GEO

Guyana Economic Opportunities

Guyana National Bureau of Standards (GNBS)

Assessment of Current Activities and Programs and Planning Framework

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Table of Contents

PART II: STRATEGIC FRAMEWORK

PART I: ASSESSMENT OF THE GUYANA NATIONAL BUREAU OF STANDARDS

I. Introduction

The present assessment of the Guyana National Bureau of Standards (GNBS) and related planning framework have been prepared in compliance with a specific request submitted by this Bureau. Both activities have been carried out by the consultant within the framework of the GEO Project funded by USAID and executed by Chemonics International, in the course of a mission carried out by the consultant from July 22 to August 12, 2000.

II. The Guyana National Bureau of Standards (GNBS)

GNBS was established by Act Nº 11 of 1984. In 1994, the Government decided to change the focus of the Bureau's activities by giving priority to consumer protection. As a result of the Amendment Act Nº 2 of 1997, the Bureau was officially assigned the task of monitoring certain imports, and was vested the responsibility to enforce this.

Several factors have hampered the Bureau's development in the past. The lack of appropriate budget and the sporadic operation of the National Standards Council are two important ones, and these shortcomings are compounded by the present unawareness existing in the country about the important role that a standards body can play in its economic and social development. Its present organization was put in place in 1994 and the National Standards Council became operational in the course of that year. This study examines the organization and activities of the Bureau from 1994 to the present.

The Bureau is a semi-autonomous body governed by the National Standards Council. A Director, an Assistant Director (presently vacant), and an Administrative Officer are in charge of the Bureau’s management. Currently, the Bureau consists of a staff of 39 persons, including technical officers.

The objectives, vision, and mission statements of the Bureau are included in Annex I.

The Council, which is appointed every year, has historically been composed of 10 members. Presently, four members represent Government Agencies; one, technological institutes; one, universities; two, the private sector; one, professional societies; and one, consumers associations.

A. Organization

The Bureau is mainly organized into Divisions. The present organization is based on the organizational chart adopted by the Council in 1995 that incorporated the Analytical and Inspectorate Divisions in order to cope with the new responsibilities concerning consumer protection. The seven Divisions within GNBS at present are the following:

- General Administration and Finance
- Analytical Division
- Standards Development
- Inspectorate
- Information Unit
- Public Relations and Consumer Affairs

- Quality Assurance.

The Analytical, Standards Development, and Inspectorate Divisions are under the supervision of the Assistant Director.

The Bureau's present staffing pattern is as follows:

Direction
1 Director
1 confidential secretary
1 Assistant Director, presently vacant

Administration
1 Administrative Officer
1 Accountant
12 clerks and typists

Quality Assurance
1 Head of Division
1 Technical Officer

Engineering
1 Head of Division

Certification
1 Head of Division

Standards Writing
1 Acting Head of Division

Information Service
1 Senior Information Officer
1 Information Assistant

Inspectorate
1 Acting Chief Inspector
1 Acting Senior Inspector
12 Inspectors

Metrication
1 Technical Officer

Public Relations Office
1 Public Relations Officer
1 Assistant Public Relations Officer

Informally, there are three other divisions: Engineering, Metrication, and Certification (including Laboratory Accreditation). In order to deal with the units, a new organization chart has been proposed to the Council, which includes the following divisions:

- General Administration and Finance
- Analytical Division
- Engineering
- Certification
- Standards Writing
- Inspectorate
- Information Service
- Metrication
- Quality Assurance.

Further, the Public Relations and Consumer Affairs Division would be changed into an Office of Public Relations.

This proposed chart leaves under the supervision of the Assistant Director the following Divisions: Analytical, Engineering, Certification, Standards Writing, Information Service, and Quality Assurance.

General Administration and Finance, Inspectorate, Metrication, and the Office of Public Relations would continue to fall under the direct supervision of the Director.

B. GNBS Programs

The Bureau develops its activities through distinct programs. The ten programs currently under execution are the following:

1. Standards Development
2. Laboratory Accreditation
3. Weights and Measures
4. Standards Information
5. Metrication
6. Product Certification
7. Quality Assurance
8. Compliance
9. Public Relations
10. Training

Besides these programs, the Bureau is actively involved in different national committees dealing with matters such as the committee on Conformity Assessment.

Participation in international activities is limited to its membership in the International Standards Organization (ISO). GNBS is secretariat of the *Codex Alimentarius* Joint Commission of Food and Agriculture Organization/World Health Organization (FAO/WHO), but GNBS does not participate in the standards-writing technical committees of the Codex. At a regional level, GNBS is involved in the activities of elaboration of CARICOM regional standards.

C. Human Resources

Nine staff members have college degrees, including the Director, among them: one is a graduate in Food Science; four in Biology; two in Agriculture; one in Mechanical Engineering; and one in Public Communications.

Some technical officers have received short-term training abroad in matters concerning their activities. The Bureau has developed a program for improving communication skills, addressed to all staff members.

The responsibilities of technical staff comprise activities corresponding to their own Division and arising from the various Programs. Most of the technical staff is involved in standards writing.

D. Laboratories and Equipment

The Bureau has a metrology laboratory. The laboratory supports the initial licensing of scales and weights as well as their periodic monitoring. The equipment presently available at this laboratory is not suitable for the Bureau’s needs. However, several new pieces of equipment, such as balances, scales, and weights have been purchased and some of them have already been received; others are either in

Customs or are being exported. The present laboratory facilities are inadequate as far as space and protection against dust, humidity, saline fog, and temperature changes. GNBS has been allocated a plot of land at the University for building a new laboratory.

Some equipment for Non-Destructive Testing is stored and not used. The equipment includes one x-ray portable head, one ultrasonic machine, and one magnetic flaw machine. It has also some kits for penetrating dyes. The consultant did not check the state of this equipment.

The Bureau has a network formed by nine computers.

E. Documentation

The Bureau has a Documentation Center with several collections of standards, including ISO, British Standards, Indian Standards, ASTM, and *Codex Alimentarius*. The collections are not updated. The information center periodically receives magazines and brochures from international standards organizations and foreign standards bodies. The Information Center has access to the Internet.

Documentation is well-kept under an appropriate atmosphere to allow for its preservation. The space to keep the collections is limited and so the reading space available for visitors is insufficient.

The use of documentation, both by Bureau staff and external users, is limited.

F. Buildings and Location

GNBS carries out its activities in a building that poses several constraints to the development of the Bureau's activities, mainly as a result of poor lighting and temperature conditions in several areas. It is not suitable for the installation of laboratories unless substantial transformations are made.

The building's surroundings are quiet and nice. The location does not facilitate the visits of clients and their access to the services provided by the GNBS, as a result of a lack of public transportation.

III. Description of GNBS Programs

A. Standards Development

The development of standards is carried out through the Standards Writing Division, which is supported by National and Sectoral Technical committees, some of which have established sub-technical committees. These committees, which have invited individuals from the private and public sectors to join, collaborate with the Division in selecting and drafting the standards to be elaborated. GNBS has the following technical committees and sub-committees:

- National Building Code Committee
- National Committee on Laboratory Accreditation
- National Quality Management Committee
    - Sub-committee on Consumers
- National Committee on the *Codex Alimentarius*
- Manufacturing Sector Committee Meeting (National Quality Movement)

    - Sub-committee on Importation and Merchandising
- Metrication Sector Committee (Fuel, Power, Transport and Communications)
- Technical Committee (T.C) on Services
- Technical Committee on Cosmetics and Medical Devices
- Technical Committee on Safety
- Technical Committee on Forest Products
- Technical Committee on Laboratory Accreditation
- Technical Committee on Legal Metrology
- Technical Committee on Weights and Measures
- Technical Committee on Foods
    - Sub-committee on Carbonated Beverages
    - Sub-committee on Bread and Rolls
    - Subcommittee on Rice
- Technical Committee on Consumer Products
- Technical Committee on Mechanical Engineering
- Technical Committee on Electro-technical
- Technical Committee on Environment
    - Sub-Committee on Water
    - Sub-committee on Ozone-Depleting Substances

Representatives from Government agencies, the University, the private business community, and consumer groups compose the different committees. In most of the committees a majority of members are from the government.

From 1994 to the present, the Bureau has prepared 212 standards. Forty of them are not available due to editing and printing problems. The Bureau has withdrawn 26 standards and is revising 22. Thirteen standards are mandatory.

GNBS publishes a catalogue on a yearly basis. It also prepares a semiannual standards development work program. The last program corresponds to the first semester of the present year (2000).

The major fields in which standards have been elaborated are the following:

- Non-destructive testing (55)
- Agricultural and food products (44)
- Plastic pipes (17)
- Personal care products (14)
- Quality management and quality assurance (14)
- Contraceptives devices (12)
- Engineering (8)
- Product labeling (8)
- Textiles (7)
- Laboratory accreditation and certification (6)
- Environment (5)
- Metrology (5)

Of the 212 standards elaborated, only 13 standards are mandatory.

B. Secretariat of *Codex Alimentarius*

Guyana started its participation on the joint FAO/WHO Commission of the *Codex Alimentarius* in 1985. The same year, GNBS was established as the National Contact Point for the Codex. In 1999 the government created the National Codex Committee, with GNBS acting as the Secretariat. The composition of the National Committee is large and represents mainly the public sector. The documents of the *Codex Alimentarius* Commission are available at the Bureau.

GNBS's participation in *Codex Alimentarius* Commission activities on standards development in addition to the application of its documentation are not adequate to ensure the participation of all sectors concerned.

C. Weights and Measures

The principles criteria of application and enforcement of Legal Metrology in Guyana were established by an Act in 1981. For many years, the Weights and Measures Act was enforced by the License Revenue Department of the Ministry of Finance only in Georgetown. Regional Officers from the Ministry of Local Government were in charge of the enforcement in most of the Regions of the country. The Government has since created a Weights and Measure National Monitoring Committee.

In 1997, by initiative of the GNBS Director, responsibilities on Legal Metrology were officially transferred to GNBS. GNBS holds the view that it should mainly be responsible for the calibration and traceability to international standards of the instruments used in national commercial transactions, as well as of those used by industry-manufacturing processes. Nevertheless, due to pressure from the Government and the general public, the Bureau continues to be involved in the monitoring of Legal Metrology at the market level to protect consumers.

GNBS develops its metrology activities mainly through its Inspectorate Division, which carries out the initial inspection and calibration of scales, balances, and weights manufactured locally or abroad. It deals also with the periodic re-inspection of such instruments and weights. GNBS's inspectors have the collaboration of the regional officers of the former Weights and Measures Office. These officers are trained by GNBS.

D. Standards Information

GNBS has an information center, with some standards collections, which needs to be updated. The information center will also be Guyana's focal point on standards according to the Agreement on Technical Barriers to Trade. The Ministry of Trade will be the focal point on technical regulations. Neither of them is operational yet.

The main standard collections existing in the information center are the following: ISO, *Codex Alimentarius*, and Government of India Standards, in addition to limited British, ASTM, and Caribbean standards. As a subscriber member of ISO, the center receives the ISO Bulletin and other information. There are also some standards catalogues from foreign institutes. The ISO catalogue is the only one that is updated.

The information center has access to the Internet. The technical officer in charge of the information center undertakes some documentation research. The documentation available and Internet access are scarcely used by the Bureau's technical staff.

The use of the GNBS Information Center by external users is limited, which is presumably due to lack of public transportation to its premises, among other reasons. Students from technical institutes and the University have access to the center and use it periodically.

E. Laboratory Accreditation

Following international trends on trade and the new engagements already taken or to be taken in the future by the country, GNBS has initiated a program concerning laboratory accreditation. International Draft Standard ISO 17025 (formerly ISO Guide 25) has been adopted and an awareness campaign has been developed, reaching all testing laboratories in the country, including medical analysis laboratories.

GNBS is participating as observer in the activities of the Inter-American Accreditation Conference (IAAC) and coordinates well with similar programs in the Caribbean Region.

GNBS has made a survey on the capabilities and activities of the existing testing laboratories in the country. The consultant has not had the opportunity to analyze this document.

F. Product Certification

GNBS has started a program of third-party product certification based on the attribution of a conformity mark to a national standard. So far, only some jewelers have received the conformity mark.

No other types of certification are carried out by GNBS. The lack of appropriate laboratories limits this activity.

G. Quality Assurance

This Division is carrying out two main projects. The first relates to the introduction of quality Management and Quality Assurance techniques in industries according to the ISO 9000 family of International Standards. The second deals with environmental management according to the ISO 14000 family of international standards.

The first one is called the ISO 9000 training and liaison program and its objective is to introduce the concept of quality management systems through ISO 9000 and facilitate its implementation in the industrial sector.

During the last four years, four courses on quality management training were conducted:

- Quality management systems (5 days)
- Quality management system and auditing (5 days)
- ISO 9001 standard and quality system (1 day)
- ISO 9000 standards and internal quality auditing

This training program was carried out in response to requests made by some industries and has benefited some 20 companies, in addition to several government agencies. These courses were funded by foreign donor agencies and used foreign consultants as resource personnel.

Some companies started the implementation of a quality system with the cooperation of GNBS personnel. Presently, there are eight companies that are at various stages of their documentation process. However, these firms are losing interest in this exercise mainly due to lack of management commitment, staff turnover, and registration costs.

Two companies have completed their documentation and are presently involved in implementation activities in preparation for the pre-audit inspection.

The GNBS has been also involved in conducting introductory lectures on ISO 9001 standards for middle management of some companies that have indicated an interest in establishing quality systems in their operations.

The ISO 14000 Project on Environmental Management System - 2000 aims at introducing the concept of Environmental Management System as stipulated in the ISO 14000 family of standards.

This project has targeted companies from major productive sectors in Guyana, with the purpose of establishing and implementing an Environmental Management System (EMS). The companies involved are the following:

- Bank DIH Ltd.	Alcoholic and non-alcoholic beverages
- Demerara Destillers Ltd.	Alcoholic and non-alcoholic beverages
- Guysuco	Sugar
- Kayman Sankar	Rice
- IDS Holdings	Polyethylene bags
- Guyana Thermoplastics Ltd.	PVC pipes
- Guyana Oil Company	Petroleum
- Linmine	Bauxite
- Bermine	Bauxite
- Caribbean Resources Ltd.	Lumber and Boards

Related Guyanese regulatory agencies are also involved in this project. These are:

- Guyana Forestry Commission (GFC)
- Environmental Protection Agency (EPA)
- Guyana Geology and Mines Commission

The participation of these regulatory agencies aims at making them more aware of the ISO 14000 family of standards and how they can help in monitoring their sectoral activities.

One workshop has already been held on designing and implementing an EMS, followed by the outlining of a six-month action plan. GNBS staff and representatives from the various companies are working in the preparation of these action plans.

A workshop on EMS auditing is scheduled for the next phase of the project. The same companies will be involved.

H. Metrication

The Government of Guyana has decided to adopt the metric system in the country. The Weights and Measures Act of 1981 was amended, following the recommendations made by a Canadian consultant. The amended Act has been officially published in the National Gazette. The GNBS has been given the task to oversee this national effort.

The metrication program started in 1997. January 1999 served as the initial deadline to formally establish the metric system in the country. Although GNBS has carried out systematic awareness-raising activities in the country, in conjunction with training and educational programs, the country has not yet attained the goal of becoming fully metric. The deadline of January 1, 2002, has been set by the Cabinet as the new date for the national application of the metric system.

I. Compliance

As part of its role on consumer protection, in 1994 the GNBS, through its Inspectorate Division, was asked to carry out mandatory inspections on several families of imported products. Products submitted to this mandatory inspection are:

- electric and electronic appliances
- garments
- footwear
- gas stoves
- labels on commodities
- scales and weights
- used tires
- safety matches

Importers register at the GNBS and pay an annual fee of G$15,000 for the inspections.

GNBS set up a hotline to receive consumer complaints concerning the above-mentioned inspected products. Currently, the hotline is receiving consumer complaints concerning many other products and for very different reasons. The logbook used to register complaints shows how widely the hotline is being used and the enormous potential it has to support consumers and to identify the most important causes of theirs claims.

J. Public Relations

GNBS has been conducting a public relations campaign through the media, radio, press, and television. This campaign aims to create an awareness among the general public of the Bureau's activities. These activities are carried out on a weekly basis.

The Bureau has developed a good know-how in producing brochures that cover specific subjects and provide recommendations both to suppliers and users of products and services. The Bureau has made a special effort to support the metrication program through posters and brochures.

Financial resource limitations have prevented the improvement of the printing quality of many of the documents published by the Bureau.

K. Training

GNBS carries out internal and external training. Regarding internal training, it is developing a training program in order to improve the communication skills of its staff. This program has shown many positive results.

In connection with external training, GNBS has carried out a program of seminars on quality management and quality assurance. This activity will continue and the Bureau has started a similar one on environmental management. Both are directed at industries, government agencies, and other concerned sectors. Staff have has also lectured on the International System of Units supporting the metrication program.

L. Non-Destructive Testing Laboratory

The development of a Non-Destructive Testing (NDT) Laboratory was requested by a group of Guyanese industries, especially by those involved in the development of quality systems. Such organizations need these services for the maintenance and repair of boilers, pipes, welding, and other equipment. A foreign consultant had made an assessment of the equipment needed for this purpose, and the GNBS has obtained it, although it has not been put to use so far.

IV. Assessment of the Bureau

A. General Assessment

The Guyana National Bureau of Standards is an institution developing a wide range of activities that international standards bodies expect GNBS to carry out. All activities are developed with skill and professional proficiency. GNBS is fairly well inserted in the economic activities of the country; its name is well known, although not the extent of its activities. In fact, the Bureau’s potential for supporting and participating more strongly in the economic and social development of the country is not fully utilized by the government or the private sector. The small size of the population of Guyana and the concentration of its exports in a handful of products, mainly commodities, are presently limiting the Bureau’s progress. GNBS must direct its activities towards meeting the country’s present needs, but it should also be prepared to offer the tools that will be necessary in the medium term as national industries improve their product diversification and become increasingly export-oriented.

B. GNBS Organization

1. National Standards Council

The performance of this body is essential for the operation of the Bureau. In fact, when the Council was not operative in the past, normal operations of the Bureau were hampered. The Council's chairman, with the support of the Government, must adopt all kinds of necessary measures in order to ensure that the Council meets at appropriate and regular intervals.

The Council consists of ten members, which seem to be a reasonable number for an effective operation. The Government has five representatives; the private sector, two representatives. Both the University and consumers' associations have one member each and the Bureau is represented by its own Director. It is very important that the counselors' positions or activities are such that they enable them to provide support to the Bureau and promote the Council's initiatives in their own spheres of influence.

2. Organizational Chart of the GNBS

The Bureau has significantly extended its fields of activities during the last six years. It is strongly recommended that the Bureau adjust its organization in light of its present activities and the experiences accumulated during this period. Both the present and the proposed organization of the Bureau are too horizontal. There are far too many divisions and the organizational chart is simply a reflection of the programs being implemented by the Bureau. It would, therefore, be advisable to progressively reduce the number of divisions. It is suggested that the Bureau design a salary policy by which professionals in charge of the Bureau's programs can enjoy autonomy and receive an appropriate salary that will keep them motivated in their present posts, so that the Direction does not feel constrained to promote them to a higher post in the hierarchy of the institution.

3. Budgeting and Costing of GNBS Activities

It would be advisable for the GNBS to assess the costs involved in each activity and program in order to facilitate its institutional management and, specifically, managing its budget. On the other hand, the price the GNBS is charging for its services is either zero or very low. The Bureau should envisage, as a medium-term policy, to charge fees that would cover at least their running costs. In addition, the GNBS should inform the government about the cost of the enforcement activities that it carries out.

The consultant suggests the hiring of an external consultant in order to establish a cost accounting system, followed by a training program on the subject addressed to the Bureau's top management.

C. Human Resources

As has already been highlighted, the technical staff of the Bureau consists of nine professionals with a college degree, including the Director. There is one graduate in Food Science, four in Biology, two in Agriculture, one in Mechanical Engineering, and one in Public Communication. Considering the programs developed by the Bureau and the technical fields covered, there is a need for a person with a background in Chemical Engineering. Also, there is a need to specialize some of the graduate technical staff in Food Technology, considering the present main industrial activities of the country and a

reasonable projection of them in the medium term. The number of technical staff trained at a college level is insufficient.

Moreover, there are more than 17 non-graduate officers among the personnel involved in technical activities. The basic professional knowledge of these individuals should be upgraded and, in the future, the technical staff in general must be strengthened with a greater number of college graduates.

Is would also be advisable to examine the number of inspectors performing duties related to import inspections and legal metrology. There are currently 14 inspectors compared to a total Bureau staff of 41. This proportion is substantial. As these activities are normally a source of income for standards bodies (which is not the case with the GNBS), it is important to appraise the costs and benefits involved in the development of these activities, as well as the others suggested above.

Concerning logistical support to technical staff, it is important to mention that technical staff has no access to computers. There is a pool of four typists, which is clearly not large enough for the efficient processing of documentation produced by the various divisions. Technical staff needs to have access to computers in order to prepare more documents by themselves and relieve the workload of the typing pool. At least three new computers should be added to the Bureau's network, to be used by the technical staff to prepare the common documentation necessary to their work.

D. Standards Writing

From 1994 to the present, the Bureau has prepared 212 standards. Forty of them are not available due to editing and printing problems. The Bureau has withdrawn 26 standards and is revising 22. Thirteen standards are mandatory.

In connection with the number of standards prepared, the following should be noted:

- The total amount of standards produced in the period is considerable for an institution with limited resources such as GNBS.
- The fact that 26 standards have been withdrawn and 22 are being subject to revisions shows that the Bureau exercises a critical approach to standards writing.
- The amount of mandatory standards is very reasonable and it reflects the country's concern for safety and consumer protection.
- The fact that 40 standards have been in the printing process since 1997 or 1998 reflects the need to improve the process of typing, editing, and publishing.

There is a need to refine the criteria used to prioritize subjects to be covered by standardization activities and possibly to concentrate in fewer fields. For instance, the Bureau has developed 50 standards in the field of non-destructive testing. The question arises whether so many are necessary to meet the present needs of the country in this field. In the case of quality assurance standards, mainly those of the ISO 9000 family, it would be very advisable to adopt as soon as possible the rest of this family of standards. The composition of the technical committees, and more inquiries to the appropriate sectors, would assist in the optimization of standards writing.

Furthermore, it would also be advisable to consider the application of some of the following criteria:

- Complete blocks of standards covering one subject or product: determine if all necessary standards concerning terminology, sampling methods, testing, specifications, codes of practices, etc., have been developed.
- Review catalogues from international, regional and foreign standards organizations in order to determine which approaches have been used by different bodies in the development of standards in specific fields.
- Consider how the Bureau's activities can or must be supported by national standards, i.e., ISO 9000, ISO 14000, or ISO 17000 families; standards concerning electrical safety for low and high-tension standards to support the metrication program.
- Develop standards for consumer protection and/or information as an answer to consumer complaints expressed in the media or on the Bureau's hot line.
- Analyze import and export statistics and discuss quality and standardization problems and needs with the business community.
- Analyze the present needs of specific manufacturing sectors with concerned businesses and jointly prepare standards writing programs suited to their needs.
- Focus standards writing not only on end products to be marketed, but also in raw materials and intermediate products used by industries
- Approach the Central Tender Board and other government agencies to assist them in the elaboration of technical specifications applicable to their purchases, thereby enhancing the demand for quality and use of standards in the country.
- Look for standards that will raise the awareness of important groups, such as university teachers and students, and professional organizations.

For several fields, there is a lack of documentation. This deficiency should be improved before and during the elaboration of standards.

E. Secretariat of *Codex Alimentarius*

The National Committee has too many representatives from the public sector. The presence of the private sector should be enlarged, especially from producers and exporters.

The country has not yet developed a policy on the participation in *Codex Alimentarius* Commission activities. It is necessary to select the Technical Committees that are most important for the country, analyzing all the draft standards, and sending the country's observations to the meetings of the *Codex*. As the *Codex* standards are recognized at the international level under the terms of the Agreement on Technical Barriers to Trade, the participation in the analysis of producers and exporters is essential.

Guyana’s participation should be assured by the Guyanese diplomatic mission closest to the place of each meeting. Commercial attachés should attend those meetings and submit the country’s observations and send to the national contact point all the information collected during the meeting.

The country should develop the necessary procedures, probably through the GNBS, to systematically disseminate information on the technology and know-how that is available from the standards and technical documentation from the *Codex Alimentarius* Commission.

F. Metrology and Non-Destructive Testing Laboratories

GNBS must clearly determine which type of laboratories it needs. Presently, the meaning of the expression “testing and calibration laboratories” used in the Bureau’s documentation is too general and vague. The Bureau has a metrology laboratory mainly addressed to legal metrology activities. However, its instruments and operational environment are not appropriate and its maintenance is not optimal. The new instruments that are being imported should be placed and maintained in better conditions than the existing ones. This is true not only for the laboratory located in the Bureau’s headquarters but also for the equipment to be delivered to the regions.

The Laboratory of non-Destructive Testing (NDT) is not operational and again, it requires a special environment. Part of its equipment, such as the x-ray head, is used mainly in the field, so it requires transportation facilities, and it is normally used with a portable laboratory to develop x-ray plates.

A small and useful addition to Bureau equipment would be a portable instrument to calibrate pressure gages. This is a critical instrument for the food industry, sugar refineries and, in general, industries operating with boilers and pressure valves. It would be very useful for maintenance, process control, and energy consumption control.

The proper operation of the above-mentioned laboratories requires suitable buildings, specialists in their operation and their maintenance, equipment to work in the field and transportation. In most countries, the proper operation of a metrology laboratory, either on legal or industrial metrology fields, requires the permanent support of the government. On the contrary, a NDT laboratory is an important source of revenue as companies use it for the building of new installations and support to maintenance problems. This is especially true in sectors like mining, sugar refineries, and fisheries, where maintenance and corrosion problems are detected through the use of NDT equipment and solved through the use of welding.

If GNBS is going to be involved in NDT activities, it will be important to establish such a laboratory with the financial support of the industries that require such services. Also of importance is the engagement of industries to make use of the facilities and to pay for the real cost of the services.

On the other hand, the country lacks laboratories in several fields and it is not clear that the existing ones are prepared to offer services to the Bureau and to the industries with the traceability, efficiency, and speed that certification and technical assistance activities require. Therefore, it is important that GNBS makes an in-depth survey of the actual supply of testing and analyzing facilities available for certification and quality control, as well as on the demand for such services. If Government and the private sector are not ready to pay for the services, it will be necessary to ensure alternative ways of financing such activities.

In general, GNBS must be very careful to become involved in developing laboratory services, if there is not a previous measured assurance that the services will be provided on a cost-recovery basis, which will allow a proper financing of the new buildings, specialized personnel, cost of maintenance, and replacement of instrument over time.

The consultant suggests that the GNBS establish the traceability of all Guyanese mass standards to international ones, through the calibration with the national standards from some of the Caribbean states, defining the official procedures to do it.

G. Buildings and Location

GNBS's buildings are fairly appropriate for the development of its activities, despite shortcomings regarding air conditioning, lighting, and space. However, the building is not suitable for the installation of laboratories until improvements are made to provide a proper environment for the instruments. Moreover, the building needs a suitable storehouse for instruments and equipment.

Due to its location, the GNBS building is not easily accessible to clients and users, especially its Information Center.

H. Standards Information

GNBS must allocate a yearly budget to buy some basic documentation. The list of needed documentation starts with the latest catalogues of the existing collections in order to keep track of the changes in the collections, as well as new standards, annulled standards, revised standards, and updated standards. The information center must also be able to buy the new standards needed as reference documents for the different programs of the Bureau.

Updating the existing collections should be the responsibility of the entire technical staff. The selection of standards must be selective, supporting the needs in the areas where the Bureau has or is developing programs.

Technical staff must be encouraged not only to participate in this activity, but also to make use of the documentation existing in the information center, searching for the right documentation and making use not only of catalogues, but comparing them, and also searching on the Internet. With few exceptions, the staff is not using existing information. The Director should take the necessary steps to address this situation.

The Bureau must also make the best use of its condition as Focal Point on the WTO Agreement of Technical Barriers to Trade, to get as much standards information as possible. Much of this information is available for free on the Internet.

I. Initiating the Focal Point on the Technical Barriers to Trade Agreement

The basic conditions to implement GNBS's role as Focal Point for the Technical Barriers to Trade (TB) Agreement have been fulfilled. These include: the signature of the Standards Code (annex of the TBT Agreement); the existence of a national standards catalogue; and the bi-annual publication of a standards elaboration program. Concerning logistics, the Bureau is connected to the Internet.

The Bureau has all the elements to start operating the Focal Point. Initially, the personnel involved need some training. This training can be done through the courses offered on the WTO-TBT web page TBT. It would also be advisable to update the GNBS’s web page so as to include the national standards

catalogue and the bi-annual report. The focal point should inform the focal points about the other country members, keeping in touch periodically with them.

The use of WTO information by importers and exporters must be encouraged. Strong coordination with the focal point on technical regulations, existing in the Ministry of Trade, must be encouraged and specific proposals to enhance this coordination should be made to the Minister.

There is a need to create awareness of the engagements and benefits derived from membership in the WTO and to the specific agreements such as TBT.

J. Laboratory Accreditation

Currently, national laboratories show little interest in being accredited. If the country is unable to develop a conformity assessment system to be used locally and in the CARICOM region, foreign companies will develop these activities. It is important that GNBS continues to raise awareness in this respect and developing standards, guides, and codes to establish quality systems in laboratories. In particular, GNBS should develop a policy in order to link laboratory accreditation with conformity assessment and compliance (inspectorate activities)

It is also essential that GNBS start as soon as possible in developing a quality system for its own metrology laboratory according to ISO 17025, as well the quality system for the Inspectorate Division following ISO 17020.

K. Product Certification

Product certification, presently limited to the attribution of a conformity mark, should be expanded. The concept of conformity assessment has been developed from the initial 10 types proposed by ISO to the system developed by the European Union (EU). GNBS should study the possibility to offer the different modules used by the EU, as it is able to use its own and external laboratory facilities. As a basic complement, the Bureau must implement the adoption of the standards and know-how on statistical quality control.

In the short term, GNBS should direct this program to the local market (consumers) and to CARICOM, in order to facilitate trade and exports from Guyana. In the long term, the Bureau should aim at the development of a national certification system.

The Bureau must differentiate among the types of conformity assessment as the conformity mark, directed at providing information to the final consumer, from those intended to support imports, exports, and purchases management for industry, trade, and Government. The promotion of the advantages of product certification to customers should consider the differences in the types of conformity assessment suitable for each customer.

It is also important that GNBS try to establish a link between the conformity mark, or some other conformity assessment modules, and the enforcement activities of the Government. In many countries, products that bear a conformity mark with a mandatory standard or a safety regulation are not subject to the control of enforcement authorities with the same intensity as other products not bearing such mark.

The Division in charge of certification should initiate a survey of conformity marks (for both quality and safety) existing in countries trading with Guyana in order to share that information with the Inspectorate Division, as well as with importers and exporters to inform them about the conformity assessment systems existing in their markets and how to make use of them. Coordination between the two divisions could evolve to a broader use of the certification systems existing abroad, facilitating the inspection activities of the Bureau and making them more efficient for importers.

L. Compliance

There are several activities to be carried out in order to strengthen the work of the Inspectorate. GNBS should make an analysis of the procedures and technical regulations applied in the Inspectorate activities and make sure that they conform to the terms of the TBT Agreement. GNBS must adopt certain international standards as soon as possible, particularly those used to ensure the safety of electrical household products. It is also important that the Bureau study the local availability of international and foreign standards used for carrying out inspections of products in the country of origin.

GNBS charges importers a fee of G$15,000 for initial registration, but inspections are free. In this regard, the consultant would like to point out that it is a basic principle to link product quality assurance to fees charged for inspection. Importers will be more careful in the selection of both the products and exporters and they will also be more inclined to ask for a conformity assessment of the products prior to shipment. GNBS can explain the systems and procedures existing in the country of origin.

It is also highly advisable for GNBS to develop a system linking fee payment with the previous quality record of the importer and the product. To this effect, two databases could be built, one with the quality record of the products brought to the country by a specific importer, the other with records concerning the quality of imports from a particular brand, exporter, or broker.

These background data will make it possible to carry out inspections by taking only the necessary samples, to be determined in each case according to the historical record of the product, the importer, or both. This differentiation would be beneficial to responsible importers, and fees to be charged to them should be consistent with the number and severity of the sampling, testing, and inspection procedures.

The Inspectorate Division must encourage importers to make use of the conformity assessment systems existing in the country of origin, again to facilitate the inspection procedure and to lower its costs.

The mutual collaboration between the Inspectorate Division and the Certification Division would be very beneficial to inspection activities.

M. Quality Assurance

Up to the present, this program has focused on the development of quality systems aimed mainly at assisting companies to develop a quality assurance system that could be certified by a third party. The Bureau is also implementing a program to develop environmental management systems with a view to certifying them.

The Bureau's activities in this field are very important and will make it possible to develop the concept of both quality and environmental management in some important companies in Guyana. Unfortunately, worldwide this emphasis on quality assurance and its subsequent certification has become mainly a commercial tool for many companies, as they either use certification to strengthen market position vis-à-vis their competitors or merely as an advertising aid. On the other hand, due to the costs associated with the implementation of a quality assurance program and its certification, only large companies can normally afford them

As most companies in Guyana are small and medium-sized, GNBS should enlarge the scope of its activities in the field of quality assurance. There is a need for seminars aiming at raising awareness of the economical, commercial, and technological advantages of the implementation of the principles of quality management, including the study of the relationship between quality and productivity, costs of non-quality, and quality tools, among other matters. Other events dealing with the selection and use of different techniques suitable to specific conditions of each industry in terms of size, industrial sector and segment of the market served should complement these seminars. In the medium term, GNBS can envisage offering technical assistance in this field.

GNBS must take some immediate actions to reinforce its present activities in quality assurance and to expand them to include quality management techniques. Among these actions, the following can be mentioned:

- Complete the adoption of the standards from the ISO 9000 family as national standards.

- Carry out internal training on quality management, quality assurance, quality costs, quality tools, etc. Such program should aim, in the first place, to clarify the concepts and differences between Quality Management, Total Quality Management, and Quality Assurance. Training should emphasize the fact that the formulation of ISO 9000 standards was the result of a continuous work undertaken over several decades mainly in Japan, and, therefore, industrialized countries have had the advantage of a progressive understanding and application of these concepts and technologies.

- Develop seminars for specific industry sectors and companies sizes. By so doing, it will be possible to focus on the practical problems and limitations they face to implement quality management systems.

- Design a curriculum in these matters that could allow participants in the seminars to move forward from a general conceptual approach to a detailed application of each subject.

N. Metrication

The consultant has not analyzed the reasons for the delay in the full implementation of the metrication process in the country. Apparently, the main reason is the cultural resistance to change, something that always occurs for such processes. It appears that economic reasons (i.e., the investment in equipment and instruments) are not as important.

GNBS has elaborated several posters and brochures that have been widely displayed in offices, companies, and shops in Georgetown. The consultant recommends the reinforcement in future publications of the fact that metrication is a government decision that will be enforced once the deadline is reached.

It is advisable that the Bureau, besides continuing its present activities on the subject, initiates the adoption of the family of ISO standards concerning the International System. Once adopted, the Bureau should involve university professors and professional societies in the promotion of the IS metric system and its use.

The government should analyze the convenience of authorizing only the imports of products, labeled in metric units as well as of equipment and instruments working with the metric system.

O. Training

1. Training of Bureau Staff

Bureau staff should initiate a program of systematic training, in addition to the training they are presently undergoing. Such a program should include subjects aimed at improving their performance, and their own capacity to participate in the external training to be provided to the Government, companies, and consumers associations, among others. The training program should be addressed to top management, graduate technical staff, technical staff, and administrative staff. Some parts of the training can cover all Bureau staff and others will be targeted to specific group according specific needs.

The subjects covered by the program can be based on the training program suggested by ISO in its Development Manual Number 3, adapted to the situation in Guyana. It must also include subjects that are not presented in the ISO program or are not updated.

As training is time-consuming, and the staff must at the same time continue performing their functions, the program must be carefully defined. The consultant suggests that the training program be extended over two years for technical staff and one year for administrative staff.

The Direction should take the necessary steps so that the job description of each post specifies the training needed and the training already received.

It is very important that the Bureau approaches technical cooperation agencies from the UN system, foreign governments, and NGOs and applies for the existing training opportunities in standardization and quality-related subjects. A sensible distribution of those training opportunities will benefit the efficiency of the technical staff and its motivation.

Taking into account that most of the technical staff is young and with limited experience in industrial activities, it is very important to implement the Director's idea of sending the technical staff for specific periods of time to work in industrial companies.

2. External Training

The present training activities of the Bureau are mainly directed to quality assurance. It has also lectured schoolteachers on the support they are expected to give to the metrication program. The Bureau should develop a training program, organized using an established curriculum, thus allowing institutions and individuals to plan their training. External training must be aimed at fulfilling the needs of civil society concerning quality and standardization. The program should include three levels: technical level, basic training for consumer organizations and similar groups, and awareness raising.

At the technical level, training should focus primarily on quality management, quality assurance, and environmental management, including supporting techniques, like the use of statistical quality control, the application of quality tools and 5 S, among others. The Bureau must be very careful about the specifics of this training, ensuring that internal training is carried out before external training. On the other hand, the Bureau must not hesitate to engage independent lecturers.

The programs oriented to the other two levels should be elaborated with the participation of the Public Relations Division.

P. Public Relations

The public relations campaign that GNBS has been conducting through the media, radio, press, and television is very adequate and its frequency, on a weekly basis, is appropriate

The Bureau, through the Public Relations Department, has developed good know-how in designing and producing posters and brochures that cover specific subjects and provide recommendations both to suppliers and users of products and services. It would appear advisable to make an assessment of the impact of these posters and brochures have made on the target sectors.

The GNBS should allocate more funds to the Public Relations Department in order to improve the printing quality and coloring of some of the brochures produced. The Bureau should make sure that the services and information offered in the brochures are actually available.

PART II: STRATEGIC FRAMEWORK

I. Introduction

Part II of this report provides a planning framework for the GNBS. It was formulated in conjunction with the staff and management and based on an assessment of current activities.

The purpose of this document is to assist the Guyana National Bureau of Standards in identifying its objectives and strategies in order to fulfil its mandate. It is also intended as a guide in the selection of priorities, the definition of its budget, the level of various activities, and for the submission of projects to bilateral and multilateral technical assistance agencies.

As part of the process in developing the framework, a two-day retreat was attended by the Bureau staff and National Standards Council members. The role played by the consultant was to direct the discussion towards the main subjects that are presently of interest to all standards bodies: the international trends of standardization and related matters such as accreditation, certification, quality management and quality assurance, and metrology.

Topics at the retreat included:

- The role of a standards bureau in the context of a small, developing country.
- Standards development and metrology as mechanisms to promote and develop improved quality.
- Product certification and quality management.
- Public awareness and training.
- Information and documentation.
- The mission, role, and functions of the GNBS.
- Organizational structure of GNBS in the light of national development.
- Review and articulation of follow-up activities.

The analysis made by participants was important input for the assessment of the Bureau, for determining its strengths and weakness as well as for establishing priorities.

II. Achievements to Date

The Bureau has had many significant achievements to date:

- The existence of a standardization law to support its activities.
- The implementation of activities not only in standards development but also in most of the fields normally covered by standards bodies.
- The establishment of links with international and regional bodies concerned with standardization: ISO (subscriber member), COPANT, and CARICOM, national secretariat of the *Codex Alimentarius,* and observer in the Inter-American Accreditation Conference.
- The establishment of national technical committees to support its activities.
- The preparation of 212 national standards.
- The approval by the government of 13 of those standards as mandatory.

- The amendment of its Act in order to include metrological activities. The Bureau is responsible for the custody of the National physical standards and of calibration and verification activities including legal metrology.
- Establishment of a weights and measures laboratory for verification purposes.
- Certification of five (5) jewellers under the product certification scheme.
- Registration programs established as part of the import-monitoring scheme to ensure quality goods and services.
- Execution of the metrication drive under the theme "Swing to Metric," established by the Government with the purpose of fully introducing the metric system in Guyana.
- The training provided to personnel from various industries in quality management, non-destructive testing, and environmental management systems.
- GNBS is presently fully operational with the capability for orienting its programs and activities toward the fulfilment of the present and future national needs in standardization, quality, and trade through the establishment of the appropriate policies and strategies.

III. Bureau Strengths and Weaknesses

The consultant made an analysis of the strengths and weaknesses of the GNBS in order to assess the Bureau's capabilities. Bureau staff and management also participated in this exercise at the retreat. The results are indicated below.

A. Strengths

- The existence of comprehensive legislation to support and authorize its activities and programs.
- A working organization covering a comprehensive range of disciplines concerned with standardization activities.
- A close working relationship with the Government through the Ministry of Trade.
- The recognition by some government agencies of the important role it plays in the development of standardization in the country.
- Links already established with the private sector.
- Its status of country representative in international and regional organizations, such as the Caribbean Common Market Standards Council (CCMSC), the Pan American Commission for Technical Standards (COPANT), the International Organization for Standardization (ISO), the *Codex Alimentarius* Commission, the Inter-American Metrology System, and the Inter-American Accreditation Conference.
- Its technical support to the participation of Guyana in international trade agreements, such as acting as Focal Point for standards for the Technical Barriers to Trade Agreement of the World Trade Organization, and in the Free Trade Area of the Americas.
- The existence of technical committees with a reasonable participation of all national sectors.
- Its capacity to elaborate standards.
- The small percentage of standards made mandatory.
- Management commitment to staff training.
- The existence of medium-term specific programs reflected in its yearly work programs.

B. Weaknesses

- Lack of medium and long-term policies concerning the Bureau's activities, mainly for testing, analyzing, metrology, and enforcement services.
- Lack of knowledge in the Government and private sector alike of the activities and services that could be provided by the Bureau.
- Not enough support and cooperation from other regulatory bodies/government departments and similar organizations, which is essential for the implementation of standardization within the various sectors of the economy.
- Lack of regulations to provide legal backing to the implementation of the Bureau's policies and the non-inclusion of standards in the regulations of other regulatory bodies due to out-dated legislation.
- Lack of understanding of the differences and relationships between standards and technical regulations, especially as regards the WTO Agreement on Technical Barriers to Trade.
- Lack of public awareness of the importance of standardization and related disciplines, and of the need for a national official body responsible for their development based on the application of the principles of consensus and large participation of all sectors concerned.
- Lack of a systematic staff training program covering the programs, activities, and services developed by the Bureau.
- Present budget mostly provided by the government. Private sector is not sufficiently involved in the financing of the Bureau.
- Lack of adequate financial resources to satisfy some essential needs, such as the acquisition of technical documentation, computers and, eventually, laboratory equipment.
- Low salaries and insufficient benefits that do not attract and maintain experienced staff.
- Organization structure is too broad, with little depth to existing programs.
- The documentation available at the Documentation Center is insufficient and, in some cases, outdated.
- Lack of testing facilities in the country and their proper accreditation to ensure the quality and reliability of Bureau evaluations.

C. Critical Issues

Based on the assessment of the Bureau's present situation there are four strategic elements that present a higher priority for the Bureau. They are:

- To establish the Bureau as the recognized leading agency for standardization, conformity assessments, accreditation, quality management and assurance, and metrology.
- define the Bureau's policies with the participation of all stake-holders.
- To establish a human resources policy: including training, motivation, and adequate salaries.
- To improve the efficiency of the Bureau in the execution of its programs and activities and in the services rendered**.**

VI. Planning Framework

The planning framework has been elaborated for a period of three years. The Council and the Director must determine the feasibility of developing all the actions proposed taking into consideration the present human and financial resources available to the Bureau.

It is also important to point out that its successful implementation will be the responsibility of Council members, staff, Committee members, ministries, government agencies, the entrepreneurial community, professionals in the government, university, private sector, and consumers' associations. The Bureau, acting alone, would be unable to implement all the necessary actions.

Strategic Element	I. To establish the Bureau as the recognized leading agency responsible for standardization, conformity assessments, accreditation, quality management and assurance, and metrology.
Objective	**1.1 To develop and implement a program to raise awareness about the importance of standardization and related subjects at national level.**
Actions	1.1.1 Identify the target sectors of the program, indicating general and specific activities to be carried out, such as lecturing, training, public relations, visits, meetings, among others. (Ministers, high level officials, leaders of the business community, academic sector, industries of same sector grouped together, regulatory agencies, importers, exporters, consumers, etc.) Starting: Month 1 Ending: Month 3
	1.1.2 Prepare a detailed program for each sector. These programs will take into account the situation in each program and activity of the Bureau. For instance, the Bureau is already working in the field of standards development with a well-developed structure; but in laboratory accreditation, emphasis should be placed on underlining the advantages of such activity and in the preliminary steps to be taken by laboratories of the process to reach the accreditation, etc. Starting: Month 2 Ending: Month 4
	1.1.3 Appoint the person responsible for actions in each specific sector (including members of the National Standards Council). Starting: Month 2 Ending: Month 3
	1.1.4 Prepare the supporting documentation for the whole program. The material must include not only brochures with general information, but also a description of the services that can be offered to each specific sector:

	standards to develop, training possibilities, standards and regulation available at the documentation center, among others. It will also emphasize the benefits that can be obtained from the Secretariat of the *Codex Alimentarius* and of the Focal Point of the TBT Agreement both held by the Bureau. Starting: Month 2 Ending: Month 6

	1.1.5 Collect and process all the feedback information obtained from persons who have attended program activities, using it for the attainment of Objectives 1.2, 1.3, 1.4, 1.5. Starting: Month 6 Ending: Month 18
	1.1.6 Publish a periodical bulletin with standards and quality-related information distributed in printed and electronic formats. Starting: Month 6 Ending: Continuous
	1.1.7 Review the content and update periodically the Bureau's web page. Starting: Month 4 Ending: Continuous
Objective	**1.2 To identify and enhance collaborative relationships between GNBS and other agencies and organizations.**
Actions	1.2.1 Selection of the organizations for this purpose: principal government regulatory agencies, Central Tender Board, Customs, purchasing departments of each Ministry, the University and Technical Institutes, major companies, business organizations, etc. Starting: Month 6 Ending: Month 10
	1.2.2 Schedule Chairman and Director's visits to those organizations, extend invitations to know the Bureau's facilities, and prepare a proposal on mutual collaboration and specific services that the Bureau can offer to each of the identified organizations. Discussions with each on the possibility of signing a memorandum of understanding for mutual collaboration and services. Starting: Month 8 Ending: Month 12
	1.2.3 Negotiate and sign memoranda of understanding Starting: Month 10 Ending: Month 14
Objective	**1.3 To assess the need for the Bureau's services among the different sectors**
Actions	1.3.1 Establish a national committee composed of representatives of each sector to itemize the country's present, medium and long-term needs in standardization, certification, accreditation, and metrology. Starting: Month 10 Ending: Month 18

Objective	**1.4 To analyze and define with the government and the private sector the new role of the Bureau at national and international levels in the light of international economic and trade trends and evolving national social and economic conditions.**
Actions	1.4.1 In collaboration with the Ministries of Trade and Foreign Affairs, prepare a document and a presentation of the contents of the TBT Agreement (using the training facilities in the WTO web page) and provide a series of seminars and/or lectures to the privates and public sectors. This action will be carried out only after the Focal Point has become fully operational. Starting: Month 12 Ending: Month 18
	1.4.2 Preparation of a plan concerning the *Codex Alimentarius*, underlining the potential for a greater participation on the part of Guyana, the role the Bureau should play in this connection and the benefits for government, producers, facilitation of the international trade of Guyanese processed food products and the observance by the country of international treaties. Starting: Month 10 Ending: Month 16
	1.4.3 Prepare and submit a proposal for a better application of the TBT agreement and the membership on the *Codex Alimentarius*, highlighting the rights and duties for the country and the role to be played by the Bureau in this matter, particularly as a meeting point to enhance the relationship and coordination between the various sectors of the government and the civil society concerned. Starting: Month 16 Ending: Month 18
	1.4.4 Draft a proposal about the Bureau's new role, taking into account the results of the above-mentioned actions and the outcomes of the implementation of Objectives 1.1, 1.2 and 1.3. Starting: Month 14 Ending: Month 20
	1.4.5 Circulate the proposal and present it in a national seminar, and subsequently submit its recommendations to the government for their approval. Starting: Month 20 Ending: Month 24

Objective	**1.5 To train all concerned sectors in their participation and use of the programs and activities of the Bureau.**
Actions	1.5.1 Prepare and implement training programs mainly addressed at persons that collaborate in each of the Bureau's programs. Starting: Month 6 Ending: Continuous
	1.5.2 Prepare and implement training programs addressed at persons who make use of specific services of the Bureau. Application of standards in industries, in exports and imports, public procurement, enforcement and regulatory actions, accreditation principles and practice, metrology as support to quality systems, etc. Starting: Month 6 Ending: Continuous

Strategic Element	**II. To define policies for the Bureau with the participation of all stakeholders.**
Objective	**2.1 To establish policies in each of the Bureau's programs and activities in compliance with the needs expressed by the public.**
Actions	2.1.1 Establish a general policy to differentiate activities and programs carried out as services to the public and those that provide support to the country's economic and social development. Starting: Month 24 Ending: Continuous
	2.1.2 Establish a policy in standards development aligned with the priorities established in conjunction with the government and the private sector. Starting: Month 14 Ending: Month 20
	2.1.3 Submit to the government a proposal for establishing a national policy on the drafting of technical regulations through the principle of reference to standards, in conformity with international recommendations and the clauses of the TBT Agreement. Submit to the Government: Month 22

	2.1.4 Define a policy on conformity assessment that will comply with the needs of local and international trade. Such a policy should include the enlargement of the present certification scheme (conformity mark) to all types, as the ones used by the European Union. The policy also has to consider the development of testing laboratories, a certification (conformity assessment) system, the traceability of all standards and instrument, and to raise awareness of the need for an accreditation system. Submit to the Government: Month 24
	2.1.5 Plan a medium term program to harmonize the quality systems and procedures of national laboratories according to the terms of ISO 17025, followed by their voluntary accreditation in order to attain the goal of a national conformity assessment system. Starting: Month 6 Ending: Continuous
	2.1.6 Define a policy that will determine whether the Bureau will develop its enforcement, conformity assessment, and calibration activities through the expansion of its own laboratories or through the use of external laboratories. Define by Month 12
	2.1.7 Define a policy on the implementation of quality assurance and quality management techniques in local companies. Differentiate the activities directed to large companies and those interested in the certification of their quality systems of those activities intended to help SME to improve their productivity and product quality. Starting: Month 6 Ending: Month 12
	2.1.8 After consultations with the government and the private sector, define a policy on the Bureau's participation at international and regional levels on organizations concerned with standardization, metrology, conformity assessment, and accreditation Starting: Month 12 Ending: Month 24
	2.1.9 Define a policy on the present and future involvement of the Bureau in enforcement activities. This policy should be defined by mutual agreement between government and private sector. Define by Month 24

	2.1.10 Define a policy concerning the cost of the different services provided by the Bureau. Define by Month 24

Strategic Element	**III. To Establish a human resources policy, including training, motivation, and adequate salaries.**
Objective	**3.1 Train Bureau's staff on the responsibilities of the Bureau.**
Actions	3.1.1 Design and implement a training program adapted from that formulated by ISO, supplemented with new concepts on conformity assessment, standardization and international trade, WTO-TBT agreements, use of Internet in standards bodies. Establish priorities and duration (two years are suggested) of the program. Starting: Month 1 Ending: Month 12
Objective	**3.2 Training program for senior management and staff (senior, technical, administrative and general service)**
Actions	3.2.1 Implement the training program for senior management, on cost management and personnel management. Starting: Month 5 Ending: Month 18
	3.2.2 Establish the training needs for each post in the Bureau, jointly with its relevant job description. Prepare a form describing all the training activities already accomplished and the missing ones, defining the responsible to fill the forms. (first year) Starting: Month 8 Ending: Month 16
	3.2.3 Prepare and implement a program to send technical staff to training programs abroad, using sources of bilateral and multilateral technical assistance. Starting: Preparation from Month 1, Implementation from Month 8 Ending: Continuous

Objective	**3.3 Define and implement a personnel wage policy and request the Government for its approval and provision of necessary financing.**
Actions	3.2.1 Assessment of wage rates in similar organizations (decentralized, autonomous, and private) in the country. Starting: Month 1 Ending: Month 6
	3.2.2 Draw up and submit to the Ministry of Trade for its approval and financing a wage structure for the Bureau's staff. Starting: Month 7 Ending: Month 12

Strategic Element	**IV. To improve the efficiency of the Bureau in the execution of its programs, activities and services.**
Objective	**4.1 To devise a new organizational structure for the Bureau.**
Actions	4.1.1 Establish the Bureau's organization chart. Starting: Month 12 Ending: Month 18
	4.1.2 Define the professional and experience profile for all posts. Starting: Month 8 Ending: Month 16
	4.1.3 Design and implement a program to specialize present staff, including university-level specialization studies and the hiring of the additional technical staff required. Starting: Month 12 Ending: Continuous
Objective	**4.2 To design and implement an accounting system for the Bureau, that will allow for the control of costs and revenues of each program and activity.**
Actions	4.2.1 Hire a consultant to design and put in place the accounting system. Starting: Month 1 Ending: Month 6

	4.2.2 Train the Bureau senior management in the implementation of said system and its use in the management of the programs and the control of the Bureau's budget. Starting: Month 7 Ending: Month 10
Objective	**4.3 To develop the Documentation Center as a national center on information on standardization, quality and related matters.**
Actions	4.3.1 Enlarge the space available for users in the Documentation Center, so that it can accommodate more materials and in a more comfortable environment. Starting: Month 12 Ending: Month 24
	4.3.2 Identify the standards needed to update the present collection in those fields relevant to the priorities that have been defined for the Bureau. Starting: Month 6 Ending: Month 20
	4.3.3 Utilize the Focal Point of the TBT Agreement not only for importers and exporters, but also as a tool to obtain from other focal points the standards and technical regulations needed in the Bureau's activities. Starting: Month 6 Ending: Continuous
	4.3.4 Introduce the GNBS standards catalogue in the web page of the Bureau and make it also available through the Focal Point of the TBT Agreement. Starting: Month 8 Ending: Continuous
	4.3.5 Incorporate new services, like the adjustment of international and national standards to the realities of a particular company. Train and use the technical staff to provide such service. Starting: Month 24 Ending: Continuous
Objective	**4.4 To develop a conformity assessment system**
Actions	4.4.1 Define the types of conformity assessment needed in the country both presently and in the medium term. Define by month 12

	4.4.2 Define a program with the participation of national laboratories concerning the training of their personnel in the establishment of quality systems (ISO 17020 and ISO 17025 Standards) Define by Month 12
	4.4.3 Implement the training program, developing the quality system in two pilot laboratories. Implement Starting: Month 12 Ending: Month 24 Development of quality systems Starting: Month 24 Ending: Month 36
	4.4.4 Analyze with the testing laboratories their needs concerning standards in the fields of sampling methods, methods of analysis, methods of inter-laboratory testing, calibration, reference materials, etc. Incorporate those requirements in the standards development program of the Bureau. Starting: Month 6 Ending: Continuous
	4.4.5 Make initial assessments of the quality system of the laboratories and incorporate them to the conformity assessment activities of the Bureau, including those related to enforcement. Starting: Month 12 Ending: Month 18
Objective	**4.5 To improve the quality of imports and exports beyond inspection**
Actions	4.5.1 Establish a technical assistance and information service addressed to importers concerning the standards and technical regulations both being applied in the country of origin and those used in national inspections. This service should also include the information concerning the procedures of quality assessment available in the country of origin. Starting: Month 18-24 Ending: Continuous
	4.5.2 Development of a similar service for exporters. Starting: Month 18-24 Ending: Continuous

Objective	**4.6 To make the National Focal Point of the Technical Barriers to Trade (TBT) Agreement from the World Trade Organization operational.**
Actions	4.6.1 Initiation of activities of the Focal Point on Standards of the TBT Agreement. Starting: Month 6 Ending: Continuous
Objective	**4.7 To optimize the services rendered by the national secretariat of the *Codex Alimentarius* Commission.**
Actions	4.7.1 Organization of a complete set of services concerning the *Codex Alimentarius*. This should include the availability of Standards, Codes, acceptable residues, draft standards documents, as well as FAO and WHO-related documents. Starting: Month 8 Ending: Continuous