LEGAL AND REGULATORY ASSESSMENT OF THE GUYANA NATIONAL QUALITY INFRASTRUCTURE (GNQI) FOR COMPETITIVENESS AND TRADE

-BEST PRACTICES -

FINAL REPORT

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1. INTRODUCTION

The objective of this consultancy is the revision of the existing institutional, legal and regulatory framework for the National Quality Infrastructure and the proposal for improving laboratories and make recommendations of the following aspects:

(1) Analysis of the current institutional, legal and regulatory framework
(2) Analysis and Recommendation of the proposed legal and regulatory changes
(3) Short term proposals for an efficient institutional, legal and regulatory framework, including mechanisms to assure sustainability and governance
(4) Analysis of the sustainability of the proposal

This report focuses on the analysis of the current institutional, legal and regulatory framework and a presentation of the best practices regarding the implementation of a National Quality Infrastructure in developing countries.

The sources for this report are: a) A summary of best practices based on Tippmann (2013), Guasch, Racine, Sanchez and Dipo (2007); Kellerman (2011); ISO and UNIDO (2009); Loesener (2016). b) a process of meetings, interviews and consultations with government officials and stakeholders in Guyana; c) research on NQI trends and issues and comparative law carried out by the consultant.

Finally, I would like to express my sincere thanks to the Guyana National Bureau of Standards and the Inter-American Development Bank for their support over the duration of this assignment. I also like to thank the private and public sector institutions whom I consulted and interviewed over the course of this consultancy.

2. BACKGROUND

2.1 Even though Guyana experienced a 4.5% average economic growth during 2009-2014 period, in 2015, as a response to the decline in international prices of commodities, economic growth declined to 1.6%, highlighting the vulnerability of the economy due to the high concentration of exports on mining and agricultural products (45% correspond to gold, 18% to rice, raw sugar 6.6% and crustaceans 3.5%[1]).

2.2 As a result, there is consensus among public and private stakeholders on the need to diversify the economy and the export base, as well as to improve efficiencies and remove bottlenecks in the sectors that are currently the engine for growth, i.e. mining and agriculture.

2.3 Indeed, currently the production and trading of goods and services in the principal sectors face a number of non-compliance risks in both the local and export markets with significant impact on competitiveness, product development, consumer protection and innovation such as: i) rejection of products at border inspection point; ii) increased costs due to delays while inspections/test are being done in overseas laboratories; iii) disruptions in trade, loss or inability to expand into new market; iv) loss of revenue where inaccurate measurements and test results are used and v) inability to command premium price where quality and safety products are not defined.[2] In this regard to export markets in both traditional and non-traditional exports require compliance with technical requirements that are standards based[3].

2.4 It implies the need to modernize and strengthen the current National Quality Infrastructure in order to facilitate the growth of businesses in the local and external markets, protect the people and the environment and provide recognition for the Guyanese brand in the international market[4]. This modernization should be accompanied by a trade strategy to boost the participation of domestic firms in international markets.

2.5 The Guyana National Bureau of Standards holds primary responsibility for standardization, through a process of formulation and application of standards, technical regulations, conformity assessment procedures and metrology[5]. However, all standardizing bodies need to modernize the legal and implementation framework of the National Quality Infrastructure[6], as Guyana has still has to implement national quality infrastructure practices.

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[1] Observatory of Economic Complexity 2016.

[2] Needs Assessment for State of the Art Testing and Metrology Facilities. Executive Summary. 2014.

[3] Food Safety, Good Agricultural Practices, Quality Standards, Animal Health, Plant Health, Environmental, Social, Safery, Information Security, Efficiency and Certification, each with its own specific requirements.

[4] Needs Assessment for the State of the Art Testing and Metrology Facilities. 2014. Between 2006 and 2010, there were a total of 59 rejections of foods exported to the US from Guyana at an annual average of 12 rejections. The Unit Rate of Rejection for the US market from 2002 to 2010 ranged from 0.9 in 2003 to just about 0.2 in 2010, higher than the average of countries such as Trinidad and Tobago and Jamaica

[5] GNBS Strategy. 2011

[6] The GNBS Standards Catalogue 2012 lists twenty (20) standards as having mandatory status. The WTO Report by Measures 2015, states that Guyana's framework for standards and technical regulations has remained largely unchanged since 2009. According to WTO's report there are 22 technical regulations in force, most of them are labelling requirements. Guyana's latest notification to the WTO concerning technical regulations was made in 2005.

2.6 The current laboratories infrastructure and equipment is not adequate for supporting exports, protect consumers and the environment**.** There are 20 existing main national laboratories offering services in metrology, chemical and microbiological and physical testing of products and materials used. These laboratories have limitations and gaps in terms of: i) unsuitable laboratory facilities, lacking the proper physical conditions to assure reliability; ii) absence of laboratory facility to perform tests for consumer protection and for dynamic sectors; iii) limited calibration capacity in terms of capacity in temperature, moisture, pressure, force, volume, electricity[7]; iv) lack of adequate equipment and consumables; v) outdated test methods that no longer meets the needs for the industry requirements; vi) lack of accreditation and participation in proficiency testing programmes; and vii) insufficient trained staff for performing tests and calibrations as well as competence in use an maintenance of instrumentation [8]. In this regard, the Government of Guyana carried out in 2014, with the support of the IDB a needs assessment of the NQI and related laboratories and is contemplating its implementation through and IDB loan.

2.7 However, since the GNBS is in the process of making legal and regulatory reforms as part of the deployment of the NQI for Guyana, an analysis of the current and proposed regulatory changes to assure the most efficient operation of the NQI is required.

2.8 This paper focuses on the legal requirements and best practices for a strategy to improve NQI in Guyana. The first section includes a set of basic concepts and definitions. The second section presents the current NQI's legal framework in Guyana. Section third contrasts the current status of GNQI with a set of best practices and conclude with specific short-term proposals to improve GNQI.

[7] Unsuitable type of construction materials to ensure a sterile environment, layouts that may conduce to cross contamination, locations subject to flooding, poor ventilation, humidity and direct sunlight. Needs Assessment Report, 2014.

[8] Ibid.

3. NATIONAL QUALITY INFRASTRUCTURE – DEFINITION AND SCOPE

3.1 The *National Quality Infrastructure (NQI)* is considered as the totality of the institutional framework (public or private) required to establish and implement standardization; metrology (scientific, industrial and legal); and accreditation. (See box 2)[9]

Box.2 NQI institutions and services		
Domain	**Description**	**Institutions**
Standards	Publication of a formal document (standard), generally developed by consensus, containing the requirements that a product, process or service should comply with. Standards are considered essentially voluntary in themselves. Suppliers can therefore choose whether to use standards or not. It is only once they are called up in a contract, for example, or referenced in a technical regulation, that compliance with standards becomes a legally binding obligation.	– National Standards Body (NSB) – Sectoral Standards Development Organizations (SDO) – Industry-based standards organizations Note: Although most NSBs are public organizations, a few private NSBs exist. The SDOs are mostly private.
Metrology	The technology or science of measurement. Metrology can be subdivided into scientific metrology (the development and organization of the highest level of measurement standards), legal metrology (the assurance of correctness of measurements where these have an influence on the transparency of trade, law enforcement, health and safety) and industrial metrology (the satisfactory functioning of measurement instruments used in industry, production and testing).	– National Metrology Institute (NMI) – National Calibration Service – Calibration Laboratories (public or private) – Legal Metrology Department (LMD) Note: The NMIs are invariably public organizations and so are, by definition, the LMDs. Calibration laboratories may be public or private.
Accreditation	The activity providing independent attestation as to the competency of an individual or an organization to offer specified conformity assessment services (e.g. testing, inspection or certification).	– National Accreditation Organization/Body Note: This is usually a public organization

Source: Kellerman (2011) – Adapted by the author

3.2 *Conformity assessment* comprises the services that are required to provide independent evidence that products or services meet standards or technical regulations.[10] These could be inspection, testing, calibration, product certification and system certification or any combination thereof (See Box 3). Conformity assessment services are necessary to provide acceptable evidence that products and services meet defined requirements demanded by

[9] Kellerman (2011)

[10] The ISO/IEC Guide 2:1996 definition of conformity assessment is "*any activity concerned with determining directly or indirectly that relevant requirements are fulfilled.*" In more tangible terms, conformity assessment refers to a variety of processes whereby goods and/or services are determined to meet voluntary or mandatory standards or specifications.

authorities (i.e. in technical regulation or sanitary and phyto-sanitary measures) or the market place (i.e. contractually or inferred).[11]

Box 3. NQI – Conformity Assessment		
Domain	**Description**	**Institutions**
Inspection	The examination of a product design, a product, a process or an installation and the determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements. Inspection such as import inspection is often conducted on consignments, to ensure that the whole consignment is equivalent to the product sample tested.	– Import inspection agencies – General inspection agencies Note: These can be public or private agencies. The relevant standard to inspection bodies is ISO/IEC 17020, *General criteria for the operation of various bodies performing inspection.* The structure of ISO/IEC 17020 is similar to the standards for laboratories and management systems certification bodies, but it has some unique features. One of these is the classification system it uses for the different types of bodies involved (Types A, B, and C).
Testing	The determination of a product's characteristics against the requirements of the standard. Testing can vary from a non-destructive evaluation (e.g. X-ray, ultrasound, pressure testing, electrical, etc. whereafter the product is still fit for use) to a totally destructive analysis (e.g. chemical, mechanical, physical, microbiological, etc. whereafter the product is no longer t for use), or any combination thereof.	– Testing laboratories – Pathology laboratories – Environmental laboratories Note: These can be public or private laboratories. For testing, the main international standard is ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories.* ISO/IEC 17025 has two types of requirements, namely: a) Management systems requirements and b) Technical requirements. While the management system requirements will be common to all laboratories, there is a need to apply the technical requirements to their specific field of work.
Certification	The formal substantiation by a certification body after evaluation, testing, inspection or assessment, stating that a product, service, organization or individual meets the requirements of a standard.	– Product certification organizations – System certification organizations Note: These can be public or private organizations.

SOURCE: Kellerman (2011). Adapted by the author

[11] Kellerman (2011); Tippman (2013)

4. GUYANA NATIONAL QUALITY INFRASTRUCTURE (GNQI) – INSTITUTIONAL FRAMEWORK

4.1 The GNQI comprises various organizations each of which plays a role in establishing standards; evaluating whether goods, processes, or services fulfill specified technical requirements; and confirming that these requirements are met. The GNQI is intended to support health, environment, competitiveness and trade in compliance with Guyana's national and international obligations.

4.2 The ministries responsible for the GNQI are the Ministry of Business, the Ministry of Agriculture and the Ministry of Public Health.[12] They host a set of organizations (Departments, Semi-autonomous agencies and public corporations)[13] that are responsible for the implementation of the GNQI in three main areas: technical regulation and standards; sanitary and phytosanitary standards; and food and drugs standards. (See Box 1, Figure 1 and Annex 1)

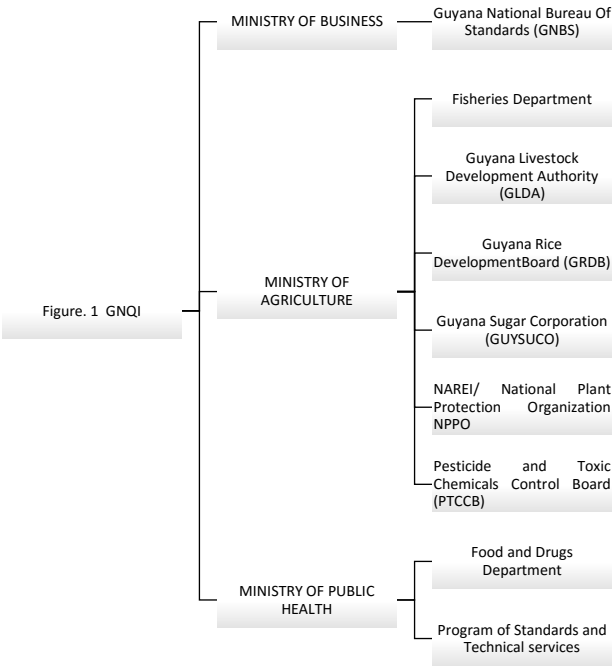
Box 1. Technical Regulations and Standards	
Multilateral (WTO)	Technical Barriers to Trade - (TBT)
Regional (CARICOM)	CROSQ - promotes efficiency and competitive production in goods and services, through the process of standardization and the verification of quality. CROSQ is mandated to establish and harmonize standards and technical regulations within the CARICOM members. CARICOM countries may transpose the community standards and technical regulations into national standards and technical regulations.[14]
National	Bureau of Standards - Act 11 of 1984 – standardization, metrology and certification (Conformity Assessment)

[12] The public sector in Guyana is composed of ministries (and divisions and departments under them), regional administrations, public corporations, financial entities, constitutional agencies, and military and police services.

[13] ***Semi-autonomous agencies*** (SAAs) are intermediate in character between government departments and public corporations. These are controlled by a supervisory board, and report directly to the subject Minister. ***Public corporations***, are another significant component of the public sector in Guyana, they are governed under the Public Corporations Act of 1988.

[14] https://www.crosq.org/index.php/home/history

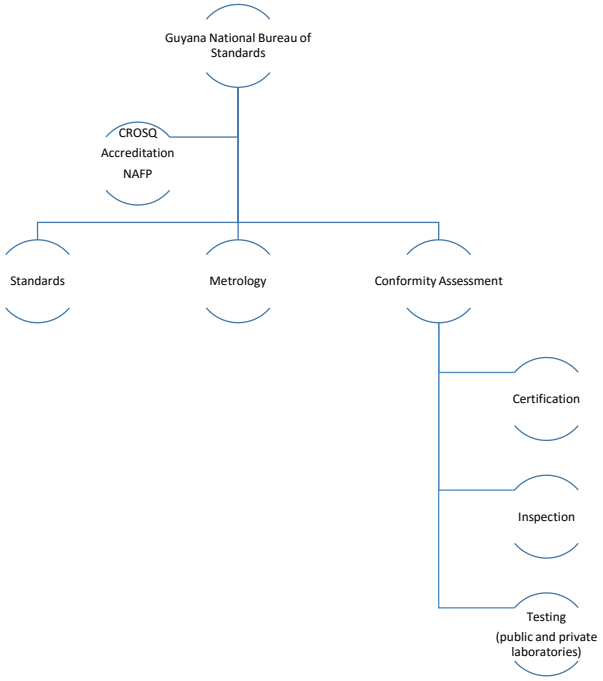
Figure 1. GNQI – Ministries and Agencies



4.3 The ***Guyana National Bureau of Standards (GNBS)*** is the agency responsible for developing national standards, metrology and conformity assessment. The Bureau has the legal status of a statutory corporation or a semi-autonomous agency Guyana National Bureau of Standards Law, 1988) – (See Figure 2). The GNBS is governed by a National Standards Council, whose members are appointed by the Minister of Business. Members of National Standards Council are drawn from organizations such as the Chambers of Commerce, the University of Guyana, the Guyana Manufacturers' Association, Regulatory bodies etc. The Council meets monthly in order to carry out the work of the organization which is executed through the various Technical Committees appointed by the National Standards Council. The Chairpersons of the respective technical committees are members of the council.[15]

[15] http://www.gnbsgy.org

Figure 2. Guyana NQI – Institutional Framework and Functions



4.4 The ***National Agricultural Research and Extension Institute (NAREI)*** under the Ministry of Agriculture is Guyana's SPS enquiry point and national notification authorities to the WTO. Guyana's main legislation pertaining to SPS measures includes: The Animals Health Act (2011) and the Plant Protection Act (2011). These laws stablished two agencies to implement SPS measures: The *Guyana Livestock Development Authorities (GLDA)* and the *National Plant Protection Organisation (NPPO)*. Other sectoral agencies (fisheries, rice and sugar) are responsible for quality in their respective sectors. Finally, the Pesticide and Toxic Chemicals Control Board (PTCCB) is tasked with responsibility for licensing, registration, training, inspection and enforcement and executes these activities with the aim of ensuring sound chemicals management in Guyana; reduce human health and environment risk, and food safety in agriculture production.

4.5 The ***Food and Drug Department*** under the Ministry of Health has the overall responsibility for issues relating to human health, including food for human consumption and cosmetics. The ***Food and Drug Act*** (1971) - section 32 (2) - specifies that imports of food, drug, cosmetic or devices (medical or veterinary) are only allowed if the goods wholly conform to the law of the country where they are manufactured or produced. Imports of these products require a certificate from the country of production (declaration by manufacturer and certificate).

5. CURRENT SITUATION, BEST PRACTICES AND RECOMMENDATIONS

5.1 The objective of this chapter is to contrast the current situation of the GNQI with the most relevant best practices and recent experiences in developing countries regarding the implementation of NQI. Even though best practices and comparison of different institutional arrangements shows that there is no ready- made or optimum model for a quality infrastructure, there are general agreement on the basic requirements for an optimum NQI. This chapter is based on Tippmann (2013), Guasch, Racine, Sanchez and Dipo (2007); Kellerman (2011); ISO and UNIDO (2009); Loesener (2016). Formal citation and quotation marks were suppressed to facilitate the analysis and the readability of the document. This chapter comprises two subsections: a) Structure of the NQI; b) Sustainability of the NQI and is complemented with a proposal for NQI policy (Model) – Annex 2.

A) Structure of the NQI

5.2 ***Principles***. The first step toward establishing an NQI that will be internationally recognized is to ***ensure good governance and create institutions free from conflicts of interest***. Conflicts of interest are common when, as in the case of Guyana, the NQI system is centrally controlled by the state and the same institution is responsible for the conducting standard development, certification, and accreditation activities[16]. Because the entire process is completely controlled by one organization, the overlap of commercial and regulatory functions and the discretionary powers of the organization to control the certification market could create considerable conflicts of interest. This can threaten the impartiality and credibility of the GNQI. According to guidelines and best practices, developing an effective NQI system requires separation of functions, often accompanied by changes in the legal status, autonomy, and governance structure of NQI bodies. It is also necessary to create clear financial and administrative barriers between the different functions and ensure that the decision-making process is transparent. To achieve well-governed institutions free from conflicts of interest, Guyana may need to reform and restructure their NQI and create independent, transparent institutions that are responsive to all stakeholders in the system. Currently proposals to amend the existing standards and metrology bills in Guyana should address these issues. They should include some ***minimum standards*** as follows:

- Metrology, accreditation, conformity assessment, and standardization bodies should not be involved in the development of technical regulations, mandatory standards, or other regulatory activities.
- Accreditation bodies must be independent from all other NQI institutions. It means, for instance, that the National Accreditation Focal Point (NAFP) should be independent from the GNBS.
- Metrology, accreditation, and standardization bodies should be free from political interference and able to respond to market needs and represent the country in relevant international organizations.

[16] According to CARICOM guidelines GNBS should serve as a National Accreditation Focal Point (NAFP) in order to support CROSQ's mandate to achieve Regional Accreditation.

5.3 **Role of other stakeholders.** It is not only the government that has a prominent role to play in the re-engineering of the NQI and the Technical Regulation Framework.

5.3.1 Guyana ***private sector*** has to be intimately involved in the design, implementation and amending of the NQI as they would be one of the main beneficiaries of the services of the NQI. The same applies to the ***non-governmental organizations and society in general***. Although the government may wish to provide NQI related services, global developments indicate that sooner or later this should be handed over to private industry. In many countries, conformity assessment services are increasingly being provided by the private sector rather than governments, while governments retain responsibility for maintaining the fundamentals—standards, metrology, and accreditation. Typically, the larger and more industrialized the economy, the more the private sector is involved.

5.3.2 ***Active participation of scientists and technologists trained as standards specialists*** should be emphasized. In Guyana consultative committees and standards bodies do not have strong enough ties to science and technology institutions. Even when the law requires the participation of academic specialists, their participation frequently does not affect the relevant standard. Academia has demonstrated an increasing interest in standards, but there are currently few incentives to encourage such involvement. In Guyana lack of ***training programs*** for NQI specialists (scientists and technologists) is an additional obstacle. Most people learn about NQI by actually participating in the process, which can be an inefficient way to learn.

5.3.3 To address ***coordination failures and take advantage of economies of scale***, government should support the strengthening of the quality infrastructure. Most firms do not have their own proper facilities for testing, metrology, and calibration, and the availability of external facilities is very limited. As in other small countries, the existing market demand in Guyana does not provide sufficient incentive for independent firms to set up testing and calibration services and cover their costs. However, the industrial development requires the availability of such services, so it becomes necessary to assist their creation. This can be done either by providing the services directly in universities or public laboratories or by providing support to ***consortia of firms, industrial associations, or chambers of commerce or industry*** to set up and administer the services. The creation of ***networks of laboratories*** have contributed in other countries (e.g. Colombia and Chile) to strengthen NQI. When demand reaches the level where provision of the services becomes financially sustainable, public support should be phased out and the services run on a purely commercial basis.

B) Sustainability

5.4 GNBS was established as a ***Semi-autonomous agency*** (SAAs). It is intermediate in character between government departments and public corporations and is controlled by a supervisory board, and report directly to the Minister of Business. In Guyana SAAs do not have financial independence and the government can withdraw their deposits in commercial banks and put them into the Consolidated Fund[17]. As a result, GNBS depends completely on government funding. However, this is not an exceptional case. Indeed, an analysis of the NQI institutions worldwide indicates that governments retain the responsibility to fund the NQI institutions to

[17] Article 216 in the Constitution of the Republic of Guyana states that all public moneys must go into the Consolidated Fund. This article was regulated in the Financial Administration and Audit Law.

a large extent, even in relatively well-developed economies. Hence, governments have to commit themselves to funding the standards, metrology and accreditation institutions of the NQI. This is true even if the national standards body or accreditation body is a private not-for-profit organization, only the type of funding from the state will be different. In the case of a statutory body it is usually in the form of a government grant, also known as "core funding", for those activities that are considered to be in the interest of the whole country, i.e. no specific beneficiary can be identified. In the case of private bodies, the funding is the result of a specific agreement or contractual arrangement between the state and the specific institution.

5.5 Concerning ***conformity assessment bodies in the public domain*** the situation is different. They should operate on the "user pays" principle so as not to distort the market, i.e. supply private service providers with an incentive to develop their services. Ultimately, governments should move out of the provision of conformity assessment services, and leave this part of the NQI to private industry. But this is a process and not something that will happen in the short term.

5.6 Last but not least, in order to operate under market rules, laboratories have to be accredited and certified. However, accreditation and certification's reliability depends on the GNBS' reliability, and the last depends on how the NQI is structured and financed. As mentioned above, it is necessary to separate and to clarify inside the GNBS the two main functions: a) standards and b) metrology. This will contribute to improve GNBS' capability to provide qualified services.

6. CHALLENGES AND RECOMMENDATIONS

6.1 GNQI main challenges are how to avoid conflicts of interest and how to ensure sustainability of the whole system. To achieve this, Guyana will need to either build or restructure their NQI on the principles of transparency, openness, consensus, impartiality, and technical credibility. No amount of staff training or technological investment can create a modern NQI if these principles are ignored.

6.2 Once a clear strategy has been developed, a legal framework must be developed to ensure proper functioning of the NQI. It is quite obvious that much of the environment in which the NQI and the Technical Regulation Framework can be given legitimacy will have to be supported by legislation. National legislation must be updated to reflect new challenges. It must also reflect the World Trade Organization's Technical Barriers to Trade principles, the guidelines of the main international NQI bodies, and the direction of a national NQI strategy/policy.

6.3 Concerning sustainability, in particular, most of the operating costs of the NQI body must be covered by the government. Although membership fees and sales of standards generate income, it is unlikely to be sufficient to cover operating costs in a small economy like Guyana, where demand for voluntary standards remains low.

6.4 At the implementation level (laboratories and related entities) lack of capital, infrastructure and human resources impedes implementation of an optimal NQI system. It is necessary to find alternative ways to maximize limited resources and expertise.

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ANNEX 1

ANNEX 1. GNQI - AGENCIES AND FUNCTIONS			
Standards	**Ministry**	**Authority**	**Functions and relevant laws**
Technical regulation and Standards	**Ministry of Business**	Guyana National Bureau of Standards (GNBS)	To promote standardisation for economic development and consumer protection through standards development and consumer protection in partnership with key sectors through Standards, Metrology and Conformity Assessement. The Bureau provides a wide range of services to industry. These include inspection, testing, calibration, certification and training. The GNBS does NOT monitor food, drugs, cosmetics, medical devices, plant and animal products. ***Act 11 de 1984***
Animal and Plant Health - Sanitary and Phytosanitary measures	**Ministry of Agriculture**	Fisheries Department	To ensure the observance of all legal and administrative requirements by all entities in the fishery sub-sector and recommended appropriate charges to existing regulations which govern the Sector. ***Fisheries Act 2002 and Maritime Act of 1977***
		Guyana Livestock Development Authority (GLDA) Animal Health Unit	Promote greater efficiency in the livestock product industry and to provide enhanced services in livestock husbandry, livestock health and research so as to make provision for effective administration and regulation of trade, commerce and export of livestock or livestock products and for matters related and incidental. ***Guyana Livestock Development Authority Act 2010*** ***Animal Health Act 2011***
		Guyana Rice Development Board (GRDB)	This department is responsible for ensuring that the quality of rice for both local consumption and exports meets the requisite specifications. They also train Farmers, Millers Workers and Exporters in areas of Quality Management. ***Act No. 15 of 1994*** ***Guyana Rice Development Board Act of 1994***
		Guyana Sugar Corporation (GUYSUCO)	Analytical Services in chemistry in chemistry to support sugar industry. In 1976, the government of Guyana nationalised and merged the sugar estates operated by Booker Sugar Estates Limited and Jessels Holdings to form the Guyana Sugar Corporation, also known as GuySuCo
		National Agricultural Research & Extension Institute (NAREI)/ National Plant Protection Organization NPPO	To protect Guyana's agriculture from the introduction and establishment of exotic plant pests, while ensuring that exported agricultural commodities conform to the Phytosanitary requirements of importing countries; enforce the "Plant Protection Act" and ensure Guyana's compliance with the International Phytosanitary Requirements for trade. ***Plant Protection Act 2011*** ***National Agricultural Research And Extension Institute Act 2010***

ANNEX 1. GNQI - AGENCIES AND FUNCTIONS			
Standards	**Ministry**	**Authority**	**Functions and relevant laws**
		Pesticide and Toxic Chemicals Control Board (PTCCB)	PTCCB was established for the management of pesticides and toxic chemicals in Guyana. The Board is tasked with responsibility for licensing, registration, training, inspection and enforcement and executes these activities with the aim of ensuring sound chemicals management in Guyana; reduce human health and environment risk, and food safety in agriculture production. All chemicals used in Guyana must be registered by the Board ensuring that all pesticides used in agriculture production are of minimum risk to human health and environment. ***Pesticides And Toxic Chemicals Control Act of 2002***
Health, Food and Drugs	Ministry of Health	Food and Drug Department	To ensure that foods are safe, sound, wholesome and are manufactured, packaged, stored and offered for sale under sanitary conditions. Drugs and medical devices are efficacious and safe for their intended use. Water is potable. Cosmetics are harmless and made from appropriate non-allergenic materials. Ensure all of the above are labelled and packaged truthfully, informatively and not deceptively. ***Food and Drugs Act of 1971***
		Program of Standards and Technical services	To establish, implement, monitor and evaluate norms and standards within which all components of the health care system must function.

ANNEX 2 – NATIONAL QUALITY POLICY (MODEL)[18]

INTRODUCTION

In the present environment of increased globalization, empirical evidence suggests that standardization and its conformity assessment companions have a very important role to play in technological progress, productivity and trade. Increasingly, global purchasers demand products and services that meet rigorous and advanced standards of quality, not only to ensure that such products and services integrate flawlessly with others in the supply chain, but also to satisfy customer expectations and to comply with a maze of technical regulations in importing countries.

In order to compete successfully in developed markets, Guyana's industry, especially the Small and Medium Enterprises (SME) sector, faces a formidable array of challenges. Over and above the logistics, management and financial issues, one of the major stumbling blocks is the attainment of demonstrable product and/or service quality demanded by regulatory authorities, as well as the major players in the markets. Hence, in order to fully exploit the possibilities of foreign markets, Guyana's industry needs to have access to an internationally recognized, but supportive national quality infrastructure that can provide the required independent evidence of product compliance.

Guyana realizes that its national quality infrastructure and its technical regulation regime may not yet be developed to their full potential, and that they are not fully harmonized with those of its major trading partners. It follows that these need to be addressed in a holistic manner, as they cut across many ministries, agencies and stakeholders. Hence, as Guyana re-engineers and upgrades the national quality infrastructure, enhances its technical regulation regime and organizes the relationship between the two, it must decide how to cater for technological and quality needs, minimize environmental, health and safety externalities, and at the same time avoid unnecessary and costly barriers to trade.

In recognizing the above realities, the government of Guyana commits itself to re-engineering, strengthening, upgrading and maintaining the national regulatory, standardization, metrology, accreditation and conformity assessment infrastructures to facilitate trade, enhance exports, accelerate economic development and reduce poverty while at the same time protecting the health and safety of its people and the environment as a logical outflow of the overall objective of trade or development policy and the UN Millennium Development Goals.

VISION

The Guyana's government plans, during the next two decades, to ensure the establishment of an business environment that would help Guyana's society prosper in different economic, social and

[18] Adapted from Kellerman, 2011

technological areas, taking into account the opportunities, potential and changes that are anticipated at the regional and international levels in the upcoming era.

During the next five years, Guyana is seeking to develop an effective and efficient National Quality Infrastructure that would meet international standards. Here, the government of Guyana will focus on quality and technical competency to ensure that the proper environment exists for national goods and services to gain a competitive edge in international markets, leading thereby to expanded exports and hence the sustainable growth of Guyana's society.

OBJECTIVES OF THE NATIONAL QUALITY POLICY

The primary objective of the Quality Policy is to ensure that goods and services emanating from or traded in Guyana are designed, manufactured and supplied in a manner that matches the needs, expectations and requirements of the purchasers and consumers as well as those of the regulatory authorities in the local as well as in the export markets.

In support of the primary objective, the implementation of the Quality Policy should raise quality consciousness amongst both the suppliers and the consumers, and it is an undertaking to introduce and maintain a quality culture in public life and throughout society.

The immediate outcome of the implementation of the Quality Policy will be the design and establishment of a world-class metrology, standardization, accreditation, inspection, testing and certification infrastructure, i.e. the NQI, and the support of the application of its techniques, practices and service provisions to demonstrably comply with international standards throughout.

In parallel to the establishment of the NQI, the technical regulation regime of Guyana will be reviewed and adjusted, including its related legislation, to meet regional and international requirements such as the CARICOM, the WTO-TBT and SPS Agreements and international best practices. This includes the establishment of effective cooperation amongst the NQI institutions and the national regulatory authorities, and also with their regional and international counterparts.

The service delivery of the NQI is totally dependent on a trained and skilled workforce, hence, developing the human resources necessary to support the various standardization, quality and technical regulation programs is a central theme throughout the Quality Policy.

RATIONALE FOR THE QUALITY POLICY

The desire of the government to efficiently and effectively manage their regulatory responsibilities in order to achieve two of its primary mandates, namely the protection of society and the environment;

The need of those that are being regulated to deal with a transparent and reliable state-regulatory system without having to battle with bureaucratic vagaries on a day-to-day basis;

The need of government to give industry a supportive standards, metrology, accreditation and conformity assessment service that is accepted globally and

The need of industry to have access to conformity assessment services that are affordable, and accepted globally so that their products can be marketed under the motto: *"Tested once, certified once, and accepted everywhere".*

THE NATIONAL QUALITY INFRASTRUCTURE (NQI)

The National Quality Infrastructure is taken as the totality of the institutional framework (public or private) required to establish and implement standardization, metrology (scientific, industrial and legal), accreditation and conformity assessment services (inspection, testing and product- and system certification) necessary to provide acceptable evidence that products and services meet defined requirements, be it demanded by authorities (technical regulation) or the market place (contractually or inferred).

THE TECHNICAL REGULATION FRAMEWORK

Technical regulation (which includes mandatory standards) is concerned with the safety and health of the population, the health of plants and animals, the protection of the consumer against deceptive practices, and the protection of the environment. Technical regulations are developed and administrated by competent authorities such as the ministries responsible for agriculture, construction, electricity, environment, health, industry and trade, telecommunication, tourism, transport, petroleum and mineral resources, and others. Because technical regulations should be based on the relevant international, regional and national standards, coordination with the Guyana National Bureau of Standards (GNBS) and other NQI institutions is of paramount importance.

Technical Regulation Framework comprises a number of building blocks that have to be appropriately defined and implemented at national level taking into consideration international best practices, local realities and customs. If these are not properly defined, then the goal of technical regulation will not be realized.

The Technical Requirements should be based on international, regional or national standards, and should not become unnecessary barriers to trade.

The Conformity Assessment services required to provide the independent evidence to the regulatory authorities that products and services meet technical regulation requirements can be provided by conformity assessment service providers in both the public and private domain, provided that they have been accredited as a measure of their competency and that they are so designated by the regulatory authority.

In order to oversee the implementation of the Technical Regulation Framework, a [Technical Regulation Office] shall be established under the Ministry of Business with the following responsibilities: a) Coordinate activities related to technical regulation development and implementation amongst the regulatory authorities and the NQI; b) Ensure that the regulatory authorities follow the defined Technical Regulation Framework in developing and implementing technical regulation; c) Ensure that all the regulatory authorities consistently meet the requirements of the WTO-TBT Agreement, the WTO-SPS Agreement and the CARICOM Agreement and d) Oversee the review of technical regulation already on the statute books by the regulatory

authorities, in order to revise, confirm or withdraw such regulation and to make sure that it complies with the Technical Regulation Framework.

METROLOGY

To increase the awareness of metrology and to establish a common metrological framework as one of the fundamental building blocks of the quality infrastructure, the government will enhance and upgrade the national metrology system by establishing Guyana's metrology institute that will maintain national measurement standards capable of providing a reliable and accurate measurement service within Guyana, whilst at the same time linking up internationally with the Calibration and Measurement Capability (CMC) recognition system administrated by the Bureau International des Poids et Mesures (BIPM).

Guyana's metrology institute will ensure that a national calibration service is established, maintained and continuously improved to diffuse the national measurement standards into industry, regulatory authorities and society in order to ensure that all measurements emanating from Guyana are acceptable in trade and law enforcement.

Calibration services can be provided by Guyana's metrology institute, the legal metrology department or private calibration laboratories provided that their calibration equipment is traceably calibrated to the national measurement standards kept by the Guyana's Metrology institute or another national metrology laboratory with known and recognized measurement capability. In addition, all calibration laboratories shall be appropriately accredited against the relevant international standards.

As a companion to Guyana's metrology institute, and to ensure the equitable utilization of measurements not only in trade, but also in law enforcement, health services and environmental management, the government will upgrade the weights and measures department of the Guyana National Bureau of Standards to a fully-fledged legal metrology department. The legal metrology department shall have the responsibility to type-approve, calibrate and verify measurement equipment falling within the scope of its regulation, and to ensure the protection of consumers by controlling pre-packaging operations of products, all of which are to be based on international standards such as the Recommendations of the Organisation Internationale de Métrologie Légale (OIML).

The legal metrology department will ensure that measuring equipment used in trade, law enforcement, health services and in the protection of the environment is appropriately type-approved, verified on placement into service and thereafter regularly calibrated and verified to ensure an equitable situation regarding the traders and consumers, and correctness of measurements in law enforcement, health services and environmental protection. The legal metrology department will establish national requirements for pre-packed goods based on international and regional standards and will ensure that suppliers comply with these.

STANDARDS

With regard to national standards as the initial building block for most quality-related activities, the government will see to it that the standards development process is a voluntary activity that depends on achieving consensus amongst stakeholders, and which is implemented by or on behalf of Guyana National Bureau of Standards within a participatory and transparent environment. It will encourage the adoption of relevant international and regional standards based on demonstrated needs of Guyana's authorities, industry and the society, and ensure that all standards are periodically reviewed to ensure continuous conformity with technological developments, market trends and international requirements.

The Guyana National Bureau of Standards will provide the framework required to develop and publish national standards and other normative documents at a national level, and to regularly review and update the same. Moreover, the Guyana National Bureau of Standards will participate in the process of developing regional and international standards where this is of relevance for Guyana, and will coordinate these activities with the relevant local bodies.

The development and publication of Guyana's national standards will take full cognizance of demonstrated national needs and will comply with international best practices and requirements as defined in the WTO-TBT Agreement and ISO/IEC Directives. International and regional standards will be adopted as far as is possible within the realities of Guyana.

To develop Guyana's national standards, the Guyana National Bureau of Standards will establish the relevant technical committees, which will develop the standards in conformity with approved guidelines and rules. Ministries, academic and scientific institutions will commit themselves to participating in these committees, along with individual entities or organized industry, traders and suppliers and civil society (NGOs, specialized associations and agriculture and tourism).

ACCREDITATION

As the third fundamental building block of the quality infrastructure, namely to facilitate independent attestation of the technical capabilities of the conformity assessment service providers to the satisfaction of the local and foreign markets and regulatory authorities, the Government will set up a National Accreditation Focal Point (NAFP) in the Ministry of Business[19].

The National Accreditation Focal Point will be responsible for supporting CROSQ's mandate to achieve Regional Accreditation and for facilitating accreditation of conformity assessment service providers such as inspection bodies, testing laboratories, calibration laboratories and certification bodies through foreign accreditation bodies in an internationally acceptable manner.

CONFORMITY ASSESSMENT

The overall objective of conformity assessment services is to demonstrate the quality of products and services independently of the manufacturer or the supplier. Hence, conformity assessment service providers shall pay attention to national needs, be transparent, be non-discriminatory and avoid unnecessary barriers to trade. Their activities shall be based on international standards and

[19] The accreditation desk should not be part of the Guyana National Bureau of Standards.

guidelines. They shall favor mutual recognition arrangements that would minimize retesting or recertification, thereby helping to reduce conformity assessment costs.

Testing and inspection services, certification of product and management systems, and personnel for technical regulations or the market place may be provided by laboratories and inspection bodies in both the private and public domain that demonstrably fulfill the requirements of the relevant international standards and are accredited by an internationally recognized accreditation body.

In order to provide conformity assessment services, especially to the SME sector, the government will establish, maintain and continuously improve the conformity assessment service providers and all quality-infrastructure related institutions in the public domain. These would include inspection agencies, calibration and testing laboratories and certification bodies.

Whilst enhancing the capacity of the public institutions, the government will create a policy environment that will not hinder, but rather facilitate the development of private conformity assessment service providers, and the government will utilize their services in public procurement and technical regulation provided that they can demonstrate their technical capability through accreditation.

As a measure to ensure that the state is provided with quality products and services, the government will utilize Guyana's national standards to the fullest extent possible in state purchases, and will demand independent proof of compliance of delivered products and services with relevant standards through an appropriate mix of inspection, testing and certification. Establishing an incentive, i.e. preferential treatment, for enterprises that distinguish themselves in the process of quality improvement through product and/or system certification will be part of the overall approach.

EDUCATION AND TRAINING

Government and private academic institutions shall take the necessary steps to ensure that various stakeholders have the opportunity to obtain the knowledge and the skills they need to cope with the economy triggered by globalization challenges. Moreover, they should establish appropriate programs at different education levels including specialized adult training programs, with the aim to improve the quality culture, and to develop the specialized knowledge and expertise required for implementing the Quality Policy. They shall also take measures to develop and implement training and registration programs for auditors and consultants in quality and environmental management systems, health and safety in the workplace, and other relevant certification activities as defined in international requirements.

(INFORMATION) NETWORK

The creation of an adequate (information) network that involves all the various quality infrastructure institutions is decisive in guaranteeing the success of quality-related activities. This information network will be spearheaded by the Guyana National Bureau of Standards as the appointed TBT Enquiry Point and the Ministry of Agriculture as the appointed SPS Enquiry Point, but which must be extended to include all the relevant stakeholders (public and private).

ROLE OF OTHER STAKE HOLDERS

The private sector. Improve the quality of its products and services, hasten the introduction of international practices in the field of quality and so contribute to the competitiveness of Guyana's products and services; b) Participate actively in representative structures and technical committees dealing with standardization, accreditation and metrology or related activities; c) Participate in and promote national quality events, including national quality awards and the like; d) Participate in and promote quality dissemination activities, such as congresses, seminars and the publication of information in journals, magazines and other suitable means of communication; e) Develop human resources, training the people needed for improving the quality of products and services; f) Invest in the development of quality infrastructure, benefiting from the improved market opportunities that result from the implementation of the Quality Policy and g) Participate in financing activities that support quality.

Non-governmental Organizations (NGOs) The successful implementation of the Quality Policy will require the active involvement of all of society, in particular of associations for the promotion of quality and excellence, of chambers of industry, trade and commerce, and of the media in order to realize proclaimed objectives. Therefore, within the implementation process of the Quality Policy, NGOs are encouraged to take the following initiatives in coordination with relevant partners: a) Promote and participate in quality education and training activities; b) Participate in the dissemination of quality-related information; c) Implement activities that promote the improvement of quality and the environment; d) Promote the representation of relevant bodies in the technical committees in the field of standardization, metrology, accreditation and quality and e) Propose suggestions on quality policy improvement and better ways to implement the Quality Policy. The media is encouraged to become actively involved in the dissemination of information related to standardization and quality and the improvement of productivity, thereby contributing to the multiplication effect and the effect on the country.

RELATIONSHIP WITH INTERNATIONAL ORGANIZATIONS

As is the case with technology, standards, metrology, accreditation and conformity assessment develop at a rapid pace at the international level. It is, therefore, especially important that the NQI institutions of Guyana are actively involved in the appropriate international forums, so that Guyana's regulatory authorities and industry remain firmly in touch with developments at the international level. Therefore, all the stakeholders have to cooperate to create conditions favorable for active participation in international organizations related to the various functions of the NQI institutions. These would include ISO, IEC, OIML, BIPM, CAC, ITU, IPPC, OIE, IAF, ILAC, etc. This would be achieved through strengthening the affiliation with these organizations and supporting the participation of representatives of Guyana's public and private sectors in the relevant general assemblies and technical committee meetings where it is of relevance to Guyana.

The government, together with the NQI institutions and all relevant stakeholders from organized business and organized industry, shall remain actively involved in the standardization and quality-related structures of the CARICOM at all levels, such as the CROSQ (including its various Subcommittees) as provided for in the CARICOM Agreement, so as to ensure that Guyana's interests are properly catered for.

Likewise, all the stakeholders shall cooperate to create conditions conducive to an effective understanding and participation in the implementation of the WTO-TBT and SPS Agreement requirements, as well as the CARICOM, thereby collectively and individually fulfilling Guyana's obligations in regional and international matters related to the Quality Infrastructure.

FINANCING THE NQI

In particular, the government will retain the full responsibility for the funding of: a) The development and publication of national standards by the Guyana National Bureau of Standards as well as the maintenance of the standards information center; b) The establishment and maintenance of the national measurement standards by the *[National Metrology Institute]*; c) The establishment and maintenance of a national calibration service until it has developed to the point where its users will be able to fund it; d) The legal metrology services in so far as they cannot be funded through the fees and levies paid by the users of measuring equipment falling within the scope of legal metrology legislation; e) The establishment and short-term operational expenses of the NAFP, until such time as the number of accredited organizations reaches a level that the accreditation fees can do so; f) The establishment and maintenance of the membership of the Guyana National Bureau of Standards, NAFP, [National Metrology Institute], the legal metrology department and other relevant institutions in international and regional organizations such as ISO, IEC, BIPM, OIML, CAC, IAF, ILAC, etc. relevant to the proper functioning of NQI activities; g) The establishment and maintenance of testing and calibration capacity in support of the Quality Policy, with the proviso that these services be commercialized as soon as possible in order not to compete with private industry on an unequal basis. Strategically important testing capacity that can never be successfully commercialized will continue to receive the appropriate funding until such time as it is no longer a strategic necessity and h) The establishment of proper market surveillance operations to ensure that technical regulations are complied with. The funding for the testing and certification of products falling within the scope of technical regulations remains the responsibility of the suppliers. In order not to distort the market, and to provide for a steady self-earned income of the NQI institutions in the public domain, private industry, and also government institutions that make use of the conformity assessment services of the NQI, have the responsibility to pay for such services. The pricing levels shall be set by the NQI institutions to cover costs, taking into consideration the capacity of especially the SME sector to pay for such services. Any governmental financial support for the SME sector shall not be demanded as a reduction of prices of the NQI institutions, but will be channeled to the SMEs in another way.

LEGAL FRAMEWORK

To facilitate the implementation of the Quality Policy, the government of Guyana is committed to reviewing the existing legal framework as a priority measure, to benchmarking it against international best practices, and to ensuring that it complies with the international and regional obligations of Guyana.

Legislation that will be reviewed or developed shall include legislation for, but not limited to, the following: a) Establishment of the Guyana National Bureau of Standards and the requirements for the development and publication of Guyana's national standards; b) Fundamental metrology and the establishment of a [National Metrology Institute]; c) Elevating the weights and measures

activity to a legal metrology activity; d) Establishment of a NAFP and e) Definition of a National Technical Regulation Framework and the establishment of a Technical Regulation Office in the Ministry of Business.

In establishing the Quality Infrastructure as envisaged in this policy, the current institutions have to be reviewed, new structures have to be established and responsibilities have to be allocated to ensure that the quality infrastructure environment is conducive to delivering the services required to support Guyana's development policy. An integrated approach is required to ensure that there are no oversights, overlaps, duplication and conflicts of interest amongst the various institutions that constitute the Quality Infrastructure of Guyana.