



GOVERNMENT OF ST. KITTS AND NEVIS
THE MINISTRY OF INTERNATIONAL TRADE, INDUSTRY,
COMMERCE, CONSUMER AFFAIRS AND LABOUR

Developing a National Quality Policy for St. Kitts and Nevis

*Assessment of the National Quality Infrastructure
in St. Kitts and Nevis*

NOVEMBER 2021 - 2030





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This document is the outcome of a consultancy by Mesopartner PartG on behalf of the CARICOM Organisation for Standardisation and Quality and the St Kitts and Nevis Bureau of Standards as funded by a grant from the Caribbean Development Bank.

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ACRONYMS AND ABBREVIATIONS

ABBS	Antigua and Barbuda Bureau of Standards
AIHA LAP	AIHA Laboratory Accreditation Programs
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
BIPM	International Bureau of Weights and Measures
BSI	British Standards Institute
CAB	Conformity Assessment Body
CARICOM	Caribbean Community
CCA	Caribbean Cooperation for Accreditation
CDB	Caribbean Development Bank
CEBR	Centre for Economics and Business Research
CEDAW	Committee on the Elimination of Discrimination against Women
CFB	Clarence Fitzroy Bryant
COPANT	Pan American Standards Commission
CRCP	CARICOM Regional Code of Practice
CREEBC	CARICOM Regional Energy Efficiency Building Code
CROSQ	CARICOM Regional Organization for Standards and Quality
CRS	CARICOM Regional Standard
DR	Dominican Republic
ECCB	Eastern Caribbean Central Bank
EU	European Union
FSRC	Financial Services Regulatory Commission
GDP	Gross Domestic Product
GRP	Good Regulatory Practice
IAAC	Inter American Accreditation Cooperation
IAQ	Indoor Air Quality
IDB	Interamerican Development Bank
IEC	International Electrotechnical Commission
ISO	International Organization of Standardization
KE	Key Expert

LAC	Latin America and the Caribbean
MIKE	Marketing Knowledge and Education Management
MITICCAL	Ministry of International Trade, Industry, Commerce, Consumer Affairs and Labour
NAB	National Accreditation Body
NAFP	National Accreditation Focal Point
NBSA	National Bureau of Standards Act
NEVLEC	Nevis Electricity Company Limited
NIOSH	National Institute for Occupational Safety and Health
NKE	Non-Key Expert
NMI	National Metrology Institute
NQI	National Quality Infrastructure
NQP	National Quality Policy
NSB	National Standards Body
NSC	National Standards Council
ODA	Official Development Assistance
OIML	International Organization of Legal Metrology
PS	Permanent Secretary
PSC	Project Steering Committee
PTB	Physikalisch-Technische Bundesanstalt (German National Metrology Institute)
QI	Quality Infrastructure
QICA	Quality Infrastructure Committee for the Americas
QSEC	Quality for Sustainable Energy in the Caribbean
RDT	Rapid Diagnostic Tool
RQI	Regional Quality Infrastructure
RQP	Regional Quality Policy
SADCAS	Southern African Development Community Accreditation Services
SBS	Seychelles Bureau of Standards
SIDS	Small Island Developing States
SKELEC	St. Kitts Electricity Company
SKN	St. Kitts and Nevis
SKNBS	St. Kitts and Nevis Bureau of Standards

SKNCIC	St. Kitts and Nevis Chamber of Industry and Commerce
SKNNS	St. Kitts and Nevis National Standard
SLBS	Saint Lucia Bureau of Standards
SPS	Sanitary and Phytosanitary Measures
STEM	Science, Technology, Engineering, and Mathematics
TBT	Technical Barriers to Trade
TOR	Terms of Reference
TTASCA	Trinidad and Tobago Accreditation Service for Conformity Assessment
TTBS	Trinidad and Tobago Bureau of Standards
TVET	Technical and Vocational Education and Training
TVOC	Total Volatile Organic Compounds
TWB	The World Bank
UK	United Kingdom
UL	Underwriters Laboratories
UNECE	United Nations Economic Commission for Europe
UNIDO	United National Industrial Development Organization
USOSHA	US Occupational Safety and Health Administration
VIM	International Vocabulary of Metrology
WHO	World Health Organization
WICT	Women in Construction Trades
WTO	World Trade Organization



Introduction

INTRODUCTION

As a Small Island Developing State (SIDS), St. Kitts and Nevis (SKN) faces several obstacles in its path towards sustainable development. Some of these include limited resources, small and inadequate labour pools, vulnerability to natural disasters and external shocks, as well as an overdependence on international trade (Harmes-Liedtke, 2021; IADB, 2010). The Federation's growth and development are hindered by high communication, energy, and transportation costs; irregular international transport; disproportionately expensive public administration and infrastructure; and little to no opportunity to create economies of scale (Harmes-Liedtke, 2021). Furthermore, private entrepreneurship and civil society engagement are crowded out due to the prevalence of government-led economic development (IADB, 2010).

One step towards overcoming some of these challenges is strengthening the Federation's overall National Quality Infrastructure (NQI) and integrating it into the international Quality Infrastructure (QI). This will improve product safety, quality features and competitiveness; and increase consumer protection so that the country will fully benefit from the global market. For SKN, like other SIDS, it is important for the national quality infrastructure to develop based on the current and potential demand for quality-related services, while taking its constraints into consideration (Harmes-Liedtke, 2021). Therefore, while it may be economically feasible to have basic laboratory, certification and inspection facilities in the country; some less critical-mass services, like accreditation of testing laboratories, certification and inspection bodies, would be cheaper to import (Harmes-Liedtke, 2021). Regional cooperation is also very important.

SKN is actively working towards its growth and development as a SIDS. Within this context the Ministry of International Trade, Industry, Commerce, Consumer Affairs and Labour (MITICCAL) is reassessing the overall arrangement of the country's existing NQI. The concept of QI, broadly defined, includes the scope of action of the St. Kitts and Nevis Bureau of Standards (SKNBS), including its competences in the areas of metrology, standards, and conformity assessment; the competences of other regulatory authorities; as well as domestic and foreign providers of conformity assessment services.

This report is an outcome of a consultancy by Mesopartner PartG on behalf of the CARICOM Organization for Standards and Quality (CROSQ) and supported by the Caribbean Development Bank (CDB) for the elaboration of a National Quality Policy (NQP) in St. Kitts and Nevis. This report examines and describes the current state of development of the NQI in the Federation.

The central objective of the analysis is the actual and potential demand of the national economy for QI services. A gap analysis identifies the shortcomings between demand and the current supply of quality services. The systematic closing of these gaps, as well as the general sensitization of the actors to questions of QI and the strengthening of a quality culture in SKN will be the subject of the NQP.

The consultancy team collected the information organised in this report over the period of April to July 2021. Consultants worked closely with the Director and staff of the SKNBS, conducting interviews and meetings with key stakeholders from the private and public sectors. For the project, a Steering Committee; chaired jointly by the Director of the SKNBS, Mr. Stuart Laplace, and the Permanent Secretary (PS) of the MITICCAL, Mrs. Jasemin Weekes; was established and served as a sounding board during the development of the report. This report sets the analytical ground for the development of the NQP for the Federation of St. Kitts and Nevis.

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Methodology

METHODOLOGY

APPROACH

The development of the St. Kitts and Nevis National Quality Policy follows international guidelines. Specifically, the consultancy is based on UNIDO’s Guide for the Development of National Quality Policies and the PTB’s International Technical Cooperation publications and The World Bank Toolkit for NQI assessments. This is illustrated in *Figure 1*.

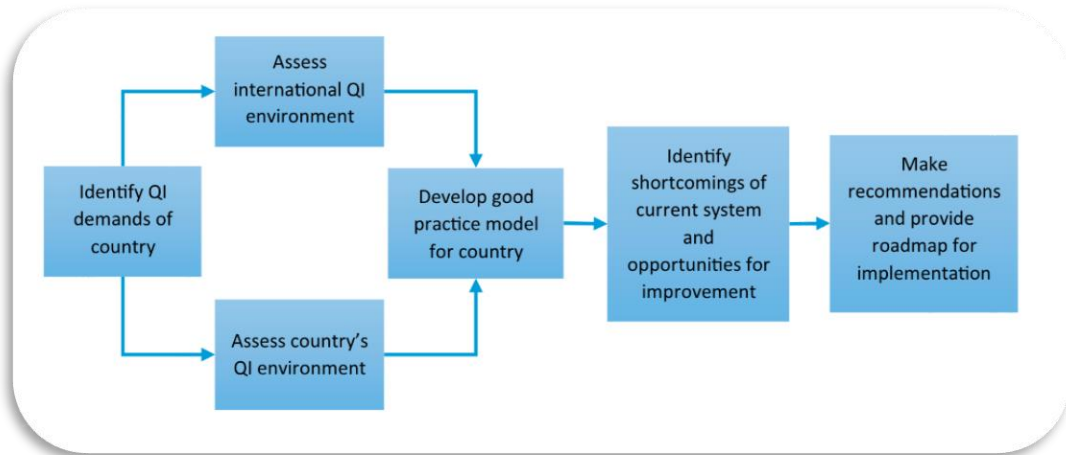


Figure 1: Designing the future National Quality Infrastructure

Source: World Bank and PTB (2018)

The QI ecosystem of this region is complex. As such, a two-state process will be applied to analyse the current supply of QI services to ensure that the decision-making process is more efficient (Figure 1). Following the initiation, the project starts with a rapid diagnostic of demand for and supply of QI services, resulting in an inception report. It is followed by a much more comprehensive evaluation of the QI ecosystem demand and supply situation in the country. A development project can then be designed to address some or all the identified gaps, depending on development project objectives, client capacity, and available resources. Guidance on implementation and monitoring modalities are also covered.

During nine (9) months the consultancy team will support the formulation of the NQP. In St. Kitts and Nevis, the consultancy will organize the following process:

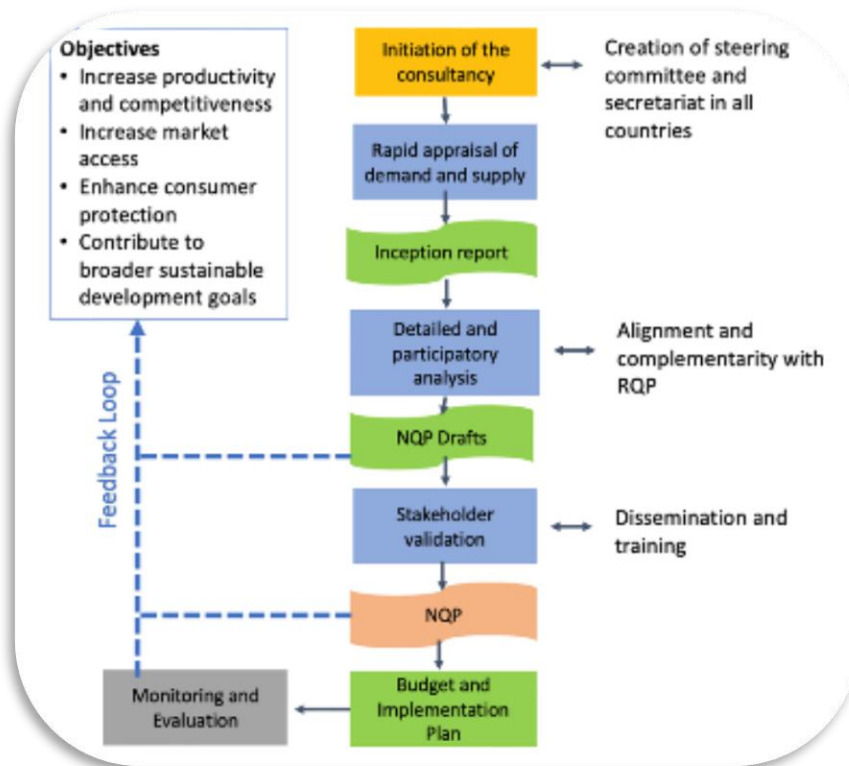


Figure 2: NQP formulation process

Source: Mesopartner based on World Bank QI Toolkit (World Bank & PTB, 2018)

ADAPTING TO THE REALITY OF SMALL ISLAND STATES

With its 53000 inhabitants, St. Kitts and Nevis is considered to be a SIDS. The economy is strongly characterized by tourism and financial services. Relevant, though comparatively small, are traditional agriculture and manufacturing industries. Many goods consumed in St. Kitts and Nevis must be imported, so that the safety and health of consumers and the environment must be protected.

To guide the National Quality Policy, Mesopartner proposes benchmarking with other SIDS. It is proposed to select countries from the Caribbean, as well as comparable countries from Africa. This will be discussed in more detail in the section “Benchmarking of the NQI” in Chapter 0.

Finally, the approach taken considered the following as winning strategies for the development of a suitable and sustainable NQP:

- Stakeholders’ participation produces superior solutions and ensures ownership and success for the policy formulation and implementation; Early participation at all levels (especially leadership) is a critical success factor. Therefore, the consultant will emphasise the early identification and engagement of key stakeholders as a critical initial milestone.
- The internationally accepted model of the QI of the Federation will include demand driven services in testing, metrology, inspection, certification, and accreditation.
- Given the development goals and trading strategy of the Federation, the NQP must foster QI that is locally impacting, regionally synchronized and globally integrated. For example, local factors, such as the country’s strategy to diversify its economy to include a greater emphasis on contributions from the tourism and service sectors, are major considerations.

- Consultation with CROSQ will be critical to ensure regional perspectives on findings, analysis, and recommendations. Any such consultation must have as its objective, the structural alignment of the national and regional perspective for national implementation success.
- The use of existing assessment information (e.g., sector and NQI reports) and proven value chain stakeholder facilitation methodology, like CALIDENA, to accelerate the process and produce useful results. We will build on previous experiences to promote user-orientation of the NQI.

PRINCIPLES

The success of the development and implementation of a National Quality Policy depends, among other things, on the following factors (UNIDO, 2016):

SHARED VISION OF QUALITY

National and regional decision-makers from public, private or civil society need to fully embrace the concept and tenets of quality culture development as enshrined in this policy, and functionally cooperate to promote and use internationally recognized quality infrastructure services across the region to aid in sustainable development.

POLITICAL COMMITMENT TO QUALITY

Government officials need to demonstrate support for this Policy by formulating National Quality Policies and establishing multi-sectoral National Quality Councils to interpret and implement these agendas. While this may be a sensitive issue, there is a great need for the state to commit to quality. Doing so creates political deliverables and as such governments may be reluctant to initiate such commitments. However, there is a tendency to follow guidelines placed in the policy in this regard. It may be useful to explore this aspect further in more detail as the issues that follow depend on the state's commitment.

WHOLE GOVERNMENT APPROACH

The development of Quality Infrastructure started in the context of international trade. The legislation and technical regulations were created independently with a focus on domestic interest. When Caribbean countries participate more actively in global trade, often a tension arises between the alignment with international standards and the existing technical regulations. Therefore, it is important to involve all regulatory bodies, not only the trade institutions, in developing the NQI.

ENABLING LEGISLATION FOR QUALITY

Legislators and policymakers need to undertake systematic reviews of regulatory instruments for reform, to prompt the requisite attitude and behavioural shift in society to continuous quality improvement.

Regulators need to embrace Good Regulatory Practices (GRP) and continuous quality improvement of product regulations.

RESOURCE MOBILIZATION IN QUALITY

Leading technical support institutions can be accessed through strategic partners involved in the promotion of QI and lead to more direct access to financial support. The consulting team will leverage its good professional and positive relationship with these institutions, and knowledge of their programmes to seek technical and financial support for the implementation of the NQP.

INFORMATION AND COMMUNICATION ON QUALITY

Communication among institutions, stakeholders and citizens is a critical and complex component of the National Quality Policy and the governance of the Quality Infrastructure. The consultants propose to coordinate efforts among these entities to develop a communication plan for the NQP.



Socioeconomic Context

SOCIOECONOMIC CONTEXT

ECONOMIC SNAPSHOT

St. Kitts and Nevis is a twin-island federation located in the Leeward Islands group of the Lesser Antillean segment of the Caribbean Archipelago (Ministry of Sustainable Development, 2006). Up until the 1970’s agriculture, predominantly sugar, formed the backbone of the country’s economy. After the closure of the sugar industry in 2005, the government embarked on a rapid economic diversification program which targeted agricultural diversification, as well as the stimulation of other sectors of the economy (Ministry of Sustainable Development, 2006). Today services, mainly tourism, have replaced sugar as the economy’s mainstay, accounting for over half of the country’s Gross Domestic Product (GDP) (Central Intelligence Agency, 2021; FCDO, 2021). The manufacturing industry also plays a key role in the country’s economy, contributing about 25% of its GDP. Despite its small size, the Federation has managed to secure a place in the high-income country group and in 2019 ranked number 44th economy in the world in terms of GDP per capita (OEC, n.d.). A breakdown of the country’s main GDP contributors is presented in *Figure 3*.

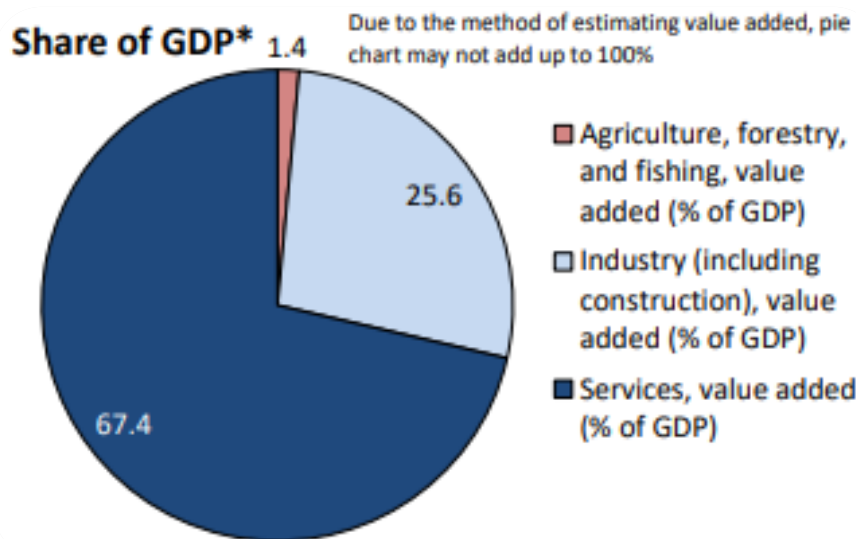


Figure 3: Main GDP contributors in St. Kitts and Nevis (most recent available data)

Source: (FCDO, 2021)

EXPORTS

In 2019, St. Kitts and Nevis exported a total of \$61.2 million and ranked 198 out of 225 countries in terms of total exports (OEC, n.d.). This is a significant decrease from the \$103 million exported in 2014(OEC, n.d.). The country’s main export partners are the United States (76.1%), Saint Lucia (2.96%), St. Vincent (2.66%) and the Grenadines and Antigua and Barbuda (2.34%). Other export partners include Canada, Germany, Denmark, China, Singapore, Brazil, and Switzerland, among others.

In recent years, the country’s top exports have been low-voltage protection equipment, broadcasting equipment, other measuring instruments, electric motor parts and electrical transformers. A visual representation of the country’s exports can be seen in *Figure 4*. In 2019, St. Kitts and Nevis was the 69th largest exporter of low-voltage protection equipment in the world, exporting \$14.9 million in low-voltage protection equipment, which accounted for 23.4% of its total exports. In the same year the Federation exported \$13.7 million in broadcasting equipment, which accounted for 22.3% of its total exports, and made it the 70th largest exporter of broadcasting equipment in the world (OEC, n.d.).

The country was also the 59th largest exporter of other measuring instruments in the world, exporting a total of \$10.3 million in other measuring instruments, which accounted for 22.3% of its total exports (OEC, n.d.).

Other important export products for the country in 2019 included recreational boats (\$3.38 million), beer (\$1.93 million), hard liquor (\$968,000), postage stamps (\$539,000), other animal products (\$471,000) and molluscs (\$64,400) (OEC, n.d.).

With respect to agriculture some of the country’s main products include coconuts, tropical fruit, roots/ tubers, vegetables, sweet potatoes, pulses, watermelons, carrots/turnips, eggs, and tomatoes (Central Intelligence Agency, 2021). In 2019, the Federation exported \$759,000 in other vegetables, tropical fruits, rice, cinnamon, tea, spices, spice seeds, cloves, cabbages, perfume plants, legumes, other fruits and cut flowers.

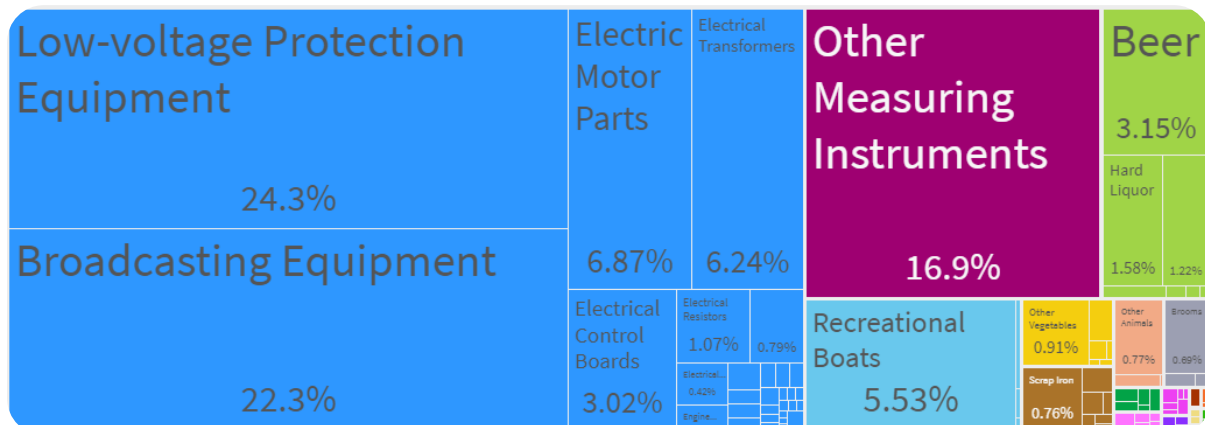


Figure 4: St. Kitts and Nevis' exports

Source: Observatory of Economic Complexity (n.d.)

IMPORTS

St. Kitts and Nevis mainly imports from the United States (59.1%), Peru (6.02%), Germany (4.67%), United Kingdom (3.26%), China (3.08%), Japan (2.92%), Barbados (2.89%) and Canada (2.13%) (OEC, n.d.). The Federation’s main import commodities include refined petroleum (\$54.5 million), jewellery (\$19.8 million), passenger and cargo ships (\$16.8 million), cars (\$12.6 million), poultry meat (\$5.72 million), cement (\$5.32 million), postage stamps (\$4.31 million), base metal watches (\$3.71 million), delivery trucks (\$3.47 million), packaged medicaments (\$3.25 million), other measuring instruments (\$2.64 million) and hard liquor (\$2.63 million). A visual representation of the country’s imports can be seen in *Figure 5*.

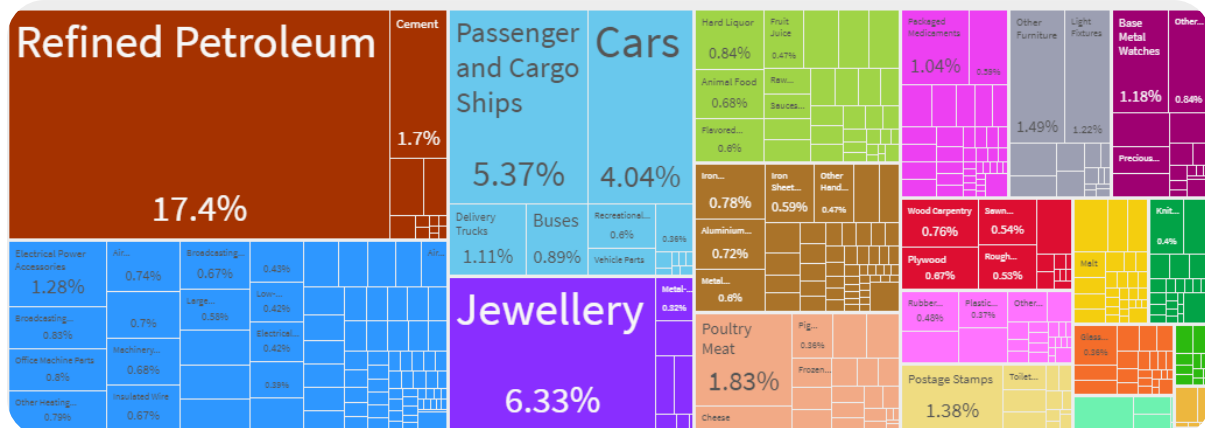


Figure 5: St. Kitts and Nevis' imports

Source: Observatory of Economic Complexity (n.d.)

ECONOMIC IMPACT OF COVID-19

The global shutdown because of the COVID-19 pandemic has severely affected the country's economy. Before the pandemic, St. Kitts and Nevis experienced mostly positive economic growth over a 5 year period (CS Global Partners, 2021). However in 2020, real annual GDP growth decreased by 18.7% (FCDO, 2021). This can be seen in Figure 6. According to preliminary estimates, the Federation's economy contracted by 10.7% - the steepest decline since records began (Eastern Caribbean Central Bank, 2020). The value of the country's imports decreased by 19.7% compared to 2019, while the value of its exports decreased by 12.07% (St. Kitts and Nevis Statistics, 2020a).

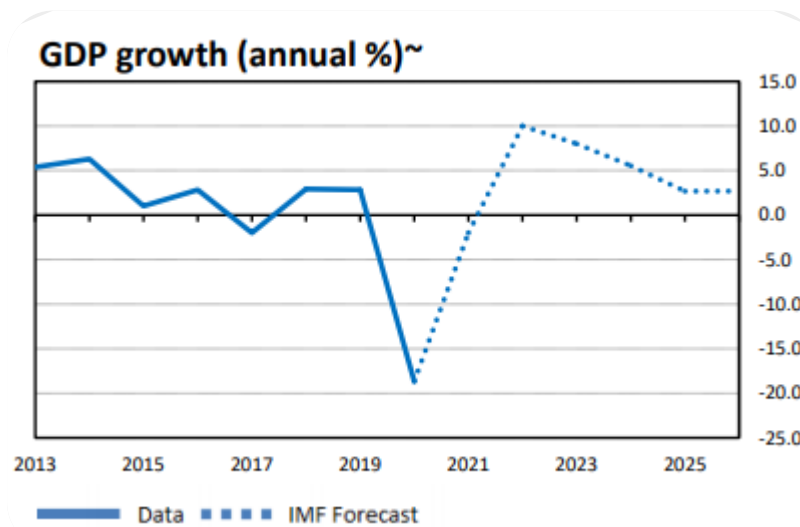


Figure 6: Annual GDP growth rate in St. Kitts and Nevis (2020 data)

Source: (FCDO, 2021)

The closure of the country's borders to international travel for approximately half of 2020, followed by a subdued reopening, resulted in drastic negative effects to the tourism sector; as well as ripple effects to other sectors (St. Kitts and Nevis Statistics, 2020b). According to estimates, the hotels and restaurants sector saw a 74.1% decrease in value-added because of a substantial decline in tourist arrivals. The transport, storage and communications sector saw a 27.6% contraction in value-added due to a decline in cargo imports, as well as in air and sea passenger services, stemming from lower levels of consumer demand and industrial production.

The construction sector saw a 16% decrease in value-added since work on major projects, like public infrastructure, condo/villa developments and fall-off residential construction activity was reduced (Eastern Caribbean Central Bank, 2020). There were also contractions in value-added in the manufacturing (6%); real estate, renting and business activities (4%); and financial intermediation (2.2%) sectors (Eastern Caribbean Central Bank, 2020). The only sectors to experience growth in 2020 were the public and social sectors, with a 2.2% increase in value added, as a result of countermeasures taken by the government to reduce the effects of the pandemic (Eastern Caribbean Central Bank, 2020).

The effects of the pandemic had a positive impact on the Federation's trade balance. There was substantial improvement with a negative decrease in the trade balance by 20.73% (St. Kitts and Nevis Statistics, 2020a).

Nevertheless, after receiving vaccine donations and rolling out a mass vaccination programme, the country is already making efforts to adapt and recover (CS Global Partners, 2021). According to Prime Minister Timothy Harris, the economy is expected to grow by 5.5% in 2021 (CS Global Partners, 2021). This growth is expected to come from the construction, manufacturing, agriculture, ICT, and services sectors. A major contribution is expected to come from ongoing construction projects, some of which include the resurfacing of main roads on the islands; residential construction; and the construction of a solar farm, a new high school and health centres (CS Global Partners, 2021). In addition to this, the country's tourism industry is slowly recovering as cruise ships carrying vaccinated passengers are expected to start arriving from July 2021 (Pfalz, 2021). Furthermore, the 2021 Hero Caribbean Premier League (CPL) is scheduled to take place in St. Kitts and Nevis from August 2021, which is expected to bring more tourists and give the country an additional economic boost (Author CPL, n.d.).



National Quality Infrastructure

NATIONAL QUALITY INFRASTRUCTURE

OVERVIEW

The NQI is the totality of the institutional networks and the legal framework that regulate it. The regulating part is responsible for formulating, editing, and implementing standards and technical regulations and providing evidence of compliance, whether through inspection, testing, certification, metrology and/or accreditation. These aspects are interrelated and should to a certain extent give the buyer, consumer, user, or authorities the necessary assurance that goods, processes, practices, or services conform to expectations.

Multiple organizations must work together to increase and facilitate trade, boost industrial and state efficiency and effectiveness, and promote consumer welfare, safety, and sustainable development. This is illustrated in *Figure 7*, which shows the different elements involved in the NQI namely:

- **Governance:** Regulatory Framework and Quality Policy; (i.e., The government of St. Kitts and Nevis)
- **Quality Infrastructure Institutions:** Metrology, Standardization and Accreditation; (i.e., the Bureau of Standards and the Department of Agriculture)
- **Quality Infrastructure Services:** Quality promotion, Conformity Assessment, Testing, Certification, Inspection, Calibration and Verification; (i.e., the Carib Brewery, Joseph N France General Hospital Laboratories, Customs and Excise, etc)
- **Enterprises:** Enterprise Upgrading and Value Chain Development; (i.e., Chamber of Commerce, Fisherfolk associations, micro-enterprises, small and medium enterprises) and
- **Consumers:** Raising awareness and Capacity building (Government Information Services and the websites or Facebook pages of the various government departments, Bureau of Standards, etc).

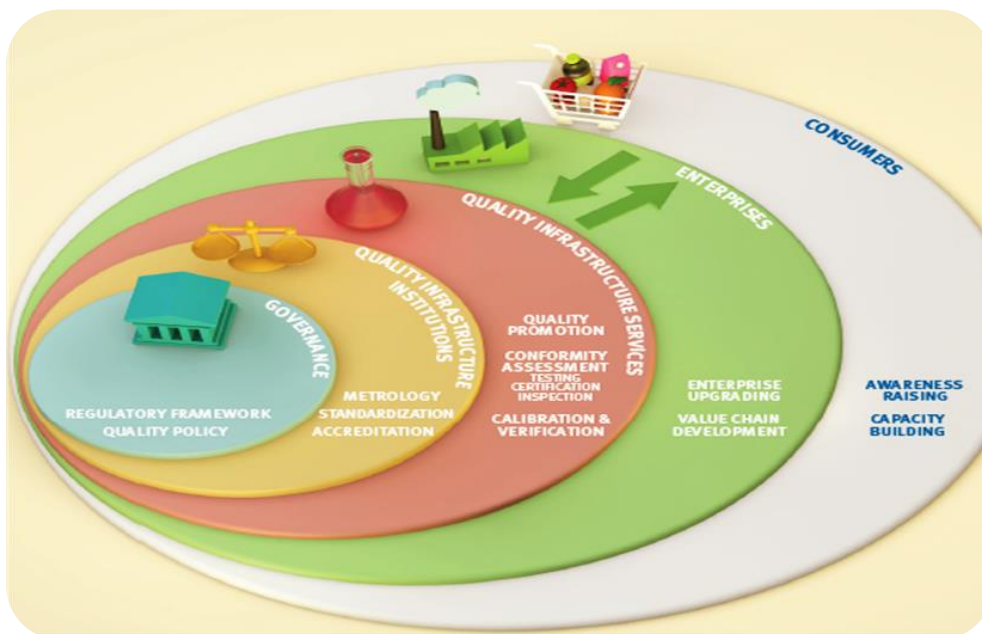


Figure 7: Elements of National Quality Infrastructure

Source: UNIDO (2016)

The goal of QI is to support the development of a *quality culture* in each country. Consumers and users are informed about the non-monetary characteristics of products and services and guide their purchasing decisions accordingly.

The companies and public service organizations should be enabled to meet the preferences of demanding customers in the country and abroad and improve continuously their products and services. The quality requirements of international buyers are seen as a key driver for the development of the NQI.

In that sense, the QI should help the national economy prosper, improve the local population's living conditions, and instil trust in the goods and services produced in the country for the visitors and trading partners globally.

The SKNBS is the foremost QI service provider in the Federation. It came into being on 8th March 1999, under the National Bureau of Standards Act No 7 of 1999, now the National Bureau of Standards Act, Cap. 23:15. The Act provides for the establishment of a Standards Council to administer the affairs of the Bureau.

The SKNBS has the major responsibility of protecting the environment, health, and safety of consumers. Its activities also focus on preparing, promoting and generally adopting standards on a national, regional or international basis, relating to structures, commodities, materials, articles and other things offered to the public commercially, hence promoting standardization, quality assurance and simplification in industry and commerce (SKNBS, 2021).

The SKNBS is a publicly funded government department and faces financial constraints to conduct its programmes and hire staff. The SKNBS is currently benefiting from two major projects that will see the upgrade of the laboratory and metrology services. However, the concern is whether the SKNBS will have the financial resources needed beyond the project to continue to expand and upgrade its services.

LEGAL FRAMEWORK AND INSTITUTIONAL SETTING

In principle, the institution responsible for the development and provision of quality services in SKN is the SKNBS. The legal basis for the SKNBS is the National Bureau of Standards Act of 1999 which was later revised on the 31st of December 2002.

The SKNBS has the following functions and is responsible for the provision of different services:

- Regarding standards setting:
 - Prepare, promote and generally adopt standards on a national, regional or international basis relating to structures, commodities, materials, articles and other things offered to the public commercially
 - Promote standardisation, quality assurance and simplification in industry and commerce
 - Prepare, frame, modify or amend specifications and codes of practice
 - Facilitate the implementation of standards in the Federation
 - Collect and disseminate information on standards and related technical matters, nationally, regionally, and internationally
 - Recognise as a national standard, in relation to an article or process, any standard established by any other body approved by the Bureau.
 -
- Metrology functions:
 - Act as custodian of the national standards of mass, length, capacity, time, temperature, and electrical measurement.

- Regarding certification, testing, and calibration services:
 - Certify those products, commodities and processes that conform to the national standards
 - Test precision instruments, gauges, and scientific apparatuses, for the purpose of determining the accuracy and the calibration of standards used in industrial and commercial activities
 - Maintain testing laboratories for the purpose of testing and providing facilities for examining commodities, products, materials, processes, and practices, and in so doing to conduct such research and investigations as may be necessary.
- Control functions:
 - Publish standard marks of any design containing such details as the Bureau thinks fit for the purpose of representing a particular standard
 - Control, in accordance with the provisions of this Act, the use of standardisation marks and distinctive marks.
- Promotion activities:
 - Co-ordinate the efforts of producers and users of materials, products, appliances, processes, and methods, for the improvement of the materials, products, appliances, processes, and methods.

The National Bureau of Standards Act of 1999 (NBSA) provides for a Standards Council to govern the SKNBS. It should be noted that the members of said Council have not been appointed. This has negatively affected the exercise of certain functions, such as (i) the possibility to operate and to be administered independently, or (ii) to prepare and pass product regulation under the scope of the NBSA, as well as other activities that must be approved by the NBSA's Standards Council. Consequently, the Federation does not have any consumer products regulations in place leaving it vulnerable to the possible importation of unsafe or harmful products.

The SKNBS has championed a process to update the NBSA. The current Act is almost two decades old and does not cover subjects that have evolved or arisen with time. The proposed draft Bill, titled "The Standards Act, 2015" follows recent legislation from other countries in the region. For example, these newer legislation models consider more updated definitions such as: "standards" (to define voluntary standards) and "technical regulations" (to define the regulation of products). Also, SKNBS will be able to avoid the need to double-gazette any voluntary standards it needs to adopt or adapt for the country. SKNBS has indicated that it is also in the process of defining the best way to establish a Standards Council within the new legal framework. The proposed Bill has recently had a first reading in the SKN Parliament.

Nevertheless, it must be mentioned that the proposed Bill covers more than just standards and should therefore be renamed to suit its contents. Additionally, this Bill was drafted six years ago and like the current Act, does not make provisions for certain issues that are now pertinent. This provides a unique opportunity for the Federation to further revise the Bill before it is passed by Parliament and become a pioneer and set the standard for other countries in the region to follow. Moreover, St. Kitts and Nevis can take advantage of the currently ongoing development of the NQP and the expertise of the consultants working on the project to inform the update of the Bill.

STATUS BY COMPONENTS

STANDARDS

In the modern world, standards have become the most successful tool to achieve economies of scale, reduce market inefficiencies and to enhance the possibilities for technology transfer. In addition, several other benefits have been granted by standards, such as: streamlining internal processes or scaling up operations and creating or entering new markets for companies; providing for the adoption of better regulations and giving safety, quality, and value for money to consumers.

The contribution of standards to the economy has been studied and their broad impact recognised. For example, a study undertaken by the British Standards Institute (BSI) and developed by the Centre for Economics and Business Research (CEBR) in June 2015 shows that the use of standards between 1921 and 2013 has contributed directly to 0.7% of GDP growth and 37.4% of labour productivity in UK's economy, which translates into an additional 8.2 trillion pounds of GDP, which come from the market-driven use of standards.

Standards are formal documents developed by a consensus process and issued by a recognised body. They contain the requirements to which a product, process or service should conform. Standards are used as the basis of technical regulations. In addition, there are international, regional, national, and private or industry standards. Today, national standards are mainly developed by the adoption or modification of regional and international standards.

Table 1 lists the seven St. Kitts and Nevis National Standards (SKNNS) that are currently in place in the country. The current numbering system for SKNNS does not correspond to ISO Guide 21. The recommended method of identification for identical adoptions consists of including the International Standard reference number in combination with or in association with the regional or national one.

Table 1: Standards adopted by the SKNBS

SKNNS-Number	Subject	Reference
001	Specification for Packaged Water	CRS1:2010
002	Labelling of Pre-Packaged Food	CRS5:2010
003	Labelling of goods — Part 1: General requirements	CRS55-1:2016
004	Labelling of goods — Part 2: Specific requirements for pre-packaged goods	CRS55-2:2016
005	CARICOM Regional Energy Efficiency Building Code (CREEBC)	International Energy Conservation Code, 2018 Edition by International Code Council
006	Tourism and Related Services — Requirements and Recommendations for Beach Operations	ISO 13009:2015
007	Environmental Management System	ISO 14001:2015

Source: Own elaboration based on <https://www.sknbs.org/> (retrieved 16/07/21)

The creation of the national standards is based on the national standards strategy, which was created for the first time in 2015 (it was developed for the period 2016-2018) with the support of ISO. After the end of the selective consultation, the National Standards Plan was discontinued.

Considering that ISO has issued over 20,000 standards and CROSQ has issued 39 product standards (CRS) and seven codes of practices (CRCP), the number of seven adopted standards is minimal, even considering the small size of St. Kitts and Nevis. There are no national standards to date for many vital areas of the economy and society of St. Kitts and Nevis. In addition, some light manufacturers on the islands use standards from abroad, which are completely disconnected from those of the SKNBS.

The SKNBS is a member of all relevant regional and international standards organisations. At the regional level, these are CARICOM Regional Organization for Standards and Quality (CROSQ) and the Pan American Standards Commission (COPANT); in the international context, International Organization for Standardization (ISO), International Electrotechnical

Commission (IEC) and Codex Alimentarius. In addition, there is membership in private standard organisations such as the American Society for Testing and Materials (ASTM).

However, SKNBS uses these memberships only sporadically. In interviews, it was confirmed that SKNBS employees have participated in individual training events organised by COPANT. The ISO website mentions that St. Kitts and Nevis is represented in the following four standard committees¹:

- ISO/TC 207 Environmental management
- ISO/TC 207/SC 1 Environmental management systems
- ISO/TC 228 Tourism and related services
- ISO/PC 325 Sex toys - Design and safety requirements for products in direct contact with the genitalia, the anus, or both

However, interviewees indicated that there is currently no active participation in these committees. No involvement of St. Kitts and Nevis representatives was reported from the other international and private standards organisations either.

In contrast, the participation of the SKNBS in the framework of CROSQ is more active. In addition to the CROSQ Council, representatives of the SKNBS also participate in project and training activities.

Like other CARICOM Member States, the SKNBS is a member of the Electrotechnical Commission (IEC) and could benefit from the Affiliate Country Program. Different from other CARICOM partners (see table), St. Kitts and Nevis has not yet adopted IEC standards.

Table 2: IEC standards adopted by CARICOM countries

Members with adoptions (number of adopted standards)	Antigua and Barbuda (6), Barbados (15), Suriname (183), Saint Lucia (6), Trinidad and Tobago (20)
Members without adoptions	Belize, Grenada, Haiti, St. Kitts and Nevis, St. Vincent, and the Grenadines

Source: Own elaboration based on IEC Website (retrieved July 17th, 2021)

¹ <https://www.iso.org/member/6201376.html?view=participation&t=PT> (retrieved 16/07/21)

Ten member states participate in the IEC Affiliate Country Programme. However, only half of them have adopted IEC standards. Suriname stands out, having adopted 183 IEC standards. However, we know from the work of the NQP in Suriname, that these standards are hardly used.

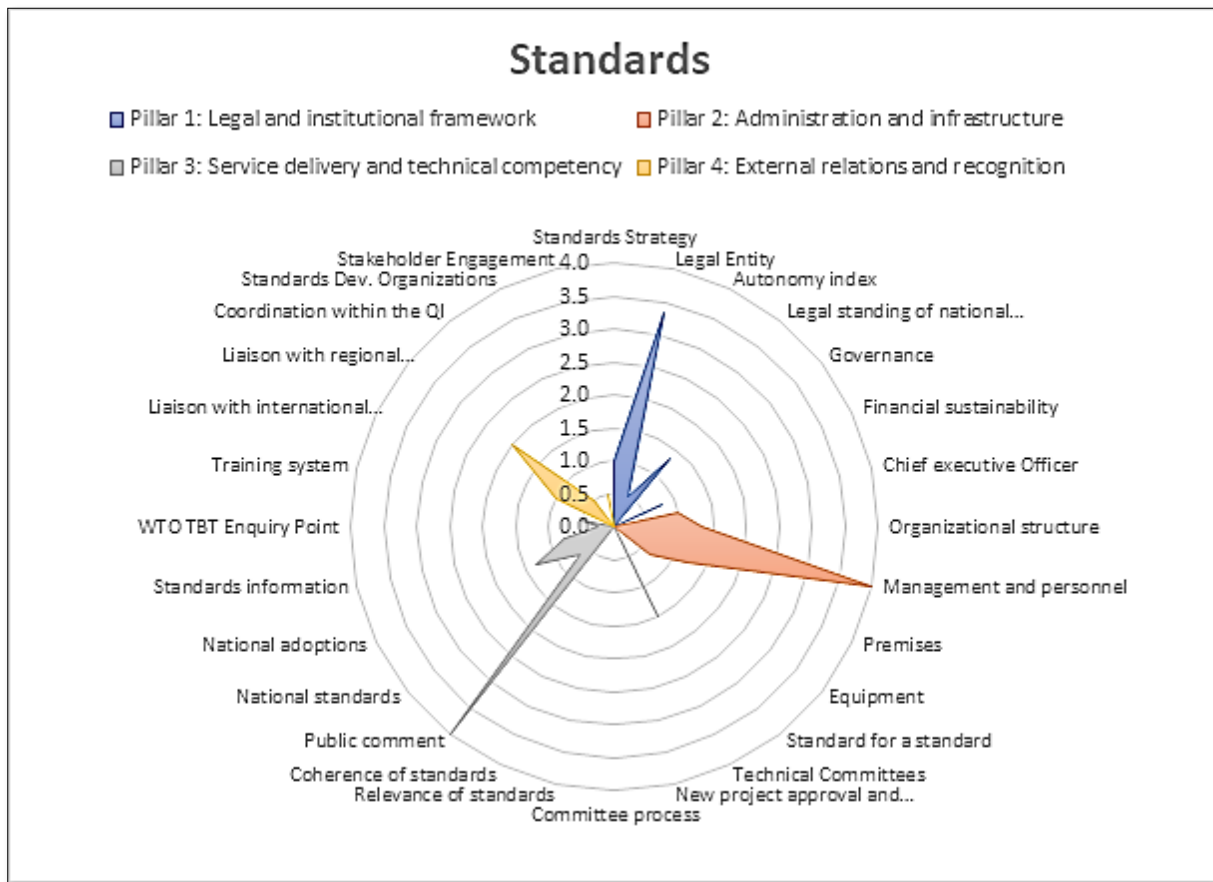


Figure 8: Rapid Assessment Standardization

Source: Elaboration by Mesopartner based on stakeholder interviews.

The radar chart figure summarises the assessment of standardisation in Saint Kitts and Nevis. The national standard system strengths include the institutional framework, management and staff, and membership in international standards organisations. Nevertheless, SKNBS is still a very young organisation with little autonomy and limited activities. It is a governmental organisation with minimal opportunities for private sector participation. A major stumbling block is that the Standards Council provided for in the Act has never been established. Financial autonomy is minimal, and the Bureau of Standards has little incentive to generate its revenue.

Innovations are heavily dependent on external funding, with the effect that when a funding project comes to an end, the related activities are not continued. An example of this is the National Standard Strategy funded by ISO in 2015, which has not been updated since.

For the private sector and for the public sector, the benefits of national standards are currently hardly known. The SKNBS is, so far, only a formal reference point for information on standards but is barely used in practice. There are considerable opportunities here for the systematic expansion of information services.

TECHNICAL REGULATIONS

Countries have the possibility to enact primary or secondary legislation to regulate different aspects of business and life in society. With regard to the regulation of products, the 1995 WTO TBT Agreement indicates that no country should be prevented from taking measures necessary to ensure the quality of its exports; or for the protection of human, animal or plant life or health, of the environment; or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade.

In the case of SKN, this prerogative has been exercised, but as mentioned before, such power has been limited by the fact that the SKNBS Standards Council has not been appointed. As indicated above, this situation that SKN faces leaves the country with little or no control over certain imports that may be deemed unsafe or pernicious for the environment, the inhabitants or, the plants and animals in the country.

A survey conducted by CROSQ in 2019 presented some difficulties for SKN regarding the regulation of products in all the areas covered by the exercise. Other countries in the region also faced similar issues. Since then, SKN has taken the findings of the survey into consideration and made positive efforts to improve the situation. While the Federation is in a better position than it was a couple of years ago, more work needs to be done in all four areas evaluated to reach international standards.

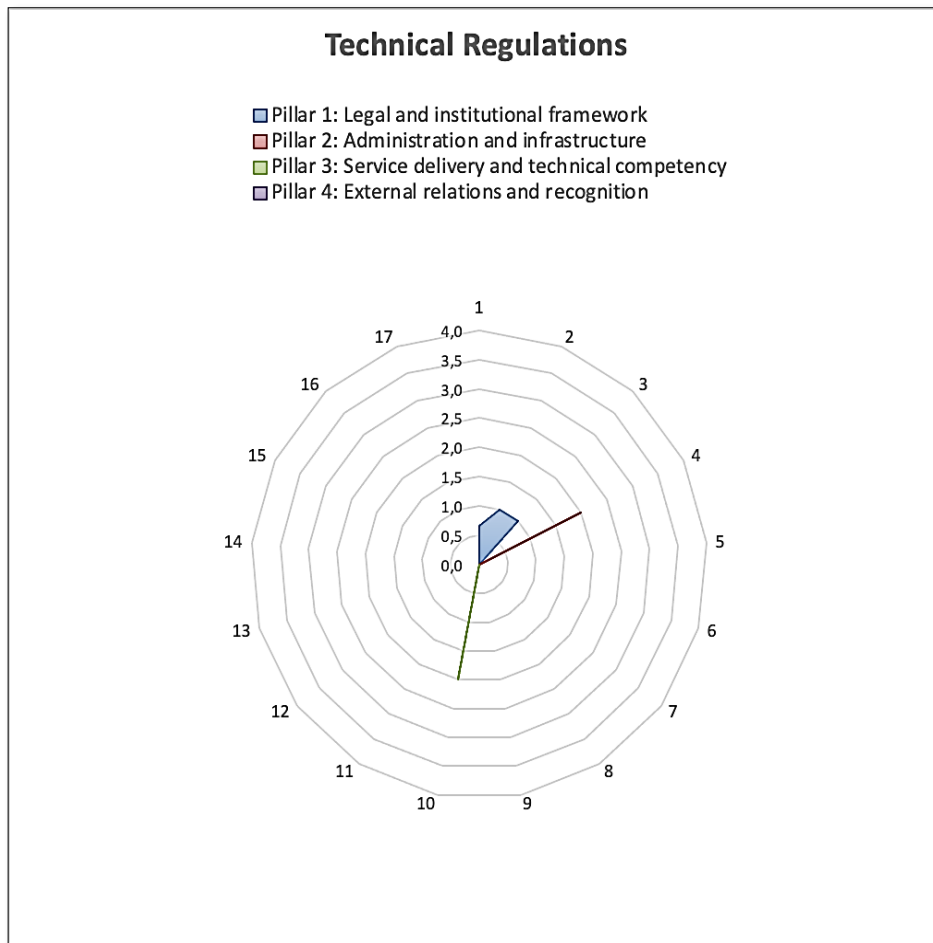


Figure 9: Rapid Assessment - Technical Regulations

Source: Elaboration by Mesopartner based on stakeholder interviews.

Given this, it is understandable and commendable that SKNBS has decided to go forward with the proposition to update the Bureau of Standards Act of 1999.

SKN still follows a common practice by some developing countries - enacting compulsory standards.

While compulsory standards were accepted under the 1980 version of the TBT agreement, this is no longer accepted by the WTO. Additional regulation is required to deal with the issues not contemplated in the current Act, as well as the draft Bill. Furthermore, not all requirements in the Act can be made compulsory without contravening the WTO TBT or SPS Agreements.

Changing the definitions to “standards” and “technical regulations” is a step in the right direction but it is not sufficient to comply with actual WTO international obligations. In this area, it should be noted that CROSQ Member States have different practices. Such is the case of Barbados. Nevertheless, the actual model does need to adequately separate the standard setting process from the technical regulation enactment process. In addition, the responsibility for regulatory action, its preparation and adoption shall be left to the responsible Minister. In other words, when preparing regulations, receiving technical support from the SKNBS and following a procedure different from the standards setting process. Therefore, SKNBS shall be responsible for setting the standards that both islands require, while a giving technical support to the Ministry in charge when a regulation is needed.

In any event, following the proper procedure, SKN will need to consider at least some basic regulations to protect human, animal and plant life, health, and the environment; and prevent deceptive practices in the country.

Finally, as sanitary and phytosanitary measures issued by SKN also need to be notified to the WTO Secretariat, SKN SPS focal point is administered by the Ministry of Agriculture. Further analysis is needed to understand the reasons why this focal point is not active. SKN TBT focal point has not been active either as no product regulation has been passed as explained above. However, it will need to be reactivated once the NBSA is repealed by the new Standards Act Bill currently in Parliament.

METROLOGY

Metrology is the science of measurement and its application. It is an essential part of the Quality Infrastructure, as metrology provides the technical basis for high-quality goods that are produced based on accurate, reliable, and traceable measurements. It is therefore an enabler of regional and international trade, but also ensures that the quality of locally consumed products can be assured and demonstrated.

Metrology includes the units of measurement to be used and their representation through measurement standards, as well as measurement instruments and their field of application, and all theoretical and practical aspects relating to measurements.

Metrology is classified into three key areas:

1. *Scientific Metrology* is that part of metrology which deals with aspects common to all metrological questions, irrespective of the quantity measured. It covers general theoretical and practical problems concerning units of measurement, including their realization and dissemination through scientific methods, the problems of errors and uncertainties in measurement, and the problems of metrological properties of measuring instruments.
2. *Industrial Metrology* is that part of metrology which deals with measurements in production and quality control. It covers calibration procedures, calibration intervals, control of measurement processes and management of measuring instruments in industry, to ensure that they are in a state of compliance with requirements for their intended use.
3. *Legal Metrology* is that part of metrology which is subject to legal/ regulatory control. It provides regulations for the control of measurements and measuring instruments. Legal metrology provides protection of public safety, the environment, consumers, and traders, and is critical to fair trade.

In 2010 the St. Kitts and Nevis Bureau of Standards conducted a metrology demand survey with the objective of evaluating the country's demand in that area. A follow up survey was conducted in 2013 to capture more recent data. A total of 22 companies were surveyed. The results showed that the areas in which calibration services are most needed are volume, mass, temperature, and pressure.

Currently, the St. Kitts and Nevis Bureau of Standards has four (4) metrology inspectors and one (1) management position assigned, the Head of Metrology. All staff is working in legal metrology and in industrial metrology as well. There is demand for at least one more metrologist. Although the number of personnel is evaluated as suitable for the current demand in metrology, the demand for personnel will increase with more services being established.

In legal metrology the SKNBS is currently performing metrological control (verification) of non-automatic weighing instruments, including weighbridges and fuel dispensers used at gas stations. A range of up to 3 t can be covered for weighing instruments, weighbridges can be verified up to 30 t

using substitution loads. Airport scales are fully covered in St. Kitts and in Nevis, also all supermarket scales, including village shop scales are regularly verified.

The SKNBS has an electricity meter test bench at its disposal, with which one e-meter can be tested at a time. The reference meter is functional and was recalibrated in 2018. However, the test bench is not in use as the Bureau lacks space that allows for continuous usage under proper conditions. Once appropriate space is allocated the SKNBS will be able to verify sampled e-meters, and instruments submitted by citizens for checking. For a full coverage of all household e-meters in St. Kitts and Nevis a multi-position test bench would be needed.

The area of pre-packaged goods is currently not covered by the SKNBS. There are various national labelling standards issued, but no technical regulation has been put into force yet. Although the Metrology Act prohibits selling of any pre-packages that do not comply with the specified limits, the Bureau does not have the means to conduct the necessary inspections and testing. It is, however, planned to develop capacities for the testing of LPG gas cylinders, which could be realized without a technical regulation in place. It would not require additional equipment, but proper laboratory space. As a next step, capacities for pre-packages testing of dry goods (flour, sugar, etc.) should be developed.

The results of the 2010/2013 demand survey showed that the health sector is one of the largest demand drivers in metrology. This sector is particularly in need for temperature, volume and pressure calibration and verification. The required services cannot currently be provided by the SKNBS. However, with only little financial effort, capacities for the verification of blood pressure devices (sphygmomanometers) can be established.

As previously mentioned, the SKNBS performs its activities in both areas, legal and industrial metrology, with the same personnel and equipment. Given the size of the economy of St. Kitts and Nevis and the related demand, this is appropriate for the moment.

Calibrations are carried out for weighing instruments (up to 3 t). The calibration scope in volume is 20 L. However, the SKNBS cannot calibrate volume provers, as it lacks proper space to set up equipment for gravimetric calibration of such provers.

The demand survey had revealed that the most important metrology need throughout the surveyed sectors is the area of mass. The SKNBS, however, has no capacities in place to calibrate weights. Although in 2013 two mass comparators and additional equipment were donated to the SKNBS through the 10th EDF CRIP/EPA – Programme, this equipment has never come into use. The currently implemented CDB/CROSQ project on technical assistance in mass metrology aims at building capacities in mass for weights up to 50 kg of OIML Class F1.

In terms of metrological traceability, the overall situation of the Bureau is critical, as almost all equipment is overdue for calibration. It must be highlighted that this affects the verification and calibration services, that are currently provided to the public, the accuracy of which cannot be assured.

The lack of space is the overlaying issue that prevents the SKNBS from developing its metrology capacities, apart from a sufficient and constant budget line to cover the traceability costs continuously.

To address the space issues, the SKNBS has planned and designed a new building at the current site. Funds have been approved and the Bureau is dependent on the Public Works Department to begin the work.

The Metrology Act (Weights and Measures Act) from 2012 is still in force. It was revised in 2017 by the Bureau's Legal Department and released for a next term without changes. The Metrology Act,

being a “classical” Weights and Measures Act, is primarily regulating the area of legal metrology and needs modernization.

For 2022, the SKNBS plans a complete revision of the Metrology Act. It is advisable to consider international good practice, recommended by the International Organisation for Legal Metrology (OIML) in its document OIML-D1 for developing the institutional and legislative framework for metrology, which was recently (2020) revised. This way metrology can be operated in an appropriate framework to serve the economy and society.

The Rapid Diagnostic Tool (RDT) was applied to both areas, legal and industrial metrology. The figures clearly show the difficult situation of the SKNBS and the need for development, in particular in the area of service delivery and international relations and recognition of metrology.

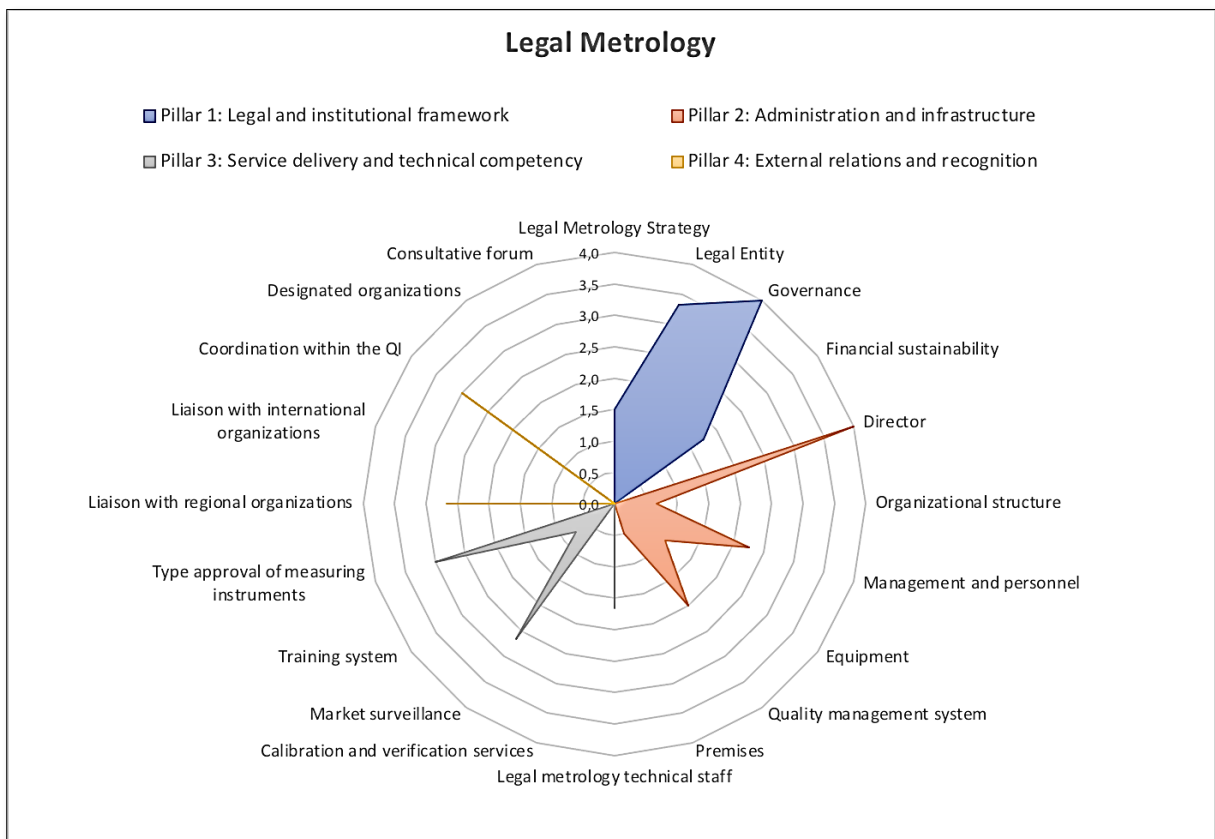


Figure 10: Rapid Assessment - Legal Metrology

Source: Elaboration by Mesopartner based on stakeholder interviews.

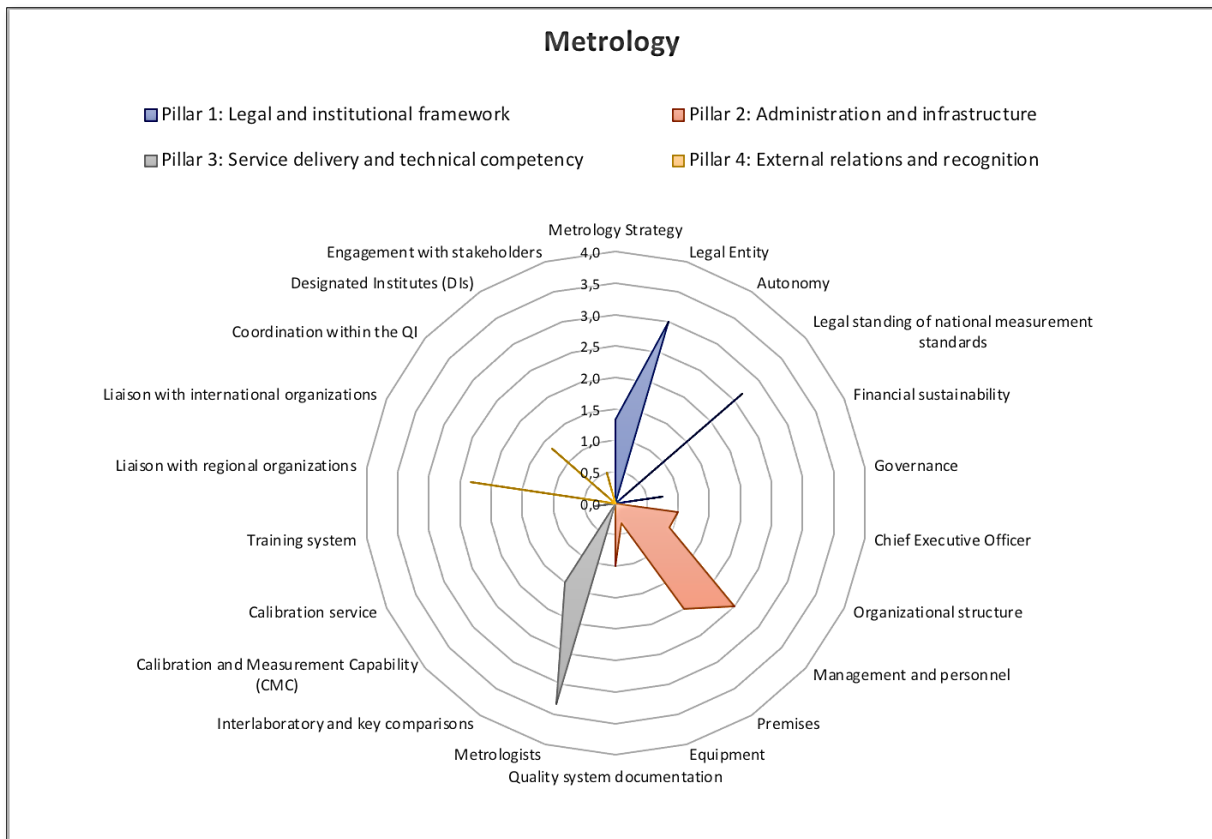


Figure 11: Rapid Assessment - Metrology

Source: Elaboration by Mesopartner based on stakeholder interviews.

CONFORMITY ASSESSMENT

Conformity Assessment is the demonstration that specified requirements relating to a product, process, system, person, or body are fulfilled and is typically conducted through quality assessment services such as inspection, testing, and certification.

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 which are standards, metrology, and accreditation. Typically, the more industrialized and the larger the economy, the more the private sector is involved. Foreign direct investment has been a driving force for certification to international standards in many developing countries following the liberalization of the market and the international harmonization of standards.

This situation has given rise to several multinational conformity assessment bodies, most operating as private for-profit companies. However, in economies like St. Kitts and Nevis that do not have the critical mass of demand to attract investment in a broad range of conformity assessment services, it means that local firms either seek them abroad which can be difficult for practical and economic reasons, or the government plays a role in the supply of these critical services.

Testing

The government is a major player in the testing laboratory services market in St. Kitts and Nevis, providing services through four (4) main laboratories, namely: (1) The Ministry of Agriculture (2) the St. Kitts and Nevis Bureau of Standards (3) Pathology laboratory, Joseph N. France General

Hospital (Clinical medical laboratory with responsibilities of public health laboratory and national lab) and (4) St. Kitts Water Services Department - (potable water quality and monitoring).

In addition to these laboratories there are at least three (3) privately owned medical laboratories and research laboratories affiliated with the medical universities and the Clarence Fitzroy Bryant College.

The SKNBS laboratory services are the most developed of the services it offers and covers testing scopes in chemistry services and microbiology. Furthermore, in the near future it is expected to perform materials testing - asphalt and concrete. The multipurpose laboratory of the SKNBS assists other Ministries with testing services and provides testing services to the public (requests for tests are voluntary, not mandated by law, for the agro-processing sector).

The Chemistry Laboratory conducts analysis on water quality, soil analysis for farmers, and solutions-chemical analysis. This laboratory is working towards ISO/IEC 17025 accreditation - most of the services offered by the SKNBS are provided by its testing laboratories.

The microbiology laboratory works closely with the General and Environmental Health Departments. It performs testing of cooked food, and water (drinking and bottled water). The laboratory also conducts tests for waste water treatment, plants – monitoring of treatment and marine water quality testing.

There is a need for capacity building in government-operated laboratories and the accreditation of laboratories in all categories, whether they perform medical, industrial, or regulatory testing.

The testing laboratories at the SKNBS are the sole laboratories providing services for food and water.

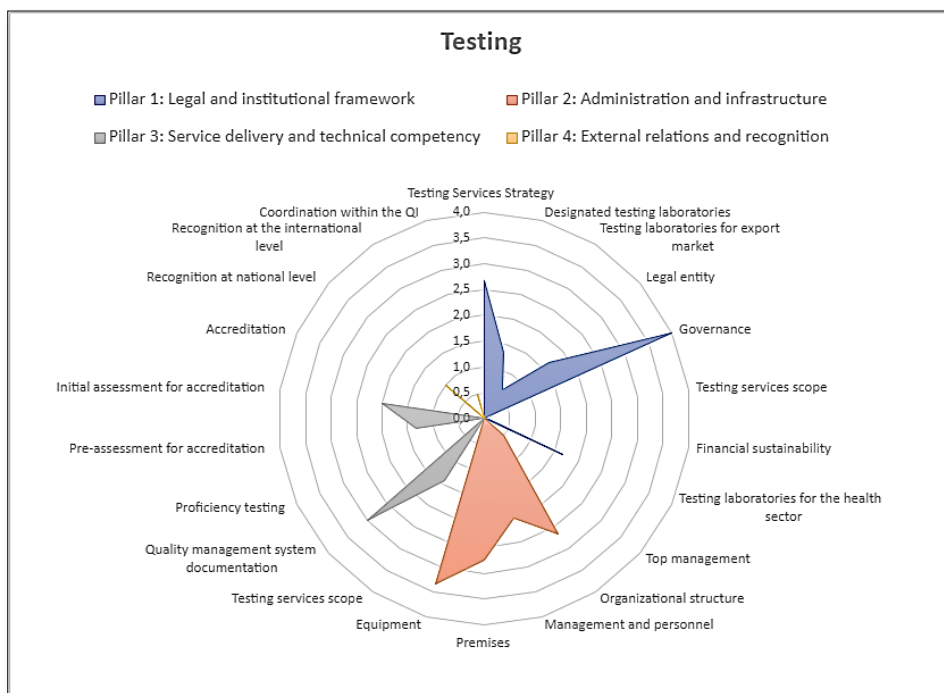


Figure 12: Rapid Assessment – Testing

Source: Elaboration by Mesopartner based on stakeholder interviews.

Inspection

There are two main agencies/ government departments empowered by law in St. Kitts and Nevis to carry out inspection work in specific sectors.

In the area of Food Safety Inspection, services are provided by the Ministry of Health (Environmental Health Department), and the Ministry of Agriculture (Plant Quarantine and Veterinary Services). Certification as a topic was not addressed because there are no certification bodies per se.

The Ministry of Health (Environmental Health Officers) inspects all foods from retail food service providers and at ports of entry: airport and seaports. The Environmental Health Officers/food inspectors, also inspect meat sold at the meat markets and abattoirs.

Motor vehicle inspection is done by the Department of Transport, but there is some overlap with other agencies since there is no clear demarcation of roles in this area.

The Customs and Excise Department's inspection of goods at the air and seaport is a very important aspect of the NQI but this work is not generally perceived as part of the QI for the country. There is also a disconnect between NQI organisations and the myriad of other government agencies that do inspections. Generally, inspections serve to check for consumer safety, compliance to the laws and regulations, as well as protection of the environment. These various sections appear to be working in silos - working independently without much communication or interaction with each other.

ACCREDITATION

Accreditation is a third-party attestation related to a conformity assessment body (CAB), conveying formal demonstration of its competence, impartiality, and consistent operation in performing specific conformity assessment activities. Through accreditation, testing, medical or calibration laboratories or inspection bodies (conformity assessment bodies) gain formal recognition, that they are technically competent to carry out specific activities within their scope.

The SKNBS has been nominated by CROSQ to function as the National Accreditation Focal Point (NAFP) to implement activities supporting accreditation in St. Kitts and Nevis. The Caribbean Cooperation for Accreditation (CCA) Scheme was developed to aid the facilitation of trade within the Caribbean region and internationally. It is based on the principles of mutual cooperation and collaboration amongst the recognized National Accreditation Bodies (NABs), National Accreditation Focal Points and the CROSQ Secretariat.

The SKNBS has one person assigned to operate the NAFP. Main functions of NAFPs are:

- to be an information and resource centre within the country for the accreditation of conformity assessment bodies and businesses
- to provide support to businesses for them to achieve accreditation
- to assist with capacity building for CABs seeking accreditation
- to be the interface between CABs and CROSQ, and between CABs and NABs for the CCA Scheme
- to promote accreditation and the CCA Scheme and symbol within the country, and amongst others

Technical regulations in St. Kitts and Nevis are not requiring accreditation for the provision of certain services, which would create demand for accreditation in the country. At this moment there are no accredited laboratories or inspection bodies in St. Kitts and Nevis. This means the respective services provided currently at the national level are non-accredited services, for which recognition by an authoritative body cannot be demonstrated. This poses a risk to citizens and industries that use these services.

In the past, several medical laboratories in St. Kitts and Nevis were supported by the SKNBS through CROSQ in their efforts to gain accreditation according to ISO 15189, but the accreditation process up until now has not been finalized.

The NAFP is focussing on awareness-building for accreditation in the country, which would enable businesses to make maximum use of the benefits of the ratified WTO Trade Facilitation Agreement. Events, like the annual World Accreditation Day, are used by the Bureau to reach out to laboratories and businesses in this regard. However, the NAFP is not made known to the public through the Bureau’s website. To introduce the SKNBS as a contact point for interested businesses could foster respective initiatives.

Another challenge is the limited personnel resource; as a result, there is also a lack of an up-to-date register of laboratories operating in St. Kitts and Nevis.

The SKNBS itself is currently working towards accreditation of its services in metrology, chemistry, and microbiology. However, local laboratories apparently fear the costs for the implementation and maintenance of the accreditation status. The Bureau’s successful accreditation initiative could serve as a good example and could advocate for the CCA Scheme, whose main objective is to provide internationally recognized accreditation services, which are economical, affordable, convenient, and readily accessible for clients in the region.

The Rapid Diagnostic Tool (RDT) was applied for the area of accreditation. Although small economies like St. Kitts and Nevis may follow a balanced approach in accreditation, the deficiencies that the *figure* below shows, are quite significant.

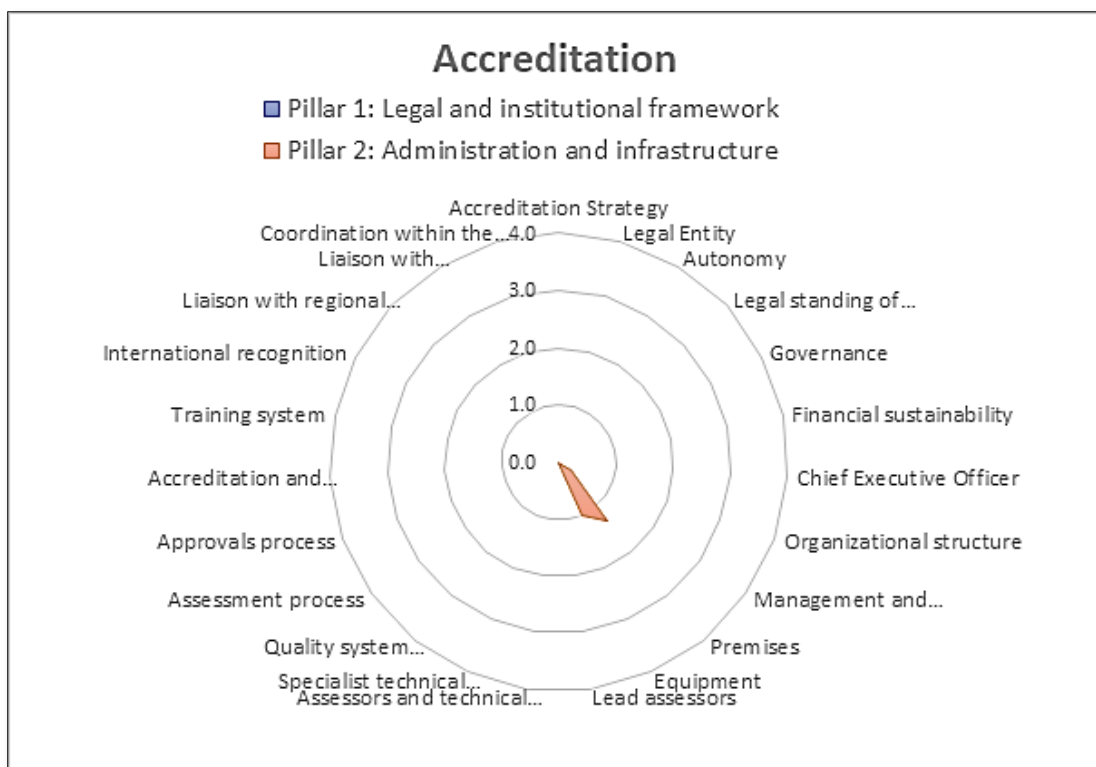


Figure 13: Rapid Assessment - Accreditation

Source: Elaboration by Mesopartner based on stakeholder interviews

QUALITY PROMOTION

Quality Promotion refers to marketing, communication, information, awareness, and education. It is understood as a relatively new, non-technical element of NQI.

The concepts refer to all entities directly vested with responsibility for the advancement of the National Quality Policy that need to further demonstrate their commitment by performing their individual and collective roles in educating civil society on the virtues of demanding and utilizing QI services.

The Marketing Information Knowledge and Education Management (MIKE) Committee is made up of representatives from every National Standards Body (NSB) in the areas of information technology, information management, marketing and communications, WTO/TBT enquiry points, and CODEX nodes. The MIKE Committee was established to assist in the development of information and communication technologies (ICT) within CROSQ. As a member of CROSQ, the SKNBS can receive support in establishing a MIKE Committee.

Informing and sensitizing stakeholders about quality issues are key tasks of the NQI institutions. The SKNBS has a website with relevant information - but there are some gaps. The site is not updated as things develop in the organisation and there were some instances where the information on site did not match the actual situation. A notable point was the list of standards. The website was set up with funding from the European Union but has not been updated as regularly as it should. However, the SKNBS recently acquired a new staff member who is responsible for marketing and communication. This new addition to the human resource pool at the SKNBS should significantly help the promotion of the services of the Bureau specifically, and the NQI in general.

While a list of standards was available on the website, it was not possible to make online payments to purchase a standard and this represents a missed revenue opportunity for the SKNBS.

The SKNBS has an active Facebook page, which is commendable. It also has a YouTube series called "Up to Standards". The third episode of the series, made for World Accreditation Day on the 9th of June 2021, can be seen on [YouTube](#)². Also commendable is the visit to a primary school on World Metrology Day to make a presentation, which can be seen in the [second episode](#) of "Up To Standards"³. These augers well for the creation of future metrologists and creates an awareness in the potential leaders of tomorrow about the importance of QI. Commendable too is the WTO Notification of a regulation on the SKNBS website.

GENDER MAINSTREAMING IN QI

Gender equality is a fundamental human right and its achievement will bring enormous socio-economic benefits. Women's participation in the labour force not only stimulates prosperity; but also increases all-round productivity; and contributes to building peaceful, fairer and more egalitarian societies (López, 2021). Nevertheless, despite significant strides being taken over the years to reduce gender disparity between men and women, significant gender gaps still remain in political empowerment, political participation, and economic participation and opportunity (World Economic Forum, 2021). The COVID-19 pandemic has resulted in the widening of these gaps and even the reopening of previously closed gaps. Women have been found to be more vulnerable to COVID-19-related economic effects because of existing gender inequalities (Madgavkar et al., 2020). It is therefore imperative to create more opportunities for women to develop and progress.

² <https://youtu.be/5UPtBWfcg48>

³ <https://youtu.be/yW2mfgmtGGY>

The QI system plays an important role in safeguarding the health and safety of the population, protecting consumers and the environment, promoting competitiveness and quality, facilitating trade capacity building, and boosting economic development (López, 2021; UNECE, 2019). In order to effectively fulfil its role, it must be responsive to the needs of all genders and ensure that participation in the development process is fully inclusive. It is therefore necessary for women to participate and contribute their opinions, knowledge, and experiences, to strengthen and enrich the QI system. Female representation in QI development reflects their participation in the labour force and wider societal decision-making (López, 2021). One of the first steps in ensuring equal participation in the development of the QI system and that it meets the needs of both men and women is by collecting data (UNECE, 2019).

A questionnaire to capture gender issues in QI in the Federation was circulated among stakeholders but only received six responses. Based on those responses one key point emerged: none of the respondents faced gender-based discrimination. Only one of the six respondents had a gender policy in place; and the remaining five, when asked if there should be one, two agreed, two disagreed, and one said maybe. In the agencies that participated, the proportion of men to women in QI was either the same, or women were in the minority. Respondents were mostly neutral about whether women were best suited to work in QI, with only one disagreeing.

Despite the low response rate, some important comments to be considered in the development of the NQP emerged. Firstly, gender mainstreaming should be manifested in all government projects, programmes, legislations, and policies to ensure that all groups including women and girls have equal access to training, certification, and implementations of the NQP. Secondly, there should be zero tolerance for gender discrimination – selection should be based on merit. Thirdly, women and men should be seen as equals and be afforded the same employment opportunities in this field. Finally, both genders must be fairly represented and involved.

While more information is required to get a detailed picture of the gender distribution in the different elements of NQI in the Federation, according to our observations, representation of both genders is even. For instance, the Director of the SKNBS is male, while the head of the hospital laboratory is female. Within the SKNBS, one head of department is female, while the other three departments are headed by males. The Director of Agriculture in St. Kitts is female, while the Director of Agriculture in Nevis is male. Most notably, the Ministry of International Trade, Industry, Commerce, Consumer Affairs and Labour (MITICCAL) is headed by a woman, the Honourable Mrs. Wendy Phipps; the Permanent Secretary, Mrs. Jasemin Weekes, is also a woman; and most of the heads of departments and supervisors in that Ministry are women.

The Federation has made some strides in putting measures in place for gender equity. The SKNBS was one of the first standards bodies to sign UNECE's Declaration on Gender Responsive Standards and Standards Development of 2019.

In 2020 the Government of St. Kitts and Nevis submitted a report for the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) noting several legislative measures being taken to promote gender equity. These include:

- Offences Against the Person Act, 18734 makes provisions regarding offences against the person and related matters. It includes aggravated assaults on females, rape, abduction, defilement of women, attempts to procure abortion, and concealing the birth of a child.
- Trafficking in Persons (Prevention) Act, 20085 prescribes measures to prevent and combat trafficking in persons, with regard to victims who are women and children.
- Status of Children Act, 19836 recognises that all children are of equal status independent of whether the child is born out of wedlock. The Status of Children (Amendment) Act, 2013 further

amended the Act with respect to the presumption of paternity, including the right of the mother to choose for the child to use her last name instead of the father's last name.

- Equal Pay Act, 2012 makes provision for the removal and prevention of discrimination based on the sex of the employee in paid employment.
- Domestic Violence Act, 2000 makes provision for the protection of any person subjected to domestic violence and provides for related or incidental matters. Victims may apply for injunctions and protection orders against perpetrators. Where a person is convicted of an offence under this Act, the court may, instead of imposing a sentence, make a rehabilitation order programme or rehabilitation programme.
- Examination of the policy and institutional frameworks that promote gender equality revealed the implementation of measures in favour of advancing the human rights of women. Specific examples, described below, include Technical and Vocational Education and Training (TVET) and Women in Construction Trades (WICT). However, the initiatives did not meet their objectives as anticipated and are currently being restructured.
- The Department of Gender Affairs is a unit within the Ministry of Community Development, Gender Affairs and Social Services. It was first established in 1986, as 'The Department of Women's Affairs' in the Ministry of Health and Women's Affairs. In 2000, the Department assumed its new name 'Department of Gender Affairs' in keeping with the state's commitment to ensure that gender is mainstreamed in all of its policies and programmes, as well as to ensure specific impact on men and women. The Department has major responsibilities for raising awareness; monitoring and improving the status of women and girls in the country through the implementation several International Conventions and declarations; as well as the Constitution of Saint Christopher and Nevis which speaks to equality between men and women.

BENCHMARKING OF THE NQI

To assess the level of development of quality infrastructure in St. Kitts and Nevis, the authors compared the country with other Small Island Developing States (SIDS). For this purpose, three CARICOM member countries (Antigua and Barbuda, Saint Lucia, and Trinidad and Tobago) and one African island nation (Seychelles) were selected. Compared to these countries, St. Kitts and Nevis has the smallest population of 53,199. The population of Antigua and Barbuda and Seychelles is almost twice that of St. Kitts and Nevis, while Saint Lucia is nearly four times, and that of Trinidad and Tobago, with about 26 times more people.

In terms of per capita income, St. Kitts and Nevis is slightly above the other countries at USD 19,934.97. Like St. Kitts and Nevis, Antigua and Barbuda, Seychelles and Trinidad and Tobago are also high-income countries. With a GDP per capita of 11,611.42 USD, Saint Lucia alone belongs to the group of upper-middle-income countries.

Table 3: Benchmark countries

Country	Location	Population (2020)	GDP per capita in USD (2019)	GQII Rank
Antigua and Barbuda	CARICOM, Caribbean	97,929	17,112.82	169
Seychelles	Indian Ocean, Africa	98,347	17,448.27	121
St. Kitts and Nevis	CARICOM, Caribbean	53,199	19,934.97	156
Saint Lucia	CARICOM, Caribbean	183,627	11,611.42	141
Trinidad and Tobago	CARICOM, Caribbean	1,399,488	17,397.98	102

Sources: Worldometer (2021), World Bank (2021a)

The GQII country profile for St. Kitts and Nevis shows that the national quality infrastructure is barely developed in global comparison. In standardisation, the SKNBS is a corresponding member of ISO; as well as a participating member of four, and an observing member of two ISO Technical Committees.

It is also significant that the ISO Survey 2020 for St. Kitts and Nevis lists one certification of an ISO QM system. In metrology, the SKNBS benefits from CROSQ's membership with the BIPM but cannot itself offer internationally recognised metrology services. Although the SKNBS is a CROSQ focal point for accreditation, it cannot provide any accreditations.

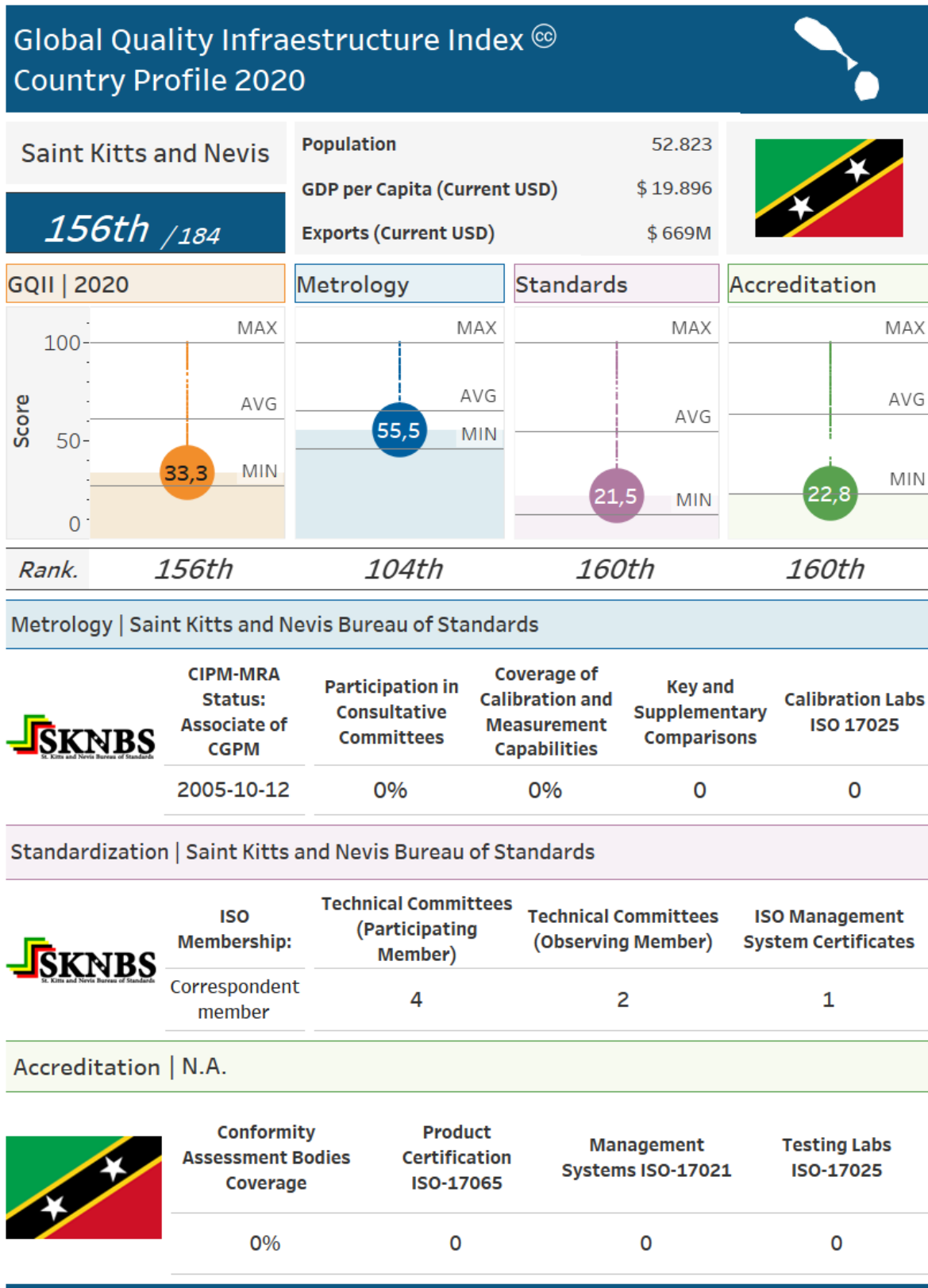


Figure 14: St. Kitts and Nevis GQII country profile

Source: <https://gqii.org>

In the global ranking of accreditation and metrology, St. Kitts and Nevis shows zero in all indicators and is accordingly at the bottom of the ranking. The ranking is higher in the area of standardisation, where participation in the ISO Technical Committees and a company with a certified quality management system are credited.

In international comparison, the quality infrastructure of St. Kitts and Nevis is very poorly developed and ranks 156th out of 184 economies. Due to its activities in the standards area, the country is slightly ahead of Antigua and Barbuda (rank 169), but clearly behind Saint Lucia (rank 141), Seychelles (rank 121) and Trinidad and Tobago (rank 102).

The strongest correlation of QI development occurs in exports (coefficient of 0.89).⁴ In all five countries studied; low QI development corresponds to weak export activity. However, the country of Trinidad and Tobago has a higher export activity, corresponding to its more developed QI.

⁴ The correlation coefficient is the specific measure to quantify the strength of the linear relationship between two variables in a correlation analysis. The correlation coefficient can take a value between -1 and +1. The larger the absolute value of the coefficient, the stronger the relationship between the variables.

A correlation of 1 indicates a perfect linear relationship, whereas a correlation close to 0 indicates no linear relationship between the variables.

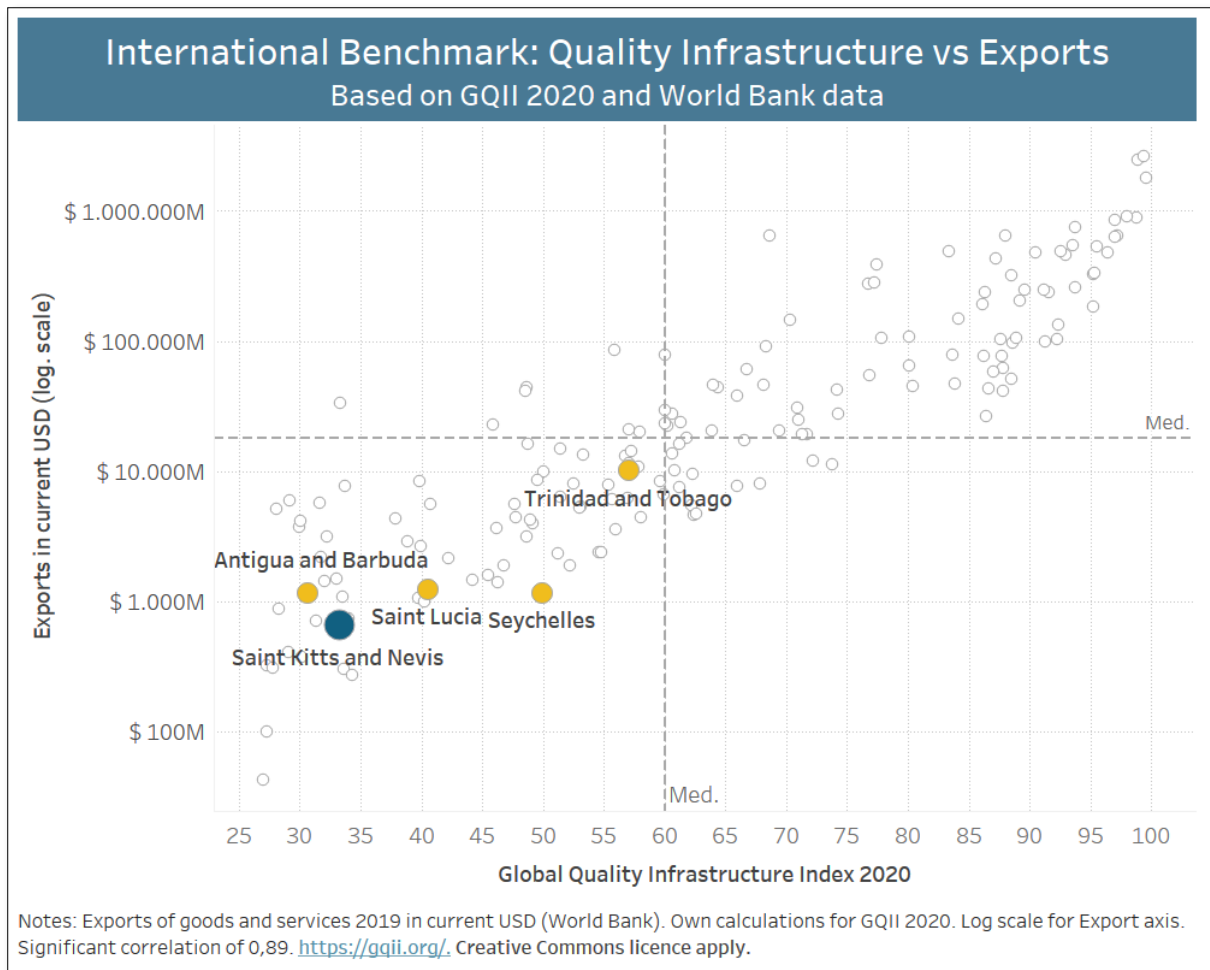


Figure 15: International Benchmark – QI vs Exports

Source: <https://gqii.org>

If the QI development is compared with the country's wealth measured in GDP per capita, all the countries studied are higher-income countries. The reasons for this are the dominance of services, including tourism in the local economy, and, in the case of Trinidad and Tobago, the wealth of natural resources. Overall, however, there is only a weak correlation (coefficient of 0.58) between QI development and GDP per capita.

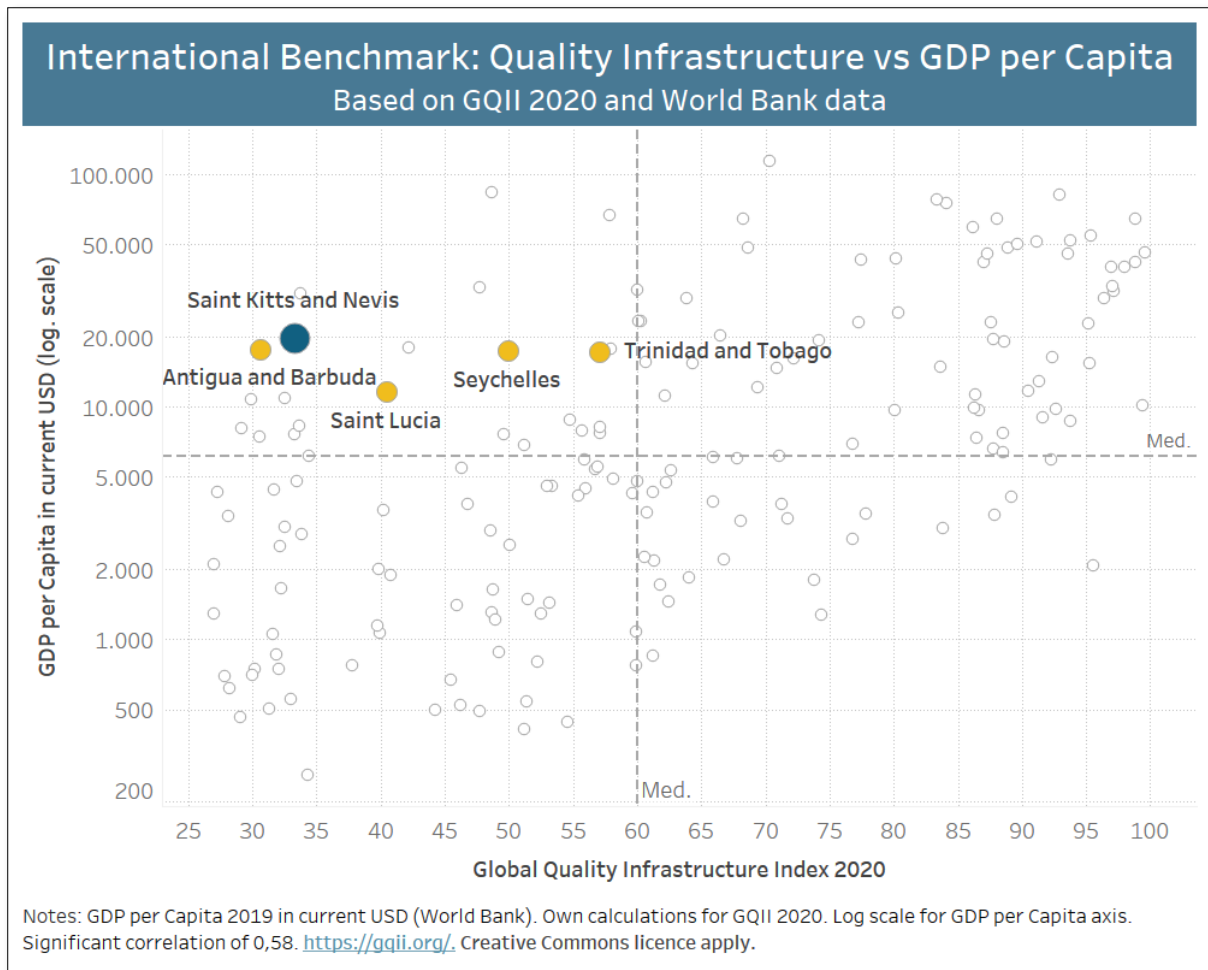


Figure 16: International Benchmark – QI vs GDP per capita

Source: <https://gqii.org>

The development of a country's QI correlates, albeit weakly (coefficient of 0.55), with its population size. Small Island Developmental States (SIDS) often lack the critical mass to build and expand a comprehensive QI. The figures confirm this for the benchmark countries, which are all in the range of underdeveloped QI. However, Seychelles and even more so Trinidad and Tobago show a remarkable level of development of national QI for the smallness of their economies.

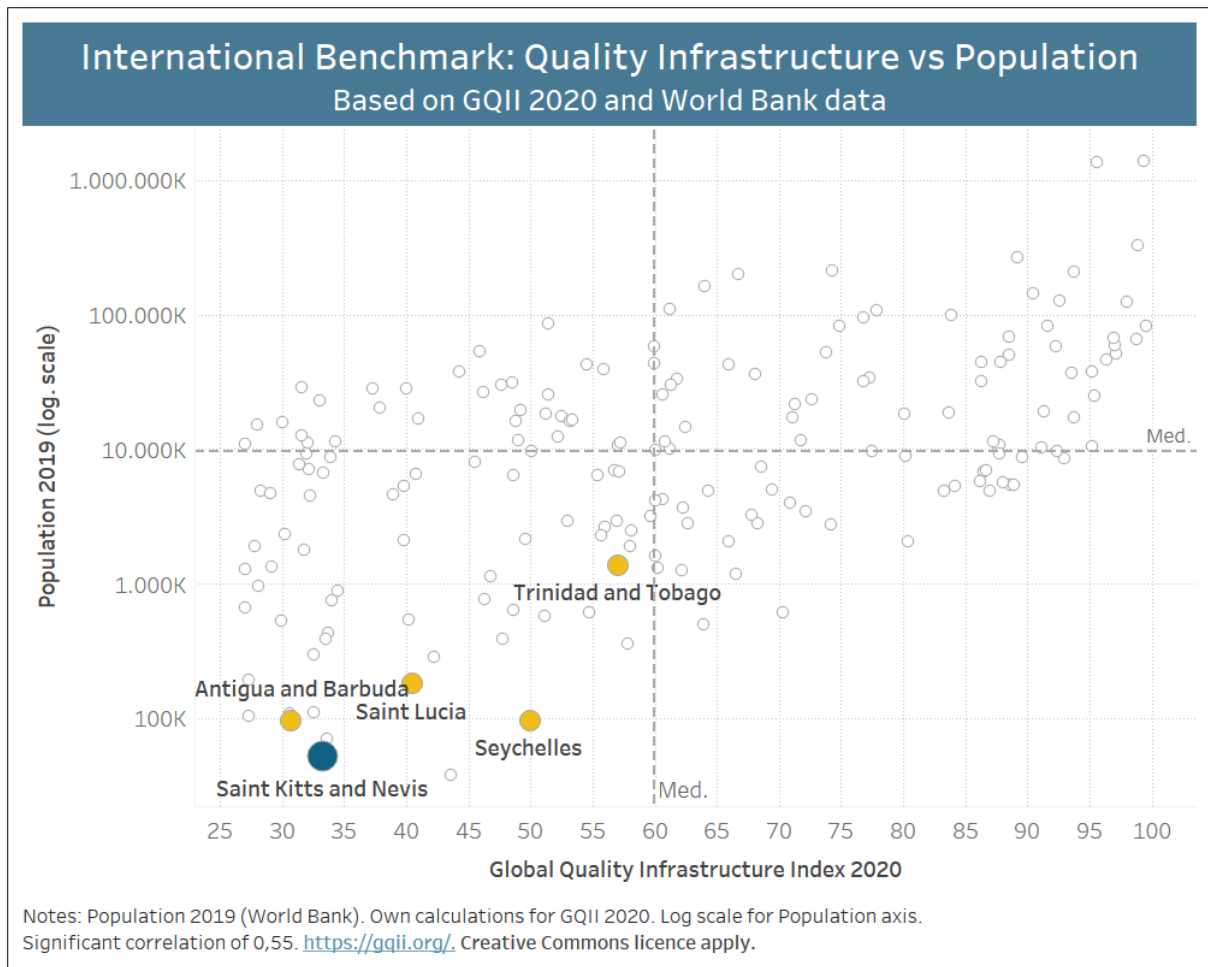


Figure 17: International Benchmark – QI vs Population

Source: <https://gqii.org>

In summary, the QI-development of St. Kitts and Nevis is in line with the size of the country and the economic structure. At the same time, there is an opportunity to significantly strengthen the export and competitiveness of the local economy by investing in QI.

STANDARDS

The Standards Act of 1999, revised in 2002, that is currently effective in St. Kitts and Nevis was compared against the respective Acts of the benchmark countries, i.e., the Standards Acts of Antigua and Barbuda (2017), Saint Lucia (1990), Trinidad and Tobago (1997), and the Seychelles Bureau of Standards Act (2014). In fact, all Standards Acts need to be adapted to modern language and scope to cover quality infrastructure as a whole. Additionally, almost all have in common that they follow the practice of enacting “compulsory” standards (Saint Lucia, Trinidad and Tobago), or “mandatory” standards (St. Kitts and Nevis, Seychelles), a practice that is no longer accepted by the WTO. Although the Standards Act of Antigua and Barbuda already introduces the term “technical regulation” as different from “standard”, both terms are often named together without sufficiently addressing the differences in the development, scope, and application of both types of documents.

The Standards Acts of all four benchmark countries can, however, be cited as benchmarks in terms of the implementation thereof. Compared to St. Kitts and Nevis, all benchmark countries have Standards Councils (or a Board in the Seychelles) established that administer the Bureau's affairs, different in number and selection criteria, but functional.

The Standards Act of Trinidad and Tobago, in particular the Standards Regulations, may be mentioned as a benchmark regarding the appointment of an advisory committee to assist in the formulation or adoption of specifications before adopting them or before declaring a standard. It should be mentioned that, although all Standards Acts include the option to appoint committees, the Trinidad and Tobago Standards Regulations clearly define its advisory function in the standard setting process.

METROLOGY

A comparison of the current Metrology Act of Saint Kitts and Nevis with those of the benchmark countries showed an almost complete congruence of said Act with the respective Acts of Antigua and Barbuda (2007) and Saint Lucia (2000). The Trinidad and Tobago Metrology Act (2002) and the Seychelles Weights and Measures Act (1981) were also reviewed for comparison. All of the benchmark countries, including St. Kitts and Nevis, have in common that they still operate their legal metrology systems under Metrology Acts that need modernization in several aspects. None is in line with modern metrology practices, which cover scientific, industrial, and legal metrology. However, the Trinidad and Tobago Metrology Act of 2002 can serve as a benchmark with regards to several aspects. Terms are used and explained in better agreement with internationally agreed terminologies as introduced in the International Vocabulary of Metrology (VIM). Furthermore, the Trinidad and Tobago Metrology Act is following another good international practice by requiring the establishment of an Advisory Committee on Metrology, which includes representatives of the Bureau of Standards and other persons knowledgeable in metrology to make recommendations on legal and technical metrology matters. It is also of note that, while St. Kitts and Nevis is still without metrology regulations, at least three of the benchmark countries (Antigua and Barbuda, Saint Lucia, and Trinidad and Tobago) have metrology regulations in place and enforced to implement their respective Metrology Acts.

INSPIRING PRACTICES FROM BENCHMARK COUNTRIES

Given that the SKNBS was only established in 1999, making it a relatively young Bureau, it has the opportunity to look to the Bureaus in other SIDS for examples of inspiring practices to adopt itself. The selected benchmark countries have many inspiring practices that can be followed by the SKNBS to improve the overall national quality infrastructure, as well as increase its profits.

One of the main challenges faced by the SKNBS is a lack of interest in or awareness of the importance of a strong QI system, as well as the service it provides. The Bureaus in all of the selected benchmark countries play very active roles in increasing public awareness of QI and getting the public involved in the standards development process. For instance, the Antigua and Barbuda Bureau of Standards (ABBS) uses e-learning platforms to disseminate knowledge on topics pertaining to QI and the services it provides. Both the Trinidad and Tobago Bureau of Standards (TTBS) and the Saint Lucia Bureau of Standards (SLBS) promote dialogue with the public when developing standards related to different sectors. For instance, the TTBS recently used a virtual webinar for discussions on QI in the agriculture sector, while the SLBS arranged a similar event to discuss QI in the tourism sector.

The TTBS, the ABBS, and the Seychelles Bureau of Standards (SBS) publish draft standards on their websites and invite the public to comment on them. The ABBS and the TTBS also have online procedures for the public to propose new standards. All of the Bureaus have online standards stores, with clear information on compulsory standards, pricing, and the purchasing process. Furthermore, the TTBS and the SLBS publish a list of their clients on their websites along with the various certifications they have obtained or the standards they comply with. Finally, the SBS has an online customer satisfaction survey and the TTBS has an online customer complaint form where customers can give valuable feedback to inform their improvement.

As previously mentioned, because of the constraints faced by SKN as a SIDS, regional cooperation, as well as collaborating with and importing services from external bodies, may be more economically viable in some cases.

The selected benchmark countries have embraced this recommendation and are becoming members of or forming partnerships with other QI bodies for accreditation services. For example, the SBS is a member of the Southern African Development Community Accreditation Services (SADCAS). Seychelles does not have its own national accreditation body; SADCAS operates as the authoritative body that oversees and accredits its conformity assessment service providers (calibration/ testing/ medical laboratories, certification and inspection bodies). While Trinidad and Tobago has its own national accreditation body, TTLABS, it has signed a Memorandum of Understanding with the AIHA Laboratory Accreditation Programs LLC (AIHA LAP). Furthermore, TTLABS is in the process of transitioning into a new accreditation entity - the Trinidad and Tobago Accreditation Service for Conformity Assessment (TTASCA) – which will serve as the national accreditation body for conformity assessment services in the country, as well as offer services to other countries in the region. Once established, the TTASCA intends to become a signatory of the Inter American Accreditation Cooperation (IAAC) Multi-Lateral Arrangement and become internationally recognized. The SLBS has signed a *Collaboration & License Agreement* with a global standards developer, Underwriters Laboratories (UL) which enables Saint Lucia to leverage and reference UL standards within Saint Lucia.

Additionally, the selected benchmark countries are working towards getting their Bureaus and conformity assessment service providers accredited. Trinidad and Tobago intends to launch a laboratory accreditation programme during the period 2021 to 2023 to assist public laboratories with preparing their respective management systems for accreditation. In addition, the SLBS, SBS and TTBS have transitioned to ISO/IEC 17025:2017 and have provided training courses to educate stakeholders about the changes. The medical laboratories in Saint Lucia operate under the scope of ISO 15189: 2012. The TTBS also conforms to ISO/IEC 17020:2012. Furthermore, both the TTBS and SBS provide a list of accredited laboratories on their websites. Both the SLBS and the TTBS have certified their quality management systems under ISO 9001:2015.

In addition, all of the benchmark countries adopt standards that correspond to their needs, demands, and realities. For instance, the TTBS offers ISO 14001:2015 certification. Trinidad and Tobago also has compulsory standards for Steel Bars for the Reinforcement of Concrete and Energy Labelling – Compact Fluorescent Lamps and Light Emitting Diode Lamps. Seychelles has mandatory standards for Concrete Blocks, Modified UHT and Modified Pasteurized Skimmed and Full Cream Milk, and Refillable Gas Cylinders. Seychelles also has standards regarding the environment. Saint Lucia is collaborating with CROSQ by participating in the Quality for Sustainable Energy in the Caribbean (QSEC) Project, which aims to develop QI services related to energy efficiency. In addition, in light of the current COVID-19 pandemic, Trinidad and Tobago has standards for non-medical face masks while Saint Lucia offers online training for certain service providers on standards relevant to the pandemic.

All in all, there are many inspiring practices for SKN to adopt from fellow SIDS. Furthermore, as a relatively young Bureau working towards the development of a NQP, there are many opportunities for the SKNBS to be an innovator with respect to QI in the region and adopt practices that other countries are inspired to follow.

USER NEEDS AND SERVICE GAPS

This chapter focuses on prioritized key sectors of the national economy: Tourism and Marine, Agriculture and Fisheries, Manufacturing, Health, Transport, Professional Services and Construction. Table 4 gives an idea of the use of QI among the key sectors. As can be seen it is not used at all in some sectors such as Consumer Affairs, and Gender Affairs. The role of the government is to support this strengthening of the NQI as a regulator, passing the necessary legislation and also as a support institution. There are some aspects of QI that need to be provided as a public good since the service is critical to the development of the economy, but it will not be supplied by the private sector.

Table 4: User needs and service gaps

Sectors QI Services	The QI services are provided by NQI alone	The QI services are provided by QI service providers from the country and overseas	The QI services are (almost) exclusively provided from abroad.
The sector makes intensive use of QI services	Tourism sector-hotels and restaurants -use food and water testing	Health -medical and environmental Carib Brewery Marine services Cruise industry	Electronics manufacturing companies-uses US standards and some verification services of the SKNBS
The sector uses some QI services	Fisheries Crop and livestock production Chamber of Commerce Air and Sea ports Construction Customs (public service)	SKNBS Agro-processing Tourism	
The sector does not yet use QI services	Consumer affairs Gender Affairs		

TOURISM

In the tourism industry some user needs/ service gaps identified included: Internally the need for standards and codes for hotel and accommodation. It is necessary to know how to assess Airbnb properties, and dining and entertainment establishments. In the area of Public Transport, more control and regulation are needed, e.g., for bus operators. Taxis and Uber services are in great need of regulations to govern how these services are conducted. Vehicle rentals also need protocols and regulations to be managed properly. Another area in need of proper regulations is the site and attractions sector. Services, such as water sports and using watercrafts, have some guidelines in draft form but more formal regulations of the services in the sector are needed. Additionally, people working in the tourism sector; such as tour guides, interpreters, spas, hair and beauty, massage/aloë rub; need training from certified trainers/instructors. While the Clarence Fitzroy Bryant College offers training courses in food and beverages, there are some gaps. The gaps may be filled by internships and apprenticeships of the trainees to properties and restaurants.

ISO standards for beaches are being promoted by the bureau but there is a lot that needs to be done to improve the services in the tourism sector.

The SKNBS can support the tourism industry by adopting or developing standards to guide the various aspects of the industry mentioned above. The 2022 workplan of the SKNBS already considers some tourism standards. Quite a number of these exist already as regional standards. Where the need for a technical regulation in this sector arises, the SKNBS will address this in coordination with the Ministry of Tourism.

CONSUMER AFFAIRS

In the Consumer Affairs Department, some service needs were identified. Standards are needed to help improve the quality of products that come to the Federation for sale. St. Kitts and Nevis sometimes receive inferior quality goods being dumped in the islands which may be unsafe for consumers, especially children's toys. The SKNBS could fill this gap by making more standards available and doing product testing. Agencies that do consumer protection in other countries offer product testing; this could be provided by the SKNBS.

FISHERIES AND FISH PROCESSING

In the area of fisheries and fish processing, the main need identified was for ciguatera toxin testing. Currently this service is not available in the Caribbean but is needed by the fishing sector to build assurance in their fish products when they are exported. The SKNBS is investigating using the fish testing techniques applied in Chile and Cuba.

TRANSPORT

With respect to transport and vehicle inspection, there is need for certified training of the inspectors to ensure proper inspection is done. Snow tires are being imported into the Federation and consumers are unable to easily recognize them from regular tires. A major gap in this area is non-conformance by vehicle inspectors. A procedure should be put in place for inspection to be done in Japan before vehicles are exported. This area may need a regional approach to get some leverage.

MANUFACTURING

The manufacturing sector in St. Kitts and Nevis is made up largely micro and small enterprises. The manufacturing sector is made up mainly of food, beverage, and similar products. There is a need to tap into new industries and become innovative, such as the international telecommunication services sector. The services must be good. The country's GDP is driven by services, so there must be some way to provide services that are internationally recognized and standardized. This must be done to ensure that the products and services are the best quality.

LIGHT MANUFACTURING

There are already a few light manufacturing companies on the island, which produce goods using USA standards and which use metrology services of the SKNBS. This is an area that could be expanded and allows for more services to be provided by the SKNBS.

CONCLUSIONS AND POLICY RECOMMENDATIONS

SWOT ANALYSIS

The purpose of a **S**trengths **W**eakness **O**pportunities and **T**hreats (SWOT) analysis is to study the internal and external environments of a company, through the identification and analysis of the strengths and weaknesses of the organization, and the opportunities and threats to which it is exposed. This type of analysis is critical in the process of decision making and thereby the development of a NQP which responds to the reality of the main NQI entity in St. Kitts and Nevis.

Part of the purpose of SWOT analysis is to also assertively identify factors that influence the functioning of the organization providing very useful information in the strategic planning process. Analysis of the strengths, weaknesses, opportunities and threats of the SKNBS was done and is summarised in *Table 5* below.

Table 5: SWOT analysis

INTERNAL FACTORS	
STRENGTHS (+)	WEAKNESSES (-)
<ul style="list-style-type: none"> • Member of the CARICOM Regional Organization for Standards and Quality (CROSQ) and the Pan American Standards Commission (COPANT) as well as a member of the InterAmerican Metrology System (SIM) and an affiliate member of the International Electrotechnical Commission (IEC). • There is an Enquiry Point for the WTO/TBT Agreement. • Staff working in the NQI possess high levels of expertise in their various roles; they are dedicated and motivated to the success of the organization. • Proactive SKNBS leadership. • Support from public and private sector stakeholders. • There are a range of services offered and the development of a strong monitoring and evaluation system which allows all stakeholders utilizing its services. • The SKNBS is focused on delivering quality results (development of a Quality Management System). • Political support, especially by the Ministry of International Trade. 	<ul style="list-style-type: none"> • The NQI cannot operate with the level of autonomy and direction to achieve its vision. • User fees are not sufficient to cover cost of services. NQI is not financially independent of the consolidated fund and donor funding. • Visibility and communication of SKNBS can be improved.
EXTERNAL FACTORS	
OPPORTUNITIES (+)	THREATS (-)
<ul style="list-style-type: none"> • Vibrant cruise industry. • Increased demand for quality products and services. • Increased access to information. • Increased need for natural disaster risk management and building a resilient economy. • Increased focus on alternative energy sources and energy efficiency. • NQI for a resilient and sustainable economy. • Development of a NQI for service sectors like agro-processing, agriculture, fisheries, and tourism services. 	<ul style="list-style-type: none"> • Reduced disposable income regionally, nationally, individually (global recession). • Natural disasters. • Lack of infrastructure (space, equipment, qualified personnel). • Dependence on policy support which can change with new governments.

ELEMENTS AND ISSUES FOR THE NQP

Findings

1. Legal framework and governance structure:
 - Current situation with regards to the legal form of the SKNBS calls for a revision of the Act that governs it. The Draft of new Standards Act does not contemplate a Standards Council, this doesn't align with international best practices for bureaux of standards. The SKN should look at best practices in the benchmark countries as a guide for the SKNBS to follow in the matter of a Standards Council.

One recommendation is for the SKNBS to become a standalone government department. There are other semi- autonomous bodies in SKN e.g., the CFB college – and this can serve as a guide. They are using government subvention but run autonomously.
2. The SKNBS is dependent on externally funded projects since there is a lack of sufficient income streams and autonomy with respect to their budget. New avenues for revenue can be sought by expanding services and user fees, also by making it possible to pay for standards online.
3. A division between administration and technical structure (WTO TBT agreements) is needed to prevent conflict between provision of service and regulation of the same service.
4. Quality promotion
 - a. Need to increase public awareness and promotion activities, many persons are still not aware of the function and services provided by the SKNBS
 - b. Need to update the website as things change and to ensure that it captures the great work being done.
 - c. Adopt good regulatory practices and promote them to the public, this will help the move towards creating a quality culture for SKN.
 - d. Get persons trained in managing the SPS and TBT Enquiry points

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Annexes

ANNEX 1: LIST OF INTERVIEWEES

List of Stakeholders interviewed and contacted

NAME	ORGANISATION	POSITION	Date of interview	Lead Interviewer Name	Comments
Stuart LaPlace	SKNBS	Director	June 7 th , 2021 9:00 am	Julie-Ann, Ulrich	Completed
SKNBS Team	SKNBS	Heads	June 8 th , 2021 10:00 am	Team	Completed
Ana Elliott	Sugartown Organics Agro-processor Exporter	Founder	June 10 th , 2021 9:00 am	Julie-Ann	Completed
Jasemin Weekes	Ministry of Trade et al	Permanent Secretary	June 11 th , 2021 9:30 am	Julie-Ann	Completed
Philip Browne	Ministry of Trade et al/SBDC	Director /SBDC Oversight	June 11 th , 2021 9:30 am	Julie-Ann/may switch	Completed
Catherine Forbes	Ministry of Health and Gender Nevis	PS/AS will verify	July 1 st , 2021, 12:30 pm	Anett	Completed
Desroy Tate	Chamber of Commerce	Executive Director	June 15 th , 16 th , 2021	Julie-Ann	Completed
Steve Tyson					
Stuart LaPlace	SNKBS	Director	June 15 th , 2021, 1:30 pm	Anett	Completed
Daniel Arthurton	Chamber/ Large Scale Farmer		June 16 th , 2021, 6:00 pm	Julie-Ann	Completed
I-ronn Audain	SKNBS	Head of Metrology		Anett	Completed
Glenville Leader	Ministry of Health	Senior Environ. Health Officer	June 17 th , 2021	Julie-Ann	Completed
Premier Mark Brantley	Nevis Island Administration	Premier	June 17 th , 2021 9:00 am	Team	Completed
Keithley Burroughs	St Kitts	Farmer	June 17 th , 2021 3:00 pm	Petra	Completed

Lorna Warner	Dieppe Bay Fisherman Co-op	Fisher		Julie-Ann	Completed
Hazel Richards	Old Road Fisherman Co-op	Fisher		Julie-Ann	Completed
Ralph Wilkins	Sandy Point Fisherman Co-op	Fisher		Julie-Ann	Completed
Jermine Mike	SKNBS	Head of Standardization	June 18 th , 2021 @8:30 am	Ulrich	Completed
Sharon Rattan	Ministry of Environment and Co-operatives	Permanent Secretary		Julie-Ann	Completed
Franklyn Connor	SKNBS	Head of Chemistry		Anett	Completed
Avicia Sweeney	SKNBS	Head of Micro Biology		Julie-Ann	Completed
Tracey Challenger	Ministry of Agriculture	Director (Ag)		Julie-Ann	Completed
Randy Elliott	Agriculture Dept. - Nevis	Director		Julie-Ann	Completed
Hon Eric Evelyn	Ministry of Cooperatives and Environment	Hon. Minister		Julie-Ann	PS took the meeting.
Janelle Lewis Tafari	Ministry of Community, Department of Community and Gender Affairs	Permanent Secretary	July 2 nd , 2021 11:30 am	Julie-Ann	PS Lewis completed the guiding questions worksheet on July 19 th
Candice Gumbs	Ministry of Health	Head of Pathology Lab.	July 1 st , 2021 10:00 am	Julie-Ann	Completed
Mentrice Warner Arthurton	Consumer Affairs Nevis	Director		Julie-Ann	Completed
Paul Queeley	Consumer Affairs St. Kitts	Director		Julie-Ann	Completed
Jermine Mike	SKNBS	Head of Standardization	June 18 th , 2021 8:30 am	Ulrich	Completed
Carlene Henry Morton	Tourism	PS	July 2 nd , 2021 3:00 pm	Julie-Ann	Completed

<i>Karen Hughes</i>	<i>Legal Drafter</i>		<i>June 30th, 2021 10:00 am</i>	<i>Ramon</i>	<i>Completed</i>
<i>Marcus Natta</i>	<i>SKNBS</i>	<i>Head of Dept</i>	<i>June 29th, 2021 2:00 pm</i>	<i>Anett</i>	<i>Completed</i>
<i>Stuart La Place</i>	<i>SKNBS</i>	<i>Director</i>	<i>July 15th, 2021 9:30</i>	<i>Ramon</i>	<i>Completed</i>
<i>Omar Christopher</i>	<i>Kajola Kristada Ltd</i>		<i>July 16th, 2021 2:30 pm</i>	<i>Julie-Ann</i>	<i>Completed</i>
<i>Joseph Wilson</i>	<i>SCASPA</i>	<i>Deputy Director</i>	<i>July 30th, 2021 11:00 am</i>	<i>Julie-Ann</i>	<i>Completed</i>

ANNEX 2: PHOTO GALLERY

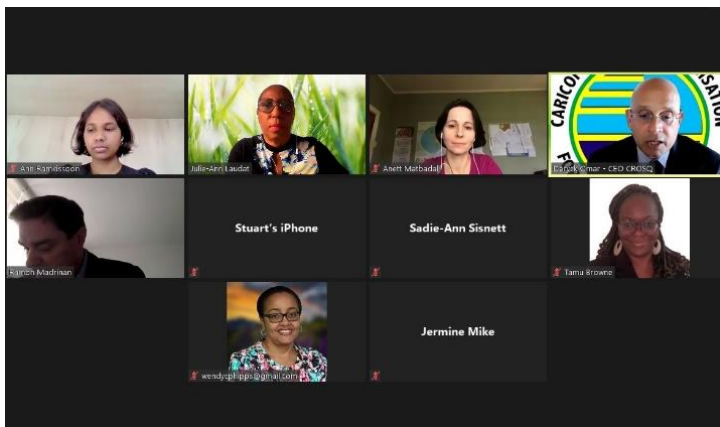


Figure 18: Meeting with Hon Wendy Phipps

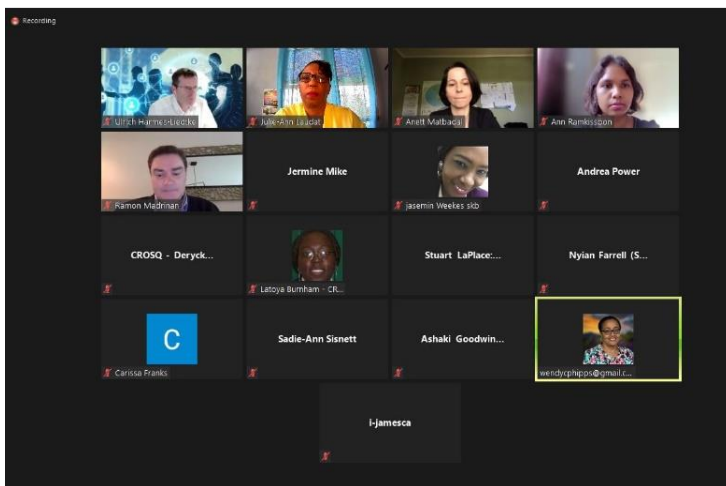


Figure 19: Project Kick Off Event

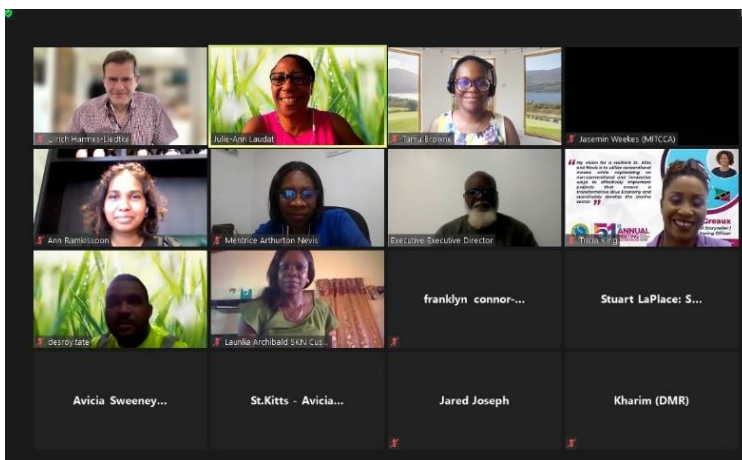


Figure 20: PSC First Meeting



GOVERNMENT OF ST. KITTS AND NEVIS
MINISTRY OF INTERNATIONAL TRADE, INDUSTRY,
COMMERCE, CONSUMER AFFAIRS AND LABOUR

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