

Belize Bureau of Standards (BBS)

Ministry of Agriculture, Food Security and Enterprise (MAFSE)

Annual Technical Report



Fiscal Year: April 2023 to March 2024

Overview of BBS:

The Belize Bureau of Standards (BBS) is the national standards body of Belize, responsible for developing, promoting, and implementing national standards to ensure the quality and safety of goods and services produced and consumed within the country.

The mandate of the department includes:

- **Standardization:** the development, adoption, and promotion of national standards in various sectors such as agriculture, manufacturing, services, and consumer products.
- **Metrology services:** ensuring the accuracy and fairness of measurements in commercial transactions and calibration of measuring instruments.
- **Consumer protection:** safeguarding the interests of consumers by enforcing standards that guarantee the safety, reliability, and quality of products and services; and
- **Education and awareness:** Educating businesses, consumers, and other stakeholders about the importance of standards compliance and quality assurance.

1. Main Achievements:

The BBS has been actively engaged in a series of national, regional, and international activities aimed at enhancing the Quality Infrastructure (QI) across various sectors in Belize. These activities include training and capacity-building activities, national standards development, enhancement of calibration capabilities, digital transformation, etc.

Accreditation of BBS Fine Mass Laboratory:

One of the biggest achievements for the BBS is securing funding for the accreditation of its Fine Mass Laboratory. Under the Metrology component of the 11th European Development Fund (EDF) Economic Partnership Agreement (EPA) Technical Barriers to Trade (TBT) program, the BBS seeks to achieve accreditation for calibration of OIML F2 class mass standards ranging from 1mg to 10 kg by 2024. Through the CARICOM Regional Organisation for Standards and Quality (CROSQ), the implementation body of this project, the Jamaican National Agency for Accreditation (JANAAC) was contracted to conduct an assessment of the BBS ISO/IEC 17025:2017 Quality Management System (QMS) in November 2023. During this period, support was also received by the National Metrology Institute (NMI) of Mexico, Centro Nacional de Metrologia (CENAM) to perform an internal audit of the BBS ISO/IEC 17025:2017 QMS. Integral to the accreditation

process is the calibration of BBS E2 mass standards for which the project also provided funding to be calibrated at the Trinidad and Tobago Laboratory Accreditation Services (TTLABS). To assess the competence, accuracy, and reliability of BBS laboratory in performing the calibration activities, funding has also been received to conduct interlaboratory comparisons (ILCs). Interlaboratory comparisons involve the comparison of measurement results obtained by different laboratories, typically using the same or similar measurement methods, instruments, and standards. BBS will be conducting its ILC with Laboratorio Costarricense de Metrología (LCM) of Costa Rica during May 2024. These initiatives mark a pivotal milestone for the BBS as it enables the department to ensure the utmost accuracy and reliability of its calibration services.

Metrology for Digital Transformation:

The BBS participated in a regional initiative to digitally transform metrology services through digital process management and lab automation utilizing the Capacity Building Using Regional Experience and Knowledge (CABUREK) Methodology. As a result of the collaborative efforts and regional exchange of expertise, experiences, and best practices, the Bureau was able to design and develop a web-based site for the management of the Industrial Metrology Unit’s (IMU) calibration data. With the development of this web-based site, the Unit has digitalized its Quality Management System, reduced the use of paper-based documents, improved the organization, accessibility, protection, and accuracy of information, and enhanced the efficiency of the calibration process through automation. The lab automation process allows the Unit to reduce the time it takes to conduct calibration and diminish transcription errors when inputting measurement results. This methodology is expected to be adopted across the Bureau to enhance its services.

National Standards Development:

#	STANDARDS PROJECTS	STAGE	STATUS/COMMENT(S)
1	Final Draft Standard Specification for Marking & Labelling of Medical Gas cylinders	60	<ul style="list-style-type: none"> Standard was published in October 2023.
2	Draft Belize Standard Specification for Nitrogen	50	<ul style="list-style-type: none"> Gazettal of notice to establish Standard as compulsory and memo requesting for

			the preparation of SI orders by the Sol Gen.	
3	Draft Belize Standard Specification for Oxygen	50	<ul style="list-style-type: none"> Gazettal of notice to establish Standard as compulsory and memo requesting for the preparation of SI orders by the Sol Gen. 	
4	Draft Belize Standard Specification for Liquefied Petroleum Gas (LPG)	90	<ul style="list-style-type: none"> The technical committee is disposing of comments received during the enquiry stage. 	
5	Draft Belize Code of Practice for Recreational High Angle Activity Tours (Canopy, Canyoneering, Rappelling, and Ziplining)	90	<ul style="list-style-type: none"> The technical committee is disposing of comments received during the enquiry stage. 	
6	Draft Belize Standard Specification for Potatoes	30	<ul style="list-style-type: none"> Working Draft (WD) formatted and edited and will be disseminated among key farmers from the various cluster groups. 	
7	Outdated Standards for Brewery Products; Rum; Carbonated Beverages; and Poultry	90	<ul style="list-style-type: none"> Finalized stakeholder mapping in relation to the technical review process for outdated standards, which includes the following categories: Brewery Products, Rum, Carbonated Beverages, and Poultry. The stakeholders will be engaged to review the standards and determine the need to initiate the revision process. Key stakeholders in the technical review process includes the following: 	
			Brewery Products	Belize Brewing Company Caribbean International Brewery Hobbs Brewing Company; Two- Brewing Company
			Rum	Copali Rum; Big Titty Rum Cuello's Distillery; Tiburon Rum Travellers Liquors; L&R Liquors
			Poultry	Belize Poultry Association; Quality Poultry Products; Caribbean

				Chicken; Three Star Chicken Fiesta Chicken; Country Foods
			Carbonated Beverages	Bowen & Bowen

Standards.for.Agriculture.and.Agriculture.Products.(AAP)

In a collaborative effort to address issues relating to quality and climate change, among other issues in agriculture, the Belize Bureau of Standards is working with the Ministry of Agriculture, Food Security and Enterprise (MAFSE) to establish national priorities for Standardization in the Agriculture Sector. In this effort, the BBS commenced a value chain exercise to assess standards and quality issues across cluster groups, seeking the involvement of farmers and other key organizations to identify priority areas in Belize’s agricultural value chains.

Below are some quality issues arising in the cluster group assessments:

#	Specific Area	Identification of Quality Issues	Recommendation(s)	Priority (High/Medium/Low)
1	Water source	Lack of constant water source	Option 1: run adequate water lines from a river source nearby. Option 2: Invest \$50,000 Bze to drill and install a water well.	High
2	Climate Change	Increasing temperatures affecting potato plant and growth	Research on heat resistant potato variants from countries with similar climatic conditions (Honduras).	High

3	Irrigation System	Inadequate irrigation system	Replace sprinklers for adequate irrigation system and apply fertilizers and pesticides more effectively.	Medium
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Belize.Energy.Efficiency.Labelling.Scheme;

In November 2022, the BBS hosted a soft launch of its Energy Efficiency Labelling Scheme (EELS) as one of the piloting countries for the CARICOM Energy Efficiency (CEE) Labels. To date, the BBS has been working on activities to develop its capabilities to implement its national scheme. In collaboration with the Lait Up Belize project through funding from the European Union, BBS is continuously supported in its communication and visibility and in capacity-building initiatives to strengthen the department’s capabilities to implement this scheme effectively.

In this regard, the Quality Institute Bureau of Standards Jamaica (QI BSI) conducted training for BBS and the Energy Unit Officers from 18 to 22nd March 2024 in Jamaica. This initiative is part of Lait Up Belize's commitment to support the successful implementation of the Energy Efficiency Labelling Scheme (EELS) pilot program in Belize, aimed at promoting energy conservation and sustainability.

This training was designed to enhance the Officers' understanding and application of standard requirements critical for the effective testing and certification of energy-efficient air conditioning and refrigeration appliances. Coming out of this training, the Officers are now capable of assessing the test reports and certificates submitted by participating importers of refrigerators and air conditioners. Thereafter, once products comply with the standards, they will be registered into the BBS database and, once imported can be affixed with a CEE label.

Metrology.Services;

Legal Metrology - Legal metrology market surveillance activities aim to ensure accuracy and fairness in measurements across various sectors. This includes the verification of fuel pumps, net content, and industrial and commercial scales. By verifying the accuracy of measurements in these critical areas, legal metrology services play a key role in maintaining integrity and fairness in the marketplace, ultimately contributing to the overall well-being of both consumers and businesses alike.

The table below shows the number of verification services performed by the BBS during this period:

Activity	KPI
Verification of Fuel Pumps	1,547 fuel pumps
Net Content	1,171 prepackaged goods
Industrial Scales	190 industrial scales
Commercial Scales	551 commercial scales

Industrial Metrology - Calibration guarantees consistency and reliability in measurements, enabling businesses to meet regulatory requirements, maintain product quality, and ensure customer satisfaction. It serves as the cornerstone for confidence in measurements, facilitating fair trade practices and promoting trust between stakeholders. During the Fiscal Year 2023/2024, the BBS performed 204 calibrations in the fine and grand mass, volume, and non-automatic weighing instruments (NAWI). Industries such as airline transportation, agro-processing, cement manufacturing, forensics, the compliance unit of the BBS, etc., rely on precise measurements to ensure safety, quality, and compliance with regulatory standards.

The table below shows the number of calibrations performed by the BBS during this period:

Calibration	Quantity	Sector
Fine Mass (FM: 1 mg to 10 kg)	115	Airline Transportation, Agro-Processing, Cement manufacturing, Compliance, Forensics
Grand Mass (GM: 20 kg to 1000 kg)	50	Compliance, Agro-Processing
Volume Calibrations	5	Compliance
Non-Automatic Weighing Instruments (NAWI)	34	Airline Transportation, Agro-Processing, Distilleries
Total:	204	Total unique sectors: 6

Public Awareness Activities:

- Training in the Auditing and Implementation of ISO 9001:2015 Standards-Based Quality Management System (QMS) Standard: As part of the “Enhancing Belize’s National Quality Infrastructure” grant received through the Caribbean Development

Bank (CDB), the BBS was able to secure consultancy to provide training for both public and private sector stakeholders in the implementation and auditing of the requirements of the ISO 9001:2015 QMS standard. This consultancy included five modules, three of which were conducted virtually and saw the participation of eighty-two stakeholders, and twenty-three stakeholders were chosen to participate in face-to-face sessions on procedure writing and design of forms and internal auditing.

While these trainings were a part of a grant, BBS continues to provide this support to stakeholders upon request given its certification to the ISO standard and having certified lead auditors on staff. On 24th October 2024, BBS Officers provided training to the Ministry of Tourism & Diaspora on Internal Audit to enhance the Ministry's competency and propel their QMS.

- World Metrology Day 2023: World Metrology Day 2023, celebrated annually on 20th May, was observed under the theme "Measurements supporting the global food system." This occasion provided the BBS with a unique opportunity to engage closely with stakeholders in the agro-processing industry, illustrating the role that accurate measurements play in both local and international trade.

In pursuit of this initiative, three prominent entities were chosen: the Belize Sugar Industry (BSI-ASR Group) for sugar processing, Citrus Products of Belize Limited (CPBL) for citrus-related products, and Rainforest Seafoods for seafood processing and packaging. Each of these companies was visited, allowing BBS to capture video footage of their meticulous preparation and packaging processes for their respective products, destined for either local or international markets.

Subsequently, these videos were shared with three selected high schools in the Belmopan area, enriching students' educational experiences by offering a firsthand glimpse into the intricate world of measurements in the agro-processing sector. Moreover, these videos were also made available on BBS's social media platforms, ensuring a wider audience could benefit from this enlightening endeavor. This outreach not only fostered a deeper understanding of the role of metrology but also highlighted the practical applications of precise measurements in shaping the global food system.

- Cooperatives Rapid Response Project Workshop: On 30th June 2023, commemorating International Co-operatives Day 2023, the Department of Co-operatives invited the BBS to present on the importance of Standards and Quality in

the Agriculture Sector for eleven (11) beneficiary co-operatives from across Belize. The presentation encompassed an overview of BBS, emphasizing the standards development process and the importance of properly labeling products. This informative session proved instrumental in equipping co-operatives with a deeper understanding of the significance of standards and quality in their agricultural pursuits.

- **Introduction to Standards and Quality for Micro, Small, and Medium Size Enterprises (MSMEs):** On 6th July 2023, BBS had the opportunity to introduce MSMEs to standards and quality. This session provided MSMEs with a comprehensive overview of the BBS mandate as it relates to standardization, legal and industrial metrology, and consumer protection. The presentation underscored the importance of a robust National Quality Infrastructure (NQI), emphasizing how it contributes positively to the export of high-quality goods, thereby boosting the competitiveness of local enterprises on a global scale.
- **National Vegetable Stakeholder Consultation:** Standards and quality in agriculture are pivotal for ensuring safe, sustainable, and consistent production while fostering market access, consumer trust, and environmental stewardship. On 17th August 2023, BBS participated in the National Vegetable Stakeholder Consultation organized by the Ministry of Agriculture, Food Security, and Enterprise (MAFSE) to sensitize farmers on the benefits of implementing standards within their production process.
- **Caribbean Statistics Day:** On October 13th, the Belize Bureau of Standards (BBS) participated in a commemorative statistical exhibition at the George Price Centre in Belmopan, hosted by the Statistical Institute of Belize (SIB) in observance of Caribbean Statistics Day. The event, held under the theme "One Voice, One CARICOM, Everyone Counts," served as a vibrant platform for celebrating the profound importance of statistical data in shaping policy and decision-making processes across the region.

The BBS, along with several other private and public institutions, were invited to showcase the myriad ways in which statistics empower and inform various facets of societal progress. The Industrial Metrology Unit (IMU) presented its innovative application of statistical techniques to estimate the uncertainty of measurement, an important aspect of ensuring precision and reliability in metrological practices. Furthermore, the IMU seized the opportunity to demonstrate the practical utility of

statistical methodologies in other realms, namely, Control Charts. These dynamic tools are used to depict the dispersion and variability of repeated measurements visually. This exhibition provided a platform for the IMU to demonstrate the Bureau's unwavering commitment to fostering a culture of excellence and precision in measurement standards.

- **Belize Chamber of Commerce and Industry (BCCI) Information Session:** On 17th October 2023, the BBS facilitated a presentation to private sector stakeholders under the BCCI membership to educate and sensitize them on the roles and responsibilities of the Bureau. In this session, participants were able to identify quality infrastructure services provided by the BBS to address organizational needs. Such engagements are integral for the Bureau as they provide the department with an avenue for the dissemination of information to foster a deeper comprehension of Quality Infrastructure among businesses and furnish indispensable guidance on trade and market access requirements.
- **World Food Day 2023:** On 20th October, BBS participated in the MAFSE World Food Day Fair, celebrated under the theme, "Water is Life, Water is Food. Leave No One Behind." It highlights the basic role of water in guaranteeing food security and focuses on the need for water resources in our attempts to battle hunger and malnutrition. The BBS display captured the importance of accurate and reliable measurement through the provision of its verification and calibration services and the benefits of standards in ensuring that the minimum requirements are in place to ensure clean and safe water in food production processes.
- **MPUELE - Energy Fair:** The Belize Bureau of Standards (BBS) participated in the Ministry of Public Utilities, Energy, Logistics and E-Governance (MPUELE) Energy Fair on 16th November 2023 at the Roaring River Golf Course in the Village of Roaring Creek. The BBS showcased its strategic roadmap towards the implementation of a National Energy Efficiency Labelling Scheme for Belize, focusing on essential household appliances such as refrigerators, air conditioners, and light bulbs, all harmonized with the CARICOM Energy Efficiency (CEE) Labels.

The significance of promoting energy-efficient appliances cannot be overstated: they inherently consume less energy, thereby significantly reducing greenhouse gas emissions and mitigating the environmental footprint associated with energy production and consumption. Through informed consumer choices, individuals play

a key role in contributing to broader environmental conservation efforts, fostering a greener and more sustainable future for all.

Anticipation at this event buzzed as attendees learned of the imminent commencement of this scheme, slated to roll out starting April 2024, initially targeting refrigerators and air conditioners. This initiative marks a decisive stride towards enhancing energy efficiency and environmental stewardship across Belize, and the BBS's steadfast dedication to fostering a culture of sustainability and responsible consumption through the implementation of standards.

- University of Belize (UB) Faculty of Science and Technology (FST) Science Open Day and Expo: Annually, the UB hosts its Annual Science Open Day and Expo to promote science education within the community. This year's event was celebrated under the theme "Advancing Belize Vision through Science and Technology" on 16th November 2023, showcasing both the work of the University's students and exposing the students to the existing opportunities in the field of science. To support this initiative, the BBS promoted its work in legal and industrial metrology by highlighting the importance of verification and calibration in different fields of science and showcasing the measuring instruments used and mathematical calculations utilized in the execution of this responsibility.
- National Beekeeping Symposium: The Ministry of Agriculture, Food Security and Enterprise hosted a National Beekeeping Symposium at Centro Escolar Mexico in the Corozal District on the 30th of November. The symposium served as a platform to sensitize policymakers, beekeepers, and private and public sectors on the vital role bees and honey production play in maintaining a balance of ecosystems & biodiversity and the socio-economic benefits it has in the livelihoods of rural honey producers. BBS's presentation revolved around the Belize National Standard: Specification for Honey, which applies to all honey products and covers all styles of packaged honey that have been processed and are ultimately intended for direct consumption. The presentation reinforced the significance of quality assurance and sustainable practices within the honey industry. Utilization of this standard would ensure that the honey being produced meets specific quality criteria, bolstering consumer confidence and market access for honey producers.
- Belize Draft Specification for Liquefied Petroleum Gas (LPG): On 28th December, a virtual sensitization session was held with a representation of thirteen LPG stakeholders on the draft specification. This session aimed to engage relevant stakeholders, including government agencies, industry representatives, consumers,

and other interested parties, with information on the proposed standards. This session facilitated discussion, feedback, and input from various perspectives to ensure that the final specifications are comprehensive, practical, and reflective of the needs and priorities of the industry. Ultimately promoting transparency, inclusivity, and stakeholder buy-in in the standard development process.

- Belize Draft Code of Practice for Recreational High Angle Activity Tours (Canopy, Canyoneering, Rappelling, and Zip Lining): The High Angle Activity Standard consultation/sensitization session was held virtually on December 15, 2023. Thirteen stakeholders/public representatives joined the session to review the draft code of practice and provide their feedback where relevant to the document. The High Angle Technical Committee is reviewing comments received during this consultation for disposition.
- World Consumer Rights Day 2024 Fair and Responsible AI for Consumers: In a market where the use of Artificial Intelligence has grown exponentially, from chatbots to delivery services, to self-driving cars, etc... this technology is set to have an enormous impact in the way we work, create, communicate, gather information and much more. Artificial Intelligence can be applied to every aspect of human survival – government, healthcare business, education, finance, automobiles, manufacturing, and gaming. While in the international market, AI has taken a larger role in how consumers access goods and services - from online shopping to chatbots, locally, it plays a smaller role.

The Belize Bureau of Standards chose to focus this year's theme on the role AI plays in consumerism and what those potential impacts are. During the weeks of March 12th through 22nd, 2024, the department, along with DigiWallet, visited several High Schools, delivering presentations on "AI & Consumerism – How AI Impacts Consumers' Access to Goods or Services in Belize." The aim was to highlight this growing trend and showcase one avenue of its practical application in Belize. Students enthusiastically received the information seeing the practical application of what they are learning in class and how it is applied in a real-world setting.

2. Lessons Learnt:

- The BBS is cognizant that the resources provided to the department will always be insufficient to execute its mandate effectively and efficiently across the pillars of standardization, legal and industrial metrology, conformity assessment, and consumer protection. Therefore, it continues to explore alternative funding

sources, such as grants, public-private partnerships, and participation in regional and international projects to supplement its budget and support critical initiatives. Collaborating with donor agencies, development partners, and philanthropic organizations enables the provision of additional resources to expand BBS's reach and impact.

- BBS recognizes that while its limited resources may impede its ability to fully execute its mandate, exploring opportunities for cost-sharing initiatives with stakeholders, such as other ministries, industry associations, and academic institutions, to fund specific projects or activities can help to alleviate this challenge. This approach not only helps alleviate financial constraints but also fosters a sense of ownership and shared responsibility among stakeholders.
- Continuous sensitization of stakeholders on quality infrastructure: standards, metrology, and conformity assessment help to improve the demand for BBS services. The hope is that once the Belizean populace adopts and demands standards and quality, it will force the department to provide adequate human and financial resources to execute and advance its programs.

3. Future Priorities and Plans:

Operationalization of BBS Temperature Laboratory:

Technical assistance will be provided by the Guyana National Bureau of Standards (GNBS) through support from CROSQ under the 11th EDF project to build the technical competency of the BBS Metrology Officers in the calibration of temperature measuring instruments. The theoretical and practical training is expected to take place over a 5-day period and will cover areas such as the development of a measurement assurance program, calibration of different types of thermometers, and estimation of uncertainty. This engagement aims to support the operationalization of the BBS temperature laboratory by the end of 2024, allowing the provision of traceable calibration services of this magnitude to Belizean stakeholders.

Revision of the National Standardization Strategy:

The BBS will be provided support in the revision of its National Standardization Strategy (NSS) through the United Nations Industrial Development Organization (UNIDO) and the CARICOM Regional Organisation for Standards and Quality (CROSQ). The revision of Belize's National Standardization Strategy will mark a significant milestone in the country's journey towards enhancing quality infrastructure and promoting

competitiveness. As Belize continues to evolve in a dynamic global landscape, the revision process provides an opportunity to assess current challenges, identify emerging trends, and align strategic objectives with national development priorities. Ultimately, the revision of Belize's National Standardization Strategy reinforces the country's commitment to quality excellence, economic resilience, and sustainable development.

Modernization of Metrology Legislation:

Under the African, Caribbean, and Pacific (ACP) Quality Infrastructure (QI) Programme, Belize will be supported in the modernization of its National Metrology Act, which is currently outdated. The modernization of Belize's National Metrology Act will allow the alignment of the country's legal framework with international best practices. The ACP QI Project will assign a Consultant to work along with the BBS to ensure that Belize's metrology regulations are up-to-date, robust, and conducive to fostering innovation, trade, and consumer protection. The modernization will include adherence to guidelines outlined in OIML D1: 2020, Guide on National Metrology Systems, Developing the Institutional and Legislative Framework. The Consultant is expected to guide the drafting process, incorporating transparency, accuracy, and traceability principles into the legislation. Thereafter, the BBS is expected to present the revised legislation to its parent Ministry for eventual adoption/acceptance.

Continuous Training and Capacity Building Activities:

The BBS continues to demonstrate its commitment to supporting stakeholders through tailored training and capacity-building initiatives. Current training underdevelopment includes but is not limited to:

- Evaluating and expressing measurement uncertainty, per the ISO 17025:2017 accreditation, utilizing the principles outlined in the GUM, "Guide to the Expression of Uncertainty in Measurement."
- Calibration point selection, interpretation of calibration certificates, use of correction factors, understanding error and measurement uncertainty, differentiation between calibration and verification, and setting tolerances.
- Standards and requirements related to product labeling and packaging and the conformity assessment procedures necessary to ensure compliance with these standards.
- Internal audit training in accordance with ISO/IEC 9001:2015 – Quality Management Systems
- Consumer rights and responsibilities

These initiatives highlight BBS's dedication to empowering stakeholders with the knowledge and skills necessary to maintain precision, accuracy, and compliance in their respective fields and foster a quality culture within our nation.

4. Staffing and Financial Considerations:

The staffing and financial considerations of the Bureau pose significant challenges, particularly given the limited resources available. With only two standards officers and three consumer protection inspectors responsible for compliance activities, the Bureau faces a considerable workload overseeing standards development, enforcement, and compliance activities across various sectors. This shortage of personnel not only strains the Bureau's capacity to fulfill its mandate effectively but also hampers its ability to provide timely assistance and support to stakeholders.

The Bureau also operates within the constraints of a limited budget, which restricts its ability to invest in the required equipment to enhance its services, training programs, and capacity-building initiatives. This financial limitation impedes the Bureau's efforts to operationalize its calibration services fully, provide full regulatory coverage as it relates to legal metrology services, provide adequate redress to consumers, modernize operations, enhance service delivery, and stay abreast of emerging trends and technologies in metrology and standardization.

However, despite these challenges, the Bureau remains committed to fulfilling its responsibilities to the best of its ability. The department continues to seek innovative solutions to optimize resource utilization, streamline processes, and prioritize activities that yield the greatest impact. Collaboration with external partners, leveraging available technical expertise in the region, and advocating for increased funding and staffing are essential strategies for overcoming these obstacles and advancing the Bureau's mission of promoting quality infrastructure, consumer protection, and economic development.

5. Conclusions and Recommendations:

While the Bureau is proud of the work executed during this period and eagerly anticipates the advancement it will make during Fiscal Year 2024/2025 as it relates to its National Standards Development Work Programme, accreditation of its fine mass laboratory, and the operationalization of its temperature laboratory, the department is cognizant that there is much more work that can be done in the areas of standardization, metrology, and conformity assessment services.

Some recommendations that can be offered to support the advancement of the BBS's mandate are as follows:

- **Increase Funding:** Advocate for increased budget allocation to the Bureau to expand its operations, enhance its infrastructure, and support critical initiatives such as standards development, calibration services, verification exercises, and capacity-building programs. This includes additional vehicles to support the market surveillance activities, adequate allocation of fuel to support the continuous flow of work, adequate allocation of funds to support travel and subsistence for Officers, and the procurement of additional equipment to support the growing demand for BBS services.
- **Staffing:** Adequate staffing is essential for effectively executing the Bureau's mandate and meeting the growing needs of stakeholders. With the expansion of the National Standards Development Work Programme and the increasing demand for verification and compliance services, additional staff are urgently needed. Currently, the workload for the two Officers responsible for standards development is overwhelming, hindering their ability to serve all sectors of the country adequately. Similarly, the Compliance Unit faces challenges in meeting the rising demand for verification of weighing instruments, fueled by the proliferation of fuel stations and increased use of commercial scales. With only three Inspectors assigned to these critical tasks, the Bureau is unable to meet demand in a timely manner, risking delays and compromising the integrity of compliance assessments. Therefore, the Bureau recommends the recruitment of at least three additional Inspectors to support conformity assessment exercises and at least two additional Officers to ensure that standards and quality assurance services are delivered efficiently and effectively across all sectors. This strategic investment in staffing will not only enhance the Bureau's operational capacity and uphold regulatory compliance nationwide but also strengthen its ability to contribute to the regional standards development process.

The activities of the Belize Bureau of Standards are directed towards enhancing the national quality infrastructure as it relates to standards, metrology, and conformity assessment in Belize. Therefore, the investment in this department is essential as it:

- **Promotes Economic Development:** Investment in the Bureau enables the development and promotion of standards, metrology services, and conformity

assessment mechanisms, which are essential for businesses to meet regulatory requirements, access markets, and drive innovation.

- **Trade Facilitation:** Through the enforcement of standards and quality assurance measures, the Bureau can prevent the proliferation of substandard products, reduce trade barriers, and enhance market access for Belizean exporters. This, in turn, stimulates trade flows, fosters economic integration, and strengthens Belize's position in global value chains. However, this requires additional human and capital resources to support the development and implementation of conformity assessment programs for compulsory standards, to enhance the department's technical barriers to trade (TBT) inquiry point and CODEX contact point capabilities.
- **Quality Infrastructure Development:** Investment in the Bureau strengthens Belize's quality infrastructure, including standards development, metrology, and conformity assessment capabilities. A robust quality infrastructure is essential for supporting industrialization, promoting innovation, and enhancing Belizean citizens' overall quality of life.