside and outside the country. Out of 176, 92 members of staff attended short term training inside the country and 84 members attended short term training outside the country at different intervals.

The individual short-courses attended include MDEA training course; training on ICP-OES for testing of heavy metals in food products; attachment training on standards development; short course on communication networks; training on monitoring and evaluation of projects, training on business education; public relations for effective organizational branding; advanced public relations and customer care; food safety management systems pesticides & antibiotics residues analysis; attachment on time and frequency metrology; training on emergency communication network for developing; food safety management systems; customer service management; standardization and quality assurance; procurement of consultancy services; and occupational health and safety.

Other areas covered in individual course training include procurement framework for practitioners; Government contracting; global organic textile standard; food safety management systems, pesticides & antibiotics residues analysis; risk based auditing; cosmetics control and regulation; managing e-records; total quality management; business research and data analysis; skill in protocol and events management; managing transformation from

paper to electronic records management in public service organization; Siemens mechatronics systems certification; Micro-service with Nodejs; MySQL for data base administration; windows server administration; and standards editing and proof-reading.

Other areas covered are leadership and policy implementation; refrigeration and air-conditioning installation and maintenance; advanced fraud examination; Human Capital Management Information Systems (HCMIS); waste management and recycling; formulation/ manufacturing safety assessment and food manufacturing practice of cosmetics products; oil and chemical tanker cargo operations; gemstone identification; food safety management systems, pesticides analysis; general reconciliation, treasury essential, taxation, and preparation of financial statements; analysis of petroleum and its allied products; cement concrete mix design; financial management; transport management; ICP-OES/ICP MS analysis of toxic and nutritional elements in food; ISO 3170 petroleum liquids manual sampling; and Solar Photovoltaic T1/T2 and T3-grid Tie.

Others are guidelines for the design, operation assessment, and accreditation of food import and export inspection and certification system; inspection and quality control in manufacturing; quality assurance, standards and guidelines; leadership effectiveness high performing organizations and change management; ISO 22000 FSMS; bitumen and bituminous mixture characterization, design and testing; ICT infrastructure management using Window Server 2019; acoustics ultrasonic vibrations and flow meter measurement; DNA based identification of animal species; microbiological testing for sulphite reducing anaerobes in water and microbiological testing for cronobacter sakazakii in food; mastery in certification activities (inspection and certification system); QMS ISO 9001:2015 lead auditor course; microscopic identification of pathogenic micro-organism; advanced mass metrology; strategic talent management; fundamental principles of ergonomics; and regulation of high-risk food for special purpose.

b) Recruitment

During the financial year 2023-2024, 36 employees were added to the TBS staff. The new members of staff are Mr. Abdallah Juma Selemani (Records Management Assistant II), Mr. Deogratius Moses Mpembe (Accounts Officer II), Mr. Deric Byera Mutoka (Accountant II), Mr. Emily Alfred Mwambola (Editor II) Mr. Enossy Roitt Mwitula (Assistant Supplies Officer II), Mr. Fredrick James Lema (Metrologist II), Mr. Godlove Leonard Augustino (Metrologist II), Mr. Hosea John Mongi (Technician II) and Mr. Imani Justini Mabena (Technician II).

Other members of staff recruited during the period are Mr. Innocent Machele Maiga (Metrologist II), Mr. Jeremia Edom Mwalyaje (Metrologist II), Ms. Jesca John Oisso (Legal Officer II), Mr. John George Kazungu (Metrologist II), Mr. Maulidi Bundala Lintu (Transport Officer II), Ms. Oswalda Onesmo Kawishe (Engineer II), Mr. Shafii Saidi Kumwalu (Metrologist II), Mr. Stephen Daud Kyejo (Metrologist II), Mr. Stepheno John Mwakajonga (Metrologist II), Mr. Yasini Amri Mateleka (Metrologist II), Ms. Joyce Boniface Mallya (Metrologist II), Mr. Anyopa David Mayonjo (Quality Assurance Officer II) and Mr. Kassim Eliasa Nkya (Quality Assurance Officer II).

Other new employees are Ms. Beatrice Rogathe Lema (Quality Assurance Officer II), Ms. Shamim Ismail Isimbula (Quality Assurance Officer II), Ms. Jackline Benedict Nyandoa (Quality Assurance Officer II), Mr. George Justine Temu (Quality Assurance Officer II), Ms. Happiness Saria Lema (Quality Assurance Officer II), Ms. Hellen Mosses Mollel (Quality Assurance Officer II), Ms. Irene John Mboya (Quality Assurance Officer II), Ms. Mary Seuri Lilayo (Quality Assurance Officer II), Mr. Moses Moses Munuo (Quality Assurance Officer II), Mr. Shabani Azizi Ally (Quality Assurance Officer II), Mr. Emmanuel Christopher Busonone (ICT Officer II), Mr. Isakwisa Njole Mbyale (Editor II), Mr. Patrick Lumumba Magetta (Editor II) and Ms. Maryam Mohamed Abdulaziz (Marketing Officer II).

c) Retirement

During the year 2023-2024, one member of TBS

staff, Ms. Solana Msimbe (Principal Laboratory Assistant) retired from public service after attaining the statutory compulsory retirement age. She retired on 05th December, 2023.

d) Obituary

During the year 2023-2024, one member of staff, Mr. Juma Shaibu, who was working as a driver in the Northern Zone Office, Arusha, passed on. Mr. Shaibu died on 15th May, 2024.

Indeed, we belong to God, and indeed, to Him we return.

Training and research services

a) Training Service

During the financial year 2023, the Bureau's Research and Training Section continued to engage in imparting useful skills in the area of standardization and quality assurance in industry and commerce sectors with a view to complement national efforts to offer products and services of better quality and higher competitive edge on both the internal and external markets.

The Bureau through this section organized and implemented 41 trainings on standards, quality control, premise registration and product certification to 1400 stakeholders from four subsectors (4) subsectors namely SMEs and other stakeholders of honey & bee products (11 trainings), SMEs and other stakeholders of Bakery & confectioneries (11 trainings), SMEs and other stakeholders of legumes (6 training), SMEs and other stakeholders of fruits & vegetables (8 training), SMEs and other stakeholders of maize & maize flour (2 training), SMEs and other stakeholders of salt (2 trainings) and SMEs and other stakeholders of milk & milk products (1 training).

The trainings were conducted in Itigi (Singida), Uyui (Tabora), Kongwa (Dodoma), Dodoma City, Kibondo (Kigoma), Mlele (Katavi), Masasi (Mtwara), Biharamulo (Kagera), Mbogwe and Bukombe (Geita), Mvomero (Morogoro), Tanga City (Tanga), Mbeya City (Mbeya), Arusha City (Arusha), Kigoma-Ujiji Municipality (Kigoma), Songea (Ruvuma), Bukoba (Kagera), Kahama (Shinyanga), Mwanza City (Mwanza), Geita Municipality (Geita), Dar es Salaam City (Dar es Salaam), Kiteto (Manyara), Babati (Manyara), Moshi (Kilimanjaro), Karatu (Arusha) Mtwara-Mikindani Municipality (Mtwara), Lindi Municipality (Lindi) Lushoto (Tanga), Njombe, Iringa Municipality (Iringa), Arumeru (Arusha), Kibaha (Pwani), Bagamoyo (Pwani), Sumbawanga Municipality (Rukwa), Mpanda (Rukwa), Mtwara, and Uvinza (Kigoma).

During the financial year under review, the Bureau provided training on quality control and quality assurance to stakeholders on various occasions. In total, 406 participants attended these trainings.

The trainings conducted in this area are training on laboratory quality control; training on quality control and documentation; training on quality management in the cosmetic industries; training on requirement and implementation of ISO/IEC 17025:2017; training on pre-assessment on implementation of ISO/IEC 17025:2017; awareness training on ISO/IEC 17025:2017; training on Hazard Analysis and Critical Control Point (HACCP); training on root-cause analysis and corrective actions; training on food safety and quality assurance; and training on internal audit for ISO/IEC 17025:2017.

Other trainings conducted under this category were training on awareness of ISO 15189:2022; training on method validation and verification for testing laboratories; training on application and maintenance of ICP-OES machine; training awareness on ISO 22000:2028; training on requirements and implementation of ISO 15189:2022; training on measurement of uncertainty to laboratory staff; training on requirements on implementation of ISO 9001:2015; training on requirements and implementation of ISO 22000:2018; training on HPLC; training on manufacturing quality system; training on method validation and verification of microbiology laboratories; training on laboratory equipment management; and awareness training on ISO 9001:2015.

Moreover, the Bureau conducted 371 trainings in collaboration with other institutions including Tanzania Women Chamber of Commerce (TWCC). They are training on animal feed standards, quality assurance of animal feeds and TBS certification and compliance of animal feed standards to MSMEs processing animal feed; training on standards and TBS mark certification procedures; training on certification procedures and standards; and training on standards, business registration, product certification and premise registration procedures.

b) Research activities

During the period under review, TBS embarked

on two research projects namely Food Fraud Practices: Tampering with Expiry Date on Food Labels in Tanzania and Causes and Mitigation of Metal Roofing Corrosion and Colour Fading in Tanzania: A Case Study of Tanzania Mainland which were still in progress during the time of reporting.

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

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

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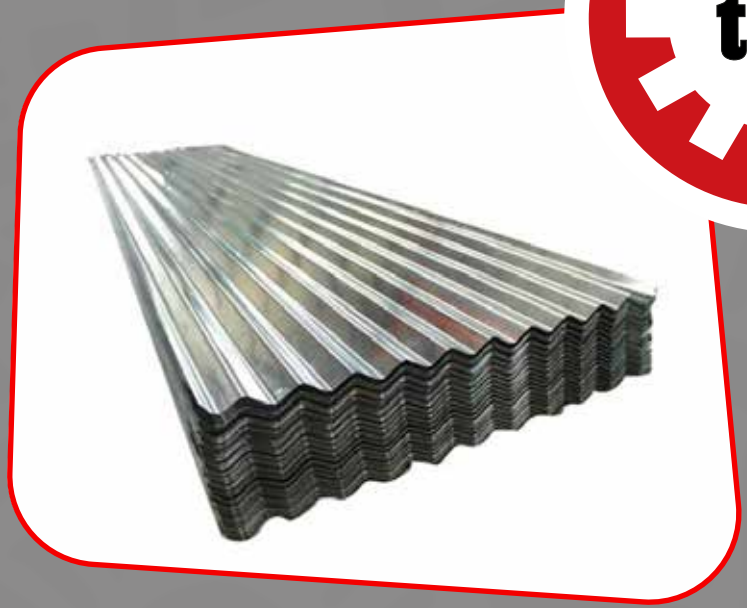

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