International Trade Centre
UNCTAD/WTO
Standards and quality management

COMMONWEALTH
SECRETARIAT

Influencing and Meeting International Standards

Challenges for developing countries

Volume Two – Procedures followed by selected international standard-setting organizations and country reports on TBT and SPS

Geneva 2004

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INTERNATIONAL TRADE CENTRE UNCTAD/WTO
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Influencing and Meeting International Standards: Challenges for developing countries.
Vol. 2 – Procedures followed by selected international standard-setting organizations and country reports on TBT and SPS
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Second volume of a set of 2 volumes study dealing with technical assistance needs of developing countries in order to conform with technical regulations and sanitary and phytosanitary measures required by export markets – reviews procedures followed by selected international standard-setting organizations and international accreditation bodies; presents country studies illustrating the technical assistance needs of developing countries in relation to WTO Agreements on Technical Barriers to Trade (TBT) and the Application of Sanitary and Phytosanitary Measures (SPS).

Subject descriptors: **Conformity Assessment, Standardization, SPS, TBT, Developing countries, Case studies**.

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Foreword

Trade liberalization is undoubtedly opening up market opportunities for developing countries. Yet many of them, especially the least developed, still have enormous difficulties in making effective use of such openings, whether they result from multilateral agreements or from special arrangements such as the European Union's Everything But Arms initiatives or the Africa Growth and Opportunities Act in the United States of America.

Supply-side problems notwithstanding, meeting the exact norms and standards of export markets presents a major challenge to developing countries in their quest for world markets. More fundamentally, as the present publication confirms, developing countries currently have little input into the international standards that serve as the basis for technical regulations and sanitary and phytosanitary measures in exporting markets. They lack both the financial and human resources to play an active role in the deliberations of the relevant international bodies. They also typically lack the infrastructure needed to demonstrate acceptable conformity to the voluntary and mandatory technical requirements in their export markets.

The present publication, based on a sample of case studies, documents these gaps and examines the difficulties hindering the export efforts of developing countries due to shortcomings in their standardization and conformity assessment structure. The publication presents an inventory of the technical assistance needs of developing countries in relation to technical regulations and sanitary and phytosanitary measures.

Needs are enormous and diverse. To address them comprehensively will require strong cooperation across the whole range of development partners. This study by the Commonwealth Secretariat and the International Trade Centre UNCTAD/WTO addresses some of the identified challenges.

Don McKinnon
Secretary General
Commonwealth Secretariat

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Acknowledgements

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The conclusions drawn and recommendations offered are based on information provided by all those in the six countries in which the case studies were undertaken (Jamaica, Kenya, Malaysia, Mauritius, Namibia and Uganda), who were approached for insights, who gave their time and openly shared their experiences and opinions about improving the capacity of developing countries to meet the standards, technical regulations, and sanitary and phytosanitary measures of export markets. The cooperation extended by representatives of international organizations and the Governments is appreciated. Digby F. Gascoine, Spencer J. Henson, Gene A. Hutchinson, John F. Landos, Samuel A. Mwambazi and Henri J. van Rensberg carried out the case studies.

Vinod Rege, Adviser on WTO Issues to the Commonwealth Secretariat, **Shyam K. Gujadhur**, Senior Adviser on Standards and Quality Management at the International Trade Centre, and **Roswitha Franz**, Consultant at the International Trade Centre, wrote this publication based on reports submitted by the six consultants.

The effective management and guidance provided by the following individuals contributed to the successful completion of the project:

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Note

All references to tons are to metric tons. The following abbreviations are used:

APEC	Asia Pacific Economic Cooperation
APHIS	Animal and Plant Health Inspection Service of the United States
ARSO	African Regional Organization for Standardization
ASEAN	Association of Southeast Asian Nations
ASTM	American Society for Testing and Materials
BIML	International Bureau of Legal Metrology
CAC	Codex Alimentarius Commission
CASCO	ISO Committee on Conformity Assessment
CARICOM	Caribbean Community
SwF	Swiss Franc
CIML	International Committee of Legal Metrology
COLEACP	Liaison Committee Europe-Africa-Caribbean-Pacific
COMESA	Common Market for Eastern and Southern Africa
COPANT	Pan American Standards Commission
COPOLCO	ISO Committee on Consumer Policy
CROSQ	CARICOM Regional Organisation for Standards and Quality
DEVCO	ISO Committee on Developing Country Matters
DKD	Deutscher Kalibrier Dienst
DSM	Department of Standards Malaysia
EOS	Egyptian Organization for Standardization and Quality Control
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and mouth disease
GDP	Gross domestic product
GNP	Gross national product
HACCP	Hazard Analysis and Critical Control Point
ICPM	Interim Commission on Phytosanitary Measures
IAF	International Accreditation Forum
IEC	International Electrotechnical Commission
ILAC	International Laboratory Accreditation Cooperation
IOC	Indian Ocean Commission
IPPC	International Plant Protection Convention
IRCA	International Register of Certificated Auditors
ISO	International Organization for Standardization
ITC	International Trade Centre UNCTAD/WTO
ITU	International Telecommunication Union

ITU-D	ITU Development
ITU-R	ITU Radio Communication
ITU-T	ITU Standardization
JBS	Jamaica Bureau of Standards
KEBS	Kenya Bureau of Standards
KEPHIS	Kenya Plant Health Inspectorate Services
LDCs	Least developed countries
MAURITAS	Mauritius Accreditation Service
MENAMET	Middle East and Northern African Metrology Cooperation
MLA	Multilateral Recognition Arrangement
MRA	Mutual Recognition Arrangement
MSB	Mauritius Standards Bureau
MSTQ	Metrology, standards, testing and quality assurance
NSIQO	Namibian Standards Information and Quality Office
OIE	Office international des epizooties
OIML	International Organization of Legal Metrology
PTB	Physikalisch-Technische Bundesanstalt
REMCO	ISO Committee on Reference Materials
RPPO	Regional plant protection organization
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SADCMET	SADC Cooperation in Measurement Traceability
SADCSTAN	SADC Committee on Standardization
SC	Subcommittee
SIDA	Swedish International Development Cooperation Agency
SIRIM	Standards and Industrial Research Institute of Malaysia
SPS	(Agreement on) Sanitary and Phytosanitary Measures
SMEs	Small and medium-sized enterprises
SQAM	Standards, Quality Assurance, Accreditation and Metrology
STDF	Standards and Trade Development Facility
SWEDAC	Swedish Board for Accreditation and Conformity Assessment
TA	Technical Assistance
TBT	(Agreement on) Technical Barriers to Trade
TC	Technical Committee
TSB	Telecommunication Standardization Bureau
UKAS	United Kingdom Accreditation Service
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
URA	Uganda Revenue Authority
USAID	United States Agency for International Development
USDA	Unites States Department of Agriculture
WHO	World Health Organization
WTO	World Trade Organization

Introduction

All countries require imported goods to conform to the technical regulations that they apply to domestically produced products for health, safety and consumer protection. Imported agricultural products also have to conform to sanitary and phytosanitary measures which are applied to protect human or animal life from food-borne risks and from plant-carried diseases. Though these regulations and measures are applied by governments for legitimate policy reasons, they could in practice create barriers to trade. Such barriers arise if regulations differ from country to country. Exporting firms have to ensure in such situations that the products they export meet the differing requirements. This adds to their costs.

The WTO Agreement on Technical Barriers to Trade (TBT) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) therefore specify that countries should base their technical regulations and sanitary and phytosanitary measures on international standards. The two Agreements also specify that there shall be presumption that such regulations and measures do not cause barriers to trade if they are based on international standards. Countries may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations if, for instance, there is a scientific justification. Countries do not have to base their technical regulations on international standards if there are fundamental climatic or geographic factors that justify the use of different standards.

To ensure that international standards are used to the maximum extent possible by countries in adopting their technical regulations and sanitary and phytosanitary measures, the two Agreements urge countries to 'play a full part, within the limits of their resources' in the preparation by international standardizing bodies of international standards for products for which they have either adopted or expect to adopt such technical regulations or sanitary and phytosanitary measures.

Even though these two Agreements thus place an obligation on members to use international standards in their technical regulations and sanitary and phytosanitary measures and call on them to take an active part in international standardization activities, only a few developing countries are able today to participate in work on developing standards at international level. The participation of this limited number of countries is also in most cases not effective, as it is not supported by the background research and analysis that are required to ensure that technical specifications of the products they produce and processes used in the manufacture of such products are adequately taken into account in developing international standards.

The inability of a large number of developing countries to participate effectively in international standardization activities poses serious actual and potential problems to the trade of these countries. If an importing country uses international standards in its technical regulations and sanitary and

phytosanitary measures, exporting enterprises from developing countries would have to change their own standards to bring them into conformity with such mandatory regulations if the product specifications in the standards they use are not reflected in international standards because of their non-participation. Otherwise, they would not be able to export their products to that country.

Moreover, since compliance with requirements laid down by technical regulations and sanitary and phytosanitary measures is mandatory, countries often require imported products to be accompanied by certificates issued by properly accredited third party conformity assessment bodies or, more typically in the case of sanitary and phytosanitary measures, certification by official bodies in the exporting country. In most developing countries the infrastructure which is required for certification of conformity to standards has not yet been fully developed. The result is that importing countries often insist on post-arrival examination of the product after importation, or resort to systems of prior inspection and approval of the products in the exporting country by their officials. These requirements not only add to the costs of exporters but also in some cases lead to delays.

Against this background, it was considered that developing countries need technical assistance to:

- Overcome the problems they encounter in participating effectively in international standardization activities;
- Meet effectively the technical requirements in their export markets; and
- Build capacities for deriving full benefits from the WTO Agreements on TBT and SPS.

In order to identify these technical assistance needs, the Commonwealth Secretariat and the International Trade Centre decided to jointly undertake case studies in six countries.[1]

In selecting countries for the case studies, the existence of a gap in the extent to which standardization and conformity assessment systems are developed in different developing countries was taken into account by studying the experience in developing countries at various stages of development.

Among the countries selected for the study, Malaysia is considered as a developing country with relatively more developed national institutions engaged in standardization and conformity activities. Jamaica, Kenya, Mauritius and Uganda have been able to make some progress in work on standardization and conformity assessment by establishing national standardizing and conformity assessment bodies, while Namibia represented countries whose experiences at national level in the area of standardization and conformity assessment are at a nascent stage.

It should be noted that the basis on which countries were selected is for analytical purposes only, to assess broadly the technical assistance needs of developing countries at widely different stages of development. It should not be interpreted as involving any value judgement on the actual level of development in standardization activities in each of these countries.

1 Case studies were carried out in the latter half of 2001. Unless otherwise specified, all statements in this book refer to situations at that time.

Box 1 contains the terms of reference that were used for the preparation of the case studies.

Box 1

Terms of reference for the case studies

i) To assess the extent to which the country is able and willing to participate effectively in international standard-setting organizations preparing standards used by countries in adopting technical regulations and sanitary and phytosanitary measures;

ii) To examine the extent and nature of infrastructure in the country relating to standardization and regulatory activities and conformity assessment at the national level, and participation in international standard-setting organizations relating to SPS and TBT measures;

iii) To identify the major constraints limiting the effective participation of the country in international standard-setting organizations relating to SPS and TBT measures;

iv) To examine the problems and difficulties faced by the country due to technical regulations, conformity assessment practices and sanitary and phytosanitary measures in its main export markets, both with respect to compliance and conformity assessment, relating these problems to the need for appropriate international standards where appropriate; and

v) To examine the need of the country for assistance for, inter alia:

- *Further development of activities for developing and adopting standards for products of export interest;*
- *Developing technical regulations and sanitary and phytosanitary measures based on international standards;*
- *Creating greater awareness among industries (producing both goods and services) and their associations of the need to undertake background research and analytical work that is necessary for their effective participation in standardization activities at national level;*
- *Assisting the national standards bodies and/or the government in participating in the work at international level on developing international standards, taking into account the existing rules, procedures and practices adopted by the international standardizing bodies (e.g. ISO and CAC) in formulating and establishing international standards, and the steps which the international standardizing bodies are taking for facilitating improved and effective participation of developing countries in the development of such standards; and*
- *Developing and strengthening national infrastructures for demonstrating compliance with technical regulations and sanitary and phytosanitary measures in export markets.*

The studies for each country in the area of technical regulations and SPS measures were undertaken separately by experts with specialized knowledge in the subject area.

Organization of the publication

The publication is divided into two volumes. Volume one contains background information, findings from case studies and technical assistance needs.

This volume is divided into three parts:

- Part One: Notes on procedures followed by selected international standard-setting organizations and on international accreditation bodies.
- Part Two: Country reports on technical barriers to trade (TBT).
- Part Three: Country reports on sanitary and phytosanitary (SPS) measures.

Volume two contains background information that would be useful in appreciating the points made and views expressed in volume one.

Part One

Notes on procedures followed by selected international standard-setting organizations and on international accreditation bodies

Chapter 1

International Organization for Standardization

(www.iso.org)

The International Organization for Standardization (ISO), established in 1947 in Geneva, Switzerland, prepares and publishes international standards in all fields except electrical, electronic and related technologies. The mission of ISO is to promote the development of standardization and related activities in the world in order to facilitate the international exchange of goods and services, and to develop cooperation in the spheres of intellectual, scientific, technological and economic activity.

Organization

Figure 1 shows the organizational structure of ISO. The General Assembly meets once a year. It is the supreme body of the organization. Its agenda includes actions relating to the ISO annual report, a multi-year strategic plan with financial implications, and the treasurer's annual financial status report on the Central Secretariat. Correspondent members and subscriber members may attend the General Assembly as observers.

The Council is elected by the General Assembly and meets twice a year to develop proposals that are presented to ISO members at the annual General Assembly. The Council governs the operations of ISO and is also responsible for setting the annual budget. It plays the role of an executive board.

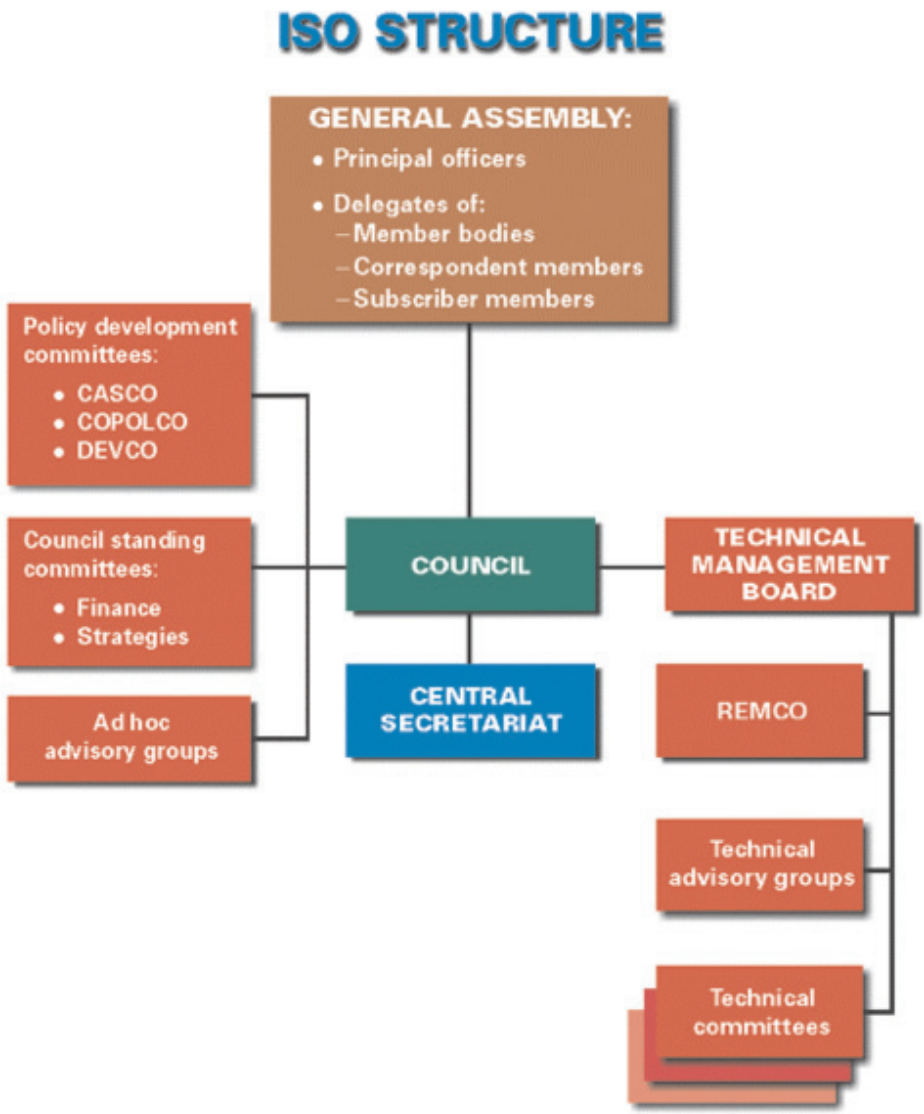
The Central Secretariat, headed by a Secretary General, is in charge of operations. It convenes and coordinates all the technical committees (TCs) and subcommittees (SCs). The Central Secretariat also acts as the secretariat to the General Assembly, the Council, the policy development committees and their subsidiary bodies, the Technical Management Board and the Committee on Reference Materials (REMCO).

The Technical Management Board, appointed by the General Assembly:

- Reports to and, when relevant, advises the Council on all matters concerning the organization, coordination, strategic planning, and programming of the technical work of ISO;
- Examines proposals for new fields of ISO technical activity, and decides on all matters concerning the establishment and dissolution of TCs;
- On behalf of ISO, keeps the ISO/IEC Directives for the technical work under review, examines and coordinates all proposals for amendments, and approves appropriate revisions; and
- Establishes (and dissolves) Technical Advisory Groups in order to obtain expert advice, and appoints their members and chairmen.

The General Assembly has established three Policy Development Committees that report to the Council: the Committee on Conformity Assessment (CASCO), the Committee on Consumer Policy (COPOLCO) and the

Figure 1 Organizational structure of ISO



Committee on Developing Country Matters (DEVCO). These committees are open to all member bodies as participating or observer members and to correspondent members as observer members.

The technical work of ISO is decentralized, carried out in a hierarchy of some 3,000 TCs, SCs and working groups.

Membership and fees

ISO has three categories of membership: member body, correspondent member and subscriber member.

A member body of ISO is the national body most representative of standardization in its country; hence there can be only one ISO member body per country. ISO members are responsible for informing interested parties in

their country of relevant standardization opportunities and initiatives, representing their country, and providing their country's share of financial support. They are entitled to participate and exercise full voting rights on any TC and policy committee of ISO. They also receive all standards existing before and after their date of accession.

A correspondent member is an organization in a country without a fully developed national standards activity. Correspondent members are not entitled to take an active part in technical and policy development work although they may register as observer members. They do not have voting rights. They receive all standards starting on their date of accession.

Subscriber members represent those countries with very small economies. Like correspondent members, subscriber members cannot take an active role in ISO's work and cannot vote. They do not receive standards and get only ISO's bulletins and other publications.

ISO has 148 members (97 member bodies, 36 correspondent members and 15 subscriber members).

The expenses of the ISO Central Secretariat are primarily met by contributions from its members (66%); each of which pays according to a formula that takes account of economic indicators (such as GNP per capita, and the value of exports and imports) as well as its involvement in standardization. The balance is made up from commercial revenues (sale of standards, copyright royalties etc.). The costs associated with working within TCs and SCs are borne directly by the participants, and the member bodies holding the secretariats of those committees directly finance the secretariat work.

In 2002 fees ranged from 5 units to 270 units (from SwF 28,305 to SwF 1,528,470) for member bodies (full members), 2 to 4 units (from SwF 11,322 to SwF 22,644) for correspondent members, and 1/2 unit (SwF 2,830.50) for subscriber members. The value of the unit for each financial year is decided by the Council. For 2002, the unit was valued at SwF 5,661.

Procedures for the establishment of standards

International standards are developed by ISO TCs and SCs by a six-step process (summarized in figure 2) which contains three main phases:

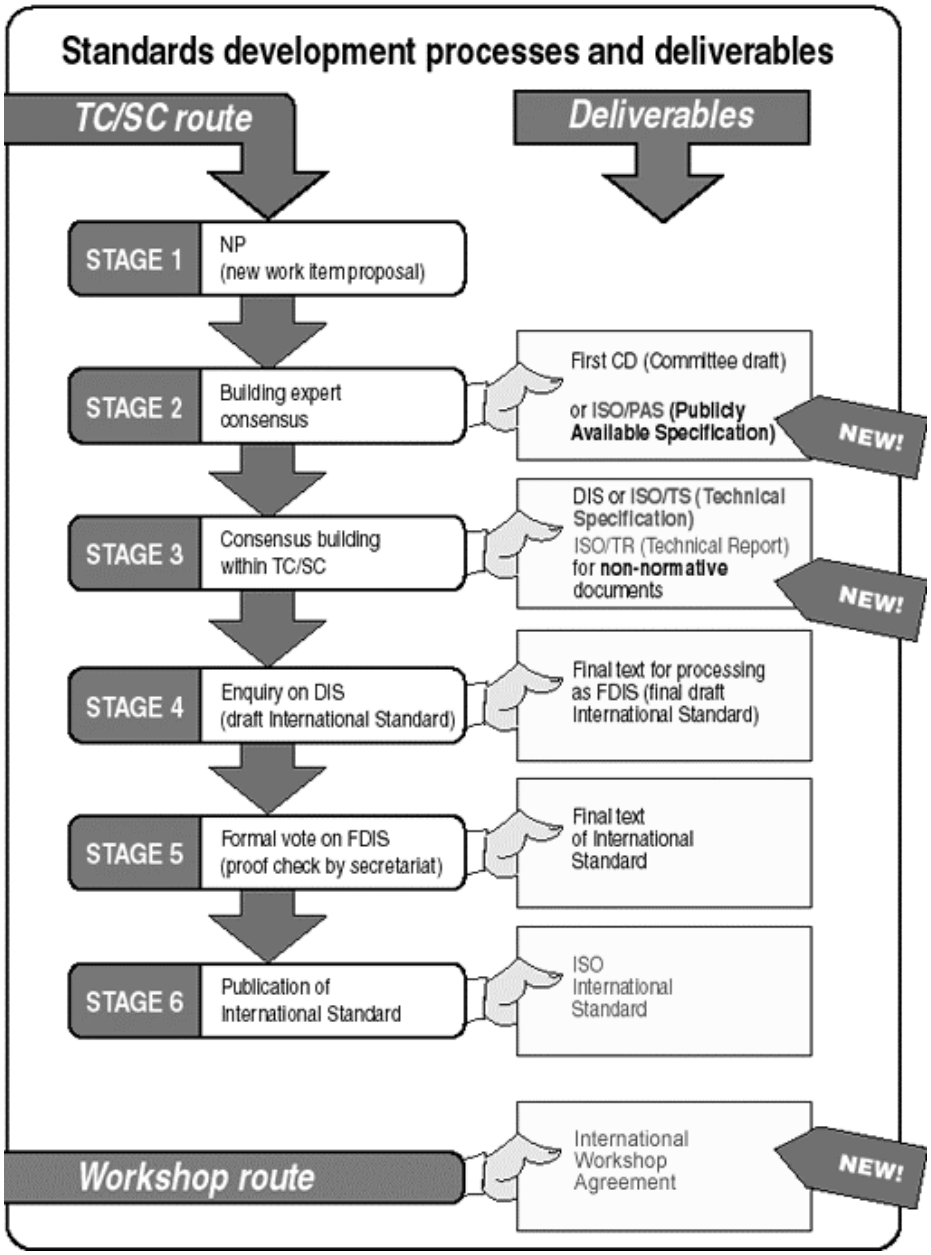
- The need for a standard is usually expressed by an industry sector, which communicates this need to a national member body. The latter proposes the new work item to ISO as a whole. Once the need for an international standard has been recognized and formally agreed, the first phase involves definition of the technical scope of the future standard. This phase is usually carried out in working groups, which comprise technical experts from countries interested in the subject matter.
- Once agreement has been reached on which technical aspects are to be covered in the standard, a second phase is entered during which countries negotiate the detailed specifications within the standard. This is the consensus-building phase.
- The final phase comprises the formal approval of the resulting draft international standard (the acceptance criteria stipulate approval by two-thirds of the ISO members that have participated actively in the standards development process, and approval by 75% of all members that vote), following which the agreed text is published as an ISO international standard.

Other ISO products, such as ISO/PAS, ISO/TS, ISO/TR and the International Workshop Agreement, do not follow the full procedure. (See figure 2.)

Most standards require periodic revision. Several factors combine to render a standard out of date: technological evolution, new methods and materials, new quality and safety requirements. To take account of these factors, ISO has established the general rule that all ISO standards should be reviewed at intervals of not more than five years. On occasion, it is necessary to revise a standard earlier.

By the end of 2002, ISO's work had resulted in 13,544 international standards.

Figure 2 The ISO standards development process



Provisions for developing countries

DEVCO is the ISO policy development committee responsible for developing country matters. It aims to:

- Identify the needs and requirements of developing countries in the fields of standardization and related areas (quality control, metrology and certification, etc.) and assist developing countries, as necessary, in defining these needs and requirements.
- Having established these needs and requirements, recommend measures to assist developing countries in meeting them.
- Provide a forum for the discussion of all aspects of standardization and related activities in developing countries, and for the exchange of experience among the developed and developing countries, as well as among developing countries.
- Advise the Council on the above matters.

DEVCO membership is open to interested member bodies as participating or observer members, and to interested correspondent members as observer members. It has a chairperson, from a developing country member, and a secretariat based at ISO in Geneva. Its budget allocation represents 3.4% of the total ISO budget.

DEVCO meets once a year prior to the General Assembly, and has a three-year activity plan known as DEVPRO, or ISO Programme for Developing Countries. DEVPRO's activities include:

- Regional training seminars held in developing countries on topics related to standardization for ISO members and industry;
- Fellowships for further training of officers of ISO members in developed countries;
- TC secretariat training;
- Sponsorships to attend technical meetings; and
- Publication of manuals on technical matters related to standardization. These are free to developing country members.

Developing countries can pay significantly reduced membership fees through the correspondent and subscriber categories of membership.

Correspondent members:

- Receive all documents concerning ISO, including copies of drafts and final ISO standards;
- Receive, as an observer member of a TC, all its documents and can assist in its discussions; and
- Have the right, as an observer member, to attend ISO's General Assembly and to participate in the work of the policy development committees as well as in REMCO.

Subscriber members are entitled to receive:

- General information about ISO (ISO bulletins, ISO press service);
- The ISO Catalogue, ISO Memento and ISONET Directory;
- A 70% discount on the first copy of international standards; and
- ISO manuals.

Voting is undertaken by postal or electronic mail. Efforts have been made to facilitate the work of TCs and SCs without the need for physical meetings, for example through electronic communication. Furthermore, ISO accepts written comments on draft standards and there is evidence that developing countries take advantage of this to provide an input to the standard-setting process. To ensure that developing country members use their right to vote on draft standards, ISO has provided training in electronic balloting upon request.

Chapter 2

International Electrotechnical Commission

(www.iec.ch)

Founded in 1906, the International Electrotechnical Commission (IEC) prepares and publishes international standards in the electrotechnical field, covering electronics, magnetics, electromagnetics, electro-acoustics, telecommunications and energy production and distribution. IEC also embraces general disciplines such as terminology and symbols, measurement and performance, dependability, design and development, safety, and the environment. The main objective of IEC is to promote international cooperation on all questions of standardization and related matters (such as conformity assessment) in the fields of electricity, electronics and related technologies, and thus facilitate international trade in these fields.

Organization

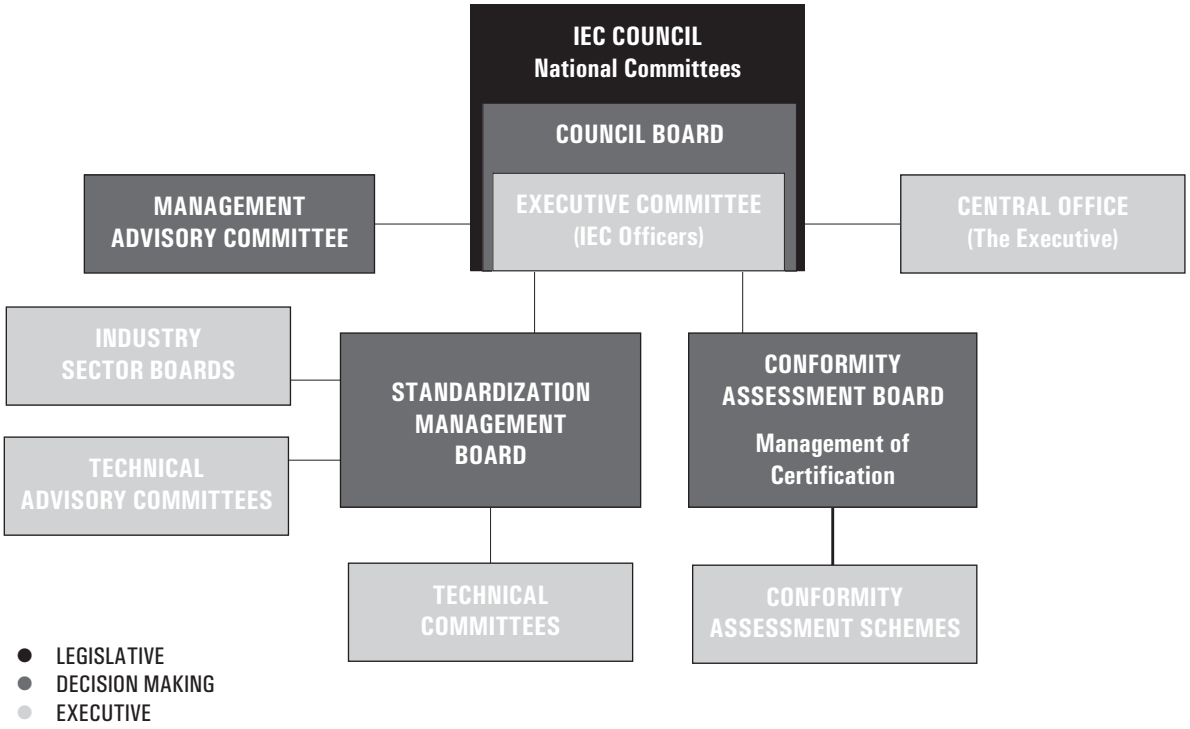
Figure 3 shows the organizational structure of IEC. The supreme authority of IEC is the council, which is the general assembly of the national committees, who are the Commission's members. IEC also comprises management, executive and advisory bodies and officers. The officers of IEC are the president, deputy president (immediate past-president or president-elect), vice-presidents, treasurer, and general secretary.

The council sets IEC policy and long-term strategic and financial objectives. It delegates the management of all IEC work to the council board, with specific management responsibilities in the spheres of standards and conformity assessment being assumed by the standardization management board and the conformity assessment board. The council is a legislative body and comprises the IEC officers, past-presidents of IEC and presidents of the full member national committees. In addition to setting policy and being responsible for financial matters, the council elects the IEC officers, and the members and chairperson of the council board, standardization management board and conformity assessment board. The council is responsible for revising IEC statutes and rules of procedure and for appeal resolution from the council board.

The council board is a decision-making body that implements the IEC council policy and makes policy recommendations to it. The council board receives and considers reports from the standardization management board and conformity assessment board. The council board has at its disposal several management advisory committees including: the president's advisory committee on future technology; marketing committee; sales policy committee; and finance committee.

The executive committee implements council and council board decisions and supervises the operation of the IEC central office as well as communication with IEC national committees.

Figure 3 Organizational structure of IEC



The standardization management board, a decision-making body, is responsible for the management of IEC's standards work including the creation, dissolution and scope of the IEC TCs, the timeliness of standards production, and liaison with other international organizations. It reports all its decisions to the council board and to all national committees. The standardization management board ensures that priorities for technical work are set according to the recommendations of the IEC sector boards, technical advisory committees and technical committees. Sector boards, which work with all TCs in an industry sector, comprise senior executives with market awareness who provide strategic guidance. Technical advisory committees help to ensure horizontal coordination and the inclusion of relevant requirements in IEC standards.

The conformity assessment board is responsible for the overall management of the IEC conformity assessment activities. It is a decision-making body, and reports all its decisions to the council board. The conformity assessment board is also responsible for evaluating and modifying IEC conformity assessment activities including approval of their budgets, as well as liaison with other international organizations on conformity assessment matters.

The IEC central office, located in Geneva, Switzerland, plays an important part in the smooth progress of work through support to TCs and SCs, as well as to the national committees. It supervises proper application of the statutes, rules of procedure and directives, and implements council and council board decisions under the supervision of the executive committee. It takes part in the organization of the annual general meeting as well as grouped or individual meetings of TCs and SCs, convened on invitation by national committees.

Regional offices

In 2002, IEC opened an Asia-Pacific Regional Centre in Singapore to promote awareness of IEC in the region, increase the use of IEC international standards and enhance participation of all countries in the region in the commission's work, most notably developing countries (see 'IEC affiliate country programme', below). The regional centre coordinates and organizes training events, seminars and workshops.

Opened in 2001, the IEC Regional Centre for North America provides additional staff support to TCs and SCs. Located in Boxborough, Massachusetts, the regional centre was opened to service the needs of IEC technical committees, particularly those with secretariats located in North America. The IEC Regional Centre for North America is an extension of the normal operations of the central office and operates under its direction.

Membership and fees

An IEC member is called a national committee, and represents its country's electrotechnical interests in IEC management and standardization work. This includes:

- Manufacturers, providers, distributors and vendors;
- Consumers and users;
- All levels of governmental agencies;
- Professional societies and trade associations; and
- Standards developers.

National committees are constituted in different ways. Some are public sector only, some are a combination of public and private sector, and some are private sector only. IEC does not specify how a national committee should be formed, leaving it up to the interested parties in each country to decide how they will constitute their national committees.

There are two types of membership:

- Full members can participate fully in IEC's international standardization activities, each having equal voting rights.
- Associate members have observer status. They can participate in all IEC meetings, but they have no voting rights and cannot be elected to any official position in IEC. For countries with limited resources, associate membership allows for a more limited form of participation.

In 2002, IEC had 63 members (52 full members and 11 associate members).

Annual dues paid by national committees to the central office finance IEC, covering roughly 60% of costs. The remainder is financed by the sales of publications and other sources as approved by the council. There is a sliding scale for dues, which are calculated according to GNP and annual electricity consumption per capita, provided these are equal to or higher than the minimum percentage agreed by the council as qualifying for full membership.

Associate membership is granted in cases where the annual percentage of dues is calculated to be inferior to the lowest percentage of dues paid by a member national committee and this percentage is at least equal to half the lowest percentage paid by a member national committee. Associate members pay annual dues equivalent to half their calculated percentage of dues.

Procedures for the establishment of standards

The standard-setting procedures of IEC follow the ISO/IEC Directives (2001), IEC Supplement (2001) concerning procedures specific to the IEC (in the case of IEC database standards, for example). The six-step process (preliminary stage; proposal stage; preparatory stage; committee stage; enquiry stage; approval stage; publication stage) is described in the chapter on ISO (see pp. 9–10).

IEC produces two categories of publications, which are described below.

International consensus products

International standards. The definition given in all IEC standards reads: 'A normative document, developed according to consensus procedures, which has been approved by the IEC National Committee members of the responsible committee in accordance with Part 1 of the ISO/IEC Directives as a committee draft for vote and as a final draft International Standard and which has been published by the IEC Central Office.' Any member of IEC may participate in the preparatory work of an international standard, and any international, governmental or non-governmental organization liaising with IEC also participates in this preparation. Another vital feature of a truly international standard is the fact that it can be submitted to public inquiry in any country. Thus, through the democratic tools of consensus and public inquiry, any interested party may speak up and have its say in the development and publication of an International Standard. Adoption of IEC standards by any country, whether it is a member of the commission or not, is entirely voluntary.

Technical specifications. A technical specification is similar to an international standard in that it is normative in nature, developed according to consensus procedures, and approved by two-thirds of the participating members of an IEC TC or SC. A technical specification is published when required support for an international standard cannot be obtained, or when the subject is still under technical development, or when there is a future – but no immediate – possibility of an international standard.

Technical reports. A technical report is more descriptive than normative; examples include collections of data. A technical report is approved by simple majority of participating members of an IEC TC or SC.

Publicly available specifications. A publicly available specification is a normative document that represents a consensus among experts. A simple majority of the participating members of a TC or SC approve the document. An IEC publicly available specification responds to an urgent market need for such a normative document and is designed to bring the work of industry consortiums into the realm of IEC.

Guides. Guides deal with non-normative matters related to international standardization.

Limited consensus products

Industry technical agreement. An industry technical agreement is a normative or informative document that specifies the parameters of a new product or service. It is developed outside the technical structures of IEC and it helps to enable production and/or market launch of industry products to proceed. It is similar to an industrial de facto standard or specification. Fast-moving technology sectors are the main potential users of industry

technical agreements, but the whole domain of electrical and electronic engineering (including information and communication technology – ICT) may be covered.

Technology trend assessment. A technology trend assessment highlights certain aspects of a technology that might conceivably become an area for standardization in the near-to-medium term. It responds to the need for global collaboration on standardization questions during the early stages of technical innovation. A technology trend assessment gives the state of the art or trend in emerging fields. It is typically the result of pre-standardization work or research.

Provisions for developing countries

IEC Affiliate Country Programme

The IEC Affiliate Country Programme is aimed at all newly industrializing countries around the world. The programme offers such countries a form of participation in IEC without the financial burden of actual membership, making full use of all ICT tools to reduce costs of participation to virtually zero. The programme has two principal aims:

- To encourage greater awareness and use of IEC international standards in newly industrializing countries; and
- To help newly industrializing countries understand and participate in the work of IEC.

The programme enables a country to participate in IEC and benefit from affiliation in a variety of ways. Affiliates will be able to use relevant IEC international standards and learn how to monitor relevant technical work in TCs, with a view to establishing an IEC national committee and seeking IEC membership in the future. Benefits of participation in the programme include:

- Access to IEC technical documents in electronic format (documents up to final draft international standards);
- Means to start and maintain a library of relevant IEC international standards;
- Attendance at meetings held during the IEC general meeting including council (as observers);
- Representation within IEC through Affiliate Country Forum (see below);
- Opportunity to participate in IEC's conformity assessment schemes;
- Guidance from the IEC central office on how to establish a national committee of IEC and how to track technical projects of interest; and
- No participation fee.

In 2002, 63 countries were participating in the IEC Affiliate Country Programme.

IEC Affiliate Country Forum

The IEC Affiliate Country Forum, comprising all IEC affiliates, acts as their collective voice with the IEC governing bodies. The goal of this forum is to:

- Identify issues in the work of IEC relevant to newly industrializing countries;

- Seek a common position for affiliates and communicate this position to the relevant technical or management committees; and
- Develop a virtual network centred on a dedicated website, specifically designed to cater to the needs of affiliates.

The forum is led by an elected representative (person, not country) who has the right to attend IEC council, standardization management board and conformity assessment board meetings. The forum conducts its work electronically, with the forum secretariat provided by the IEC central office. The secretariat moderates the flow of forum documents, and prepares submissions from the forum to other relevant IEC committees.

Chapter 3

International Telecommunication Union

(www.itu.int)

The International Telecommunication Union (ITU), located in Geneva, is an international organization of 189 member States and hundreds of member associations, within which governments and the private sector can work together for the sake of cooperation and coordination in the operation of telecommunication networks and services and the development of communication technology. ITU was originally established as an impartial international institution in 1865, and since 1947 it has been part of the United Nations System. Its core objectives are to promote international cooperation between its member States for the improvement and rational use of telecommunications of all kinds, to enhance the involvement of and partnership with entities and organizations in its activities, and to promote all kinds of standardization activities.

Organization

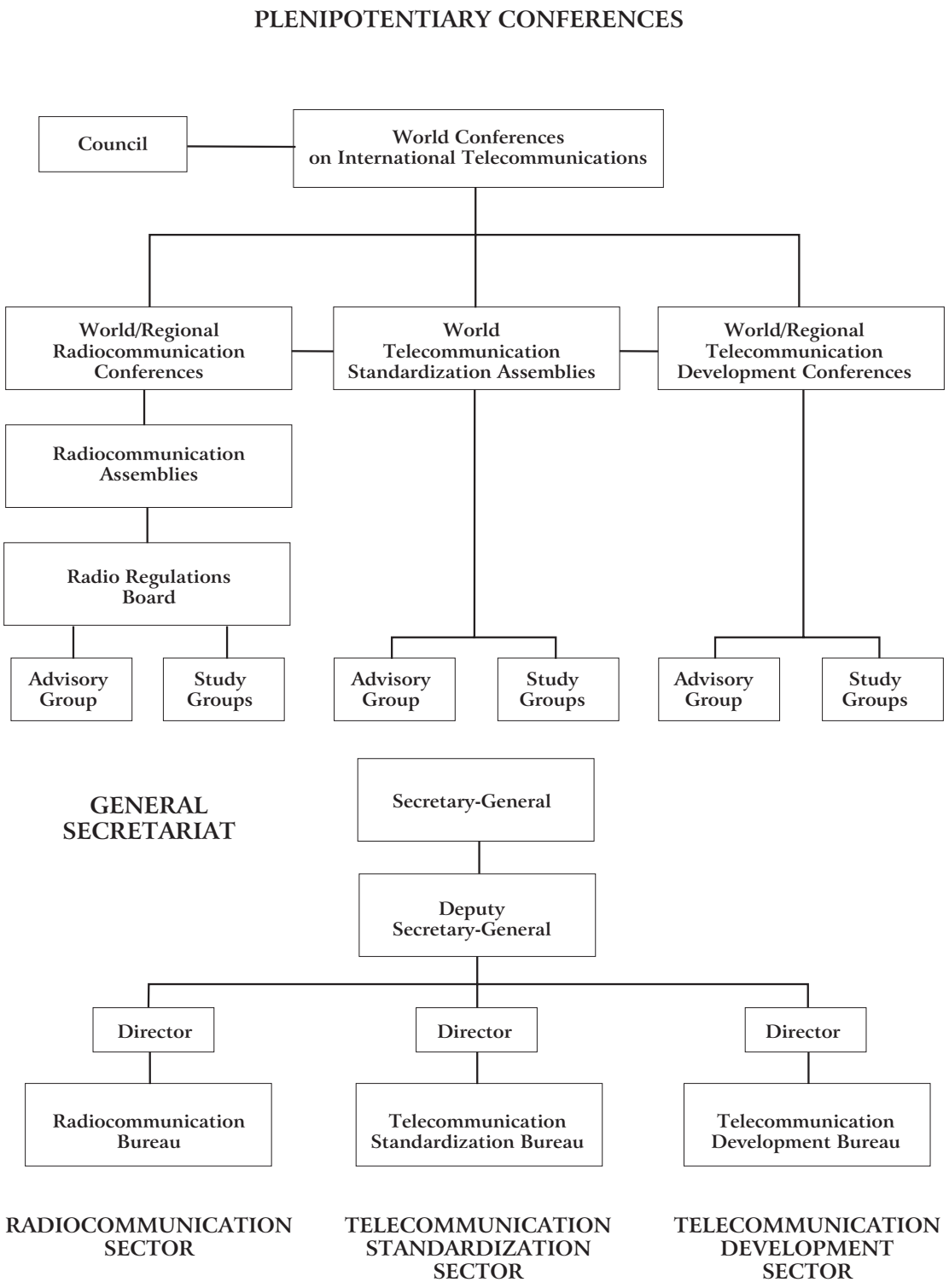
Figure 4 shows the organizational structure of ITU.

ITU is made up of a general secretariat and three specialized sectors dealing with radio communication (ITU-R), standardization (ITU-T) and development (ITU-D). An elected director heads each of these sectors. An elected secretary-general assisted by an elected deputy secretary-general heads the general secretariat.

ITU-T is made up of different decision-making entities. First the World Telecommunication Standardization Assembly sets main decisions and general policy for the sector in regular plenipotentiary conferences every four years. The Telecommunication Standardization Advisory Group reviews priorities, programmes, operations, financial matters and strategies for the sector. To study questions and elaborate non-binding recommendations is part of the Telecommunication Standardization Study Groups or Working Parties. Finally the Telecommunication Standardization Bureau (TSB) provides support for ITU-T in various ways.

ITU-R has been very active in the allocation of frequencies for the third generation of mobile telephone systems.

Figure 4 Organizational structure of ITU



Membership and fees

In 2002, the membership of ITU consisted of 189 member governments, around 654 sector members, and 81 associates. All members have the same status.

To become a member of ITU, a State must accede to ITU's constitution and convention. Before passing this accession process, new non-United Nations member States also have to be approved by a two-thirds majority of the existing member countries.

Sector members are defined as recognized operating agencies, scientific or industrial organizations, financial or development institutions, and other entities dealing with telecommunication matters. They should be approved by the administration of the member State concerned. Further regional and other international telecommunication, standardization, financial or development organizations may become sector members. Their applications should be sent directly to the ITU Secretary-General.

During the Plenipotentiary Conference in Minneapolis 1998 the class of associate membership was introduced as a way for small entities or organizations to participate in the work of ITU. However, their rights of collaboration within the study groups and meetings are limited.

The fee of member States is based on the number of units from 1/8 to 40 that the States have freely chosen. The 1/16 class is reserved for member States from developing countries (as listed by the United Nations) and other members as determined by the council. The amount of a contributory unit for member States in 2002/03 was SwF 315,000.

The minimum fee for sector members of ITU-T and ITU-R is 1/2 unit. For ITU-D the minimum is 1/8 unit. Sector members from least developed countries (LDCs) pay at least 1/16 unit. The amount of a contributory unit for sector members in 2002/03 was SwF 63,000.

The amount of financial contribution for associate members is based on the contributory unit for sector members. In 2002/03 the annual financial contribution for associates participating in the work of ITU-T was SwF 10,500. The annual financial contribution for associates participating in the work of ITU-D was SwF 3,937.50; SwF 1,968.75 for associates from developing countries.

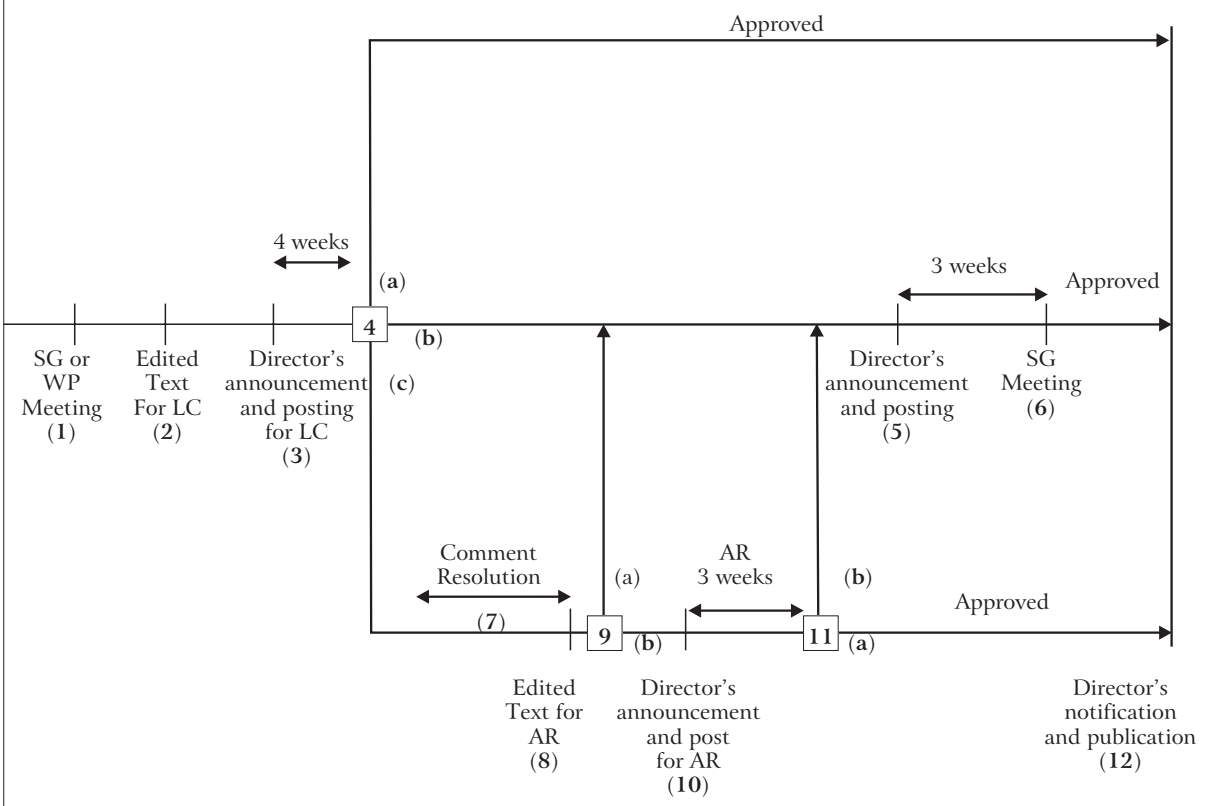
Procedures for the establishment of standards

ITU-T has 14 study groups that carry out the bulk of the standardization work to produce new or improved communication standards. In study groups, representatives of members develop recommendations for the various fields of international telecommunication. The study groups comprise experts from all telecommunication fields. Although ITU recommendations are non-binding, in practice they are de facto standards.

Active participation in standardization is open to all member States. They can also present their views orally or in written form at every stage of standard development. Sector members can present their views by submitting written contributions to study group meetings. Representatives of sector members can also participate in the development of recommendations by contributing to the technical work assigned to their groups. They all have access to documents from the origination of standards through to their approval.

ITU-T recommendations are approved using an alternative approval process, as summarized in figure 5, except for those recommendations that have policy or regulatory implications, which are approved using the traditional approval process.

Figure 5 Alternative approval process: Standard-setting procedure in ITU-T



AR: Additional Review
LC: Last Call

The steps in an alternative approval process standard-setting procedure are:

(1) **SG or WP consent.** The study group or working party concludes that the work on a draft recommendation is sufficiently mature to begin the alternative approval process and to initiate the last call.

(2) **Edited text available.** The final, edited, draft text, including summary, is provided to the telecommunication standardization bureau (TSB), and the study group chairperson requests the director to initiate the last call.

(3) **Director's last call announcement and posting.** The director announces the beginning of the last call to all member States and sector members, with reference to the summary and complete text. If the draft recommendation has not already been electronically posted, it is posted at this time.

(4) **Last call judgement.** The study group chairperson, in consultation with TSB, makes the judgement whether:

(a) No comments other than comments indicating typographical errors have been received. In this case the recommendation is considered to be approved;

(**b**) A planned study group meeting is sufficiently close to consider the comments received; or

(**c**) To save time and/or because of the nature and maturity of the work, comment resolution should be initiated leading to the preparation of edited texts.

(**5**) Director's study group announcement and posting. The director announces that the next study group meeting will consider the draft recommendation for approval and will include reference to either:

(**a**) The draft recommendation (the edited text (LC) version) plus the comments received from the last call; or

(**b**) If comment resolution has been carried out, the revised draft recommendation text. If the revised draft recommendation has not already been electronically posted, it is posted at this time.

(**6**) Study group decision meeting. The study group meeting reviews and addresses all written comments and either:

(**a**) Approves the draft recommendation; or

(**b**) Does not approve the draft recommendation. If it is concluded that a further attempt at addressing comments received is appropriate then additional work should be done and the process returns to step 2 (without further consent at a working party or study group meeting).

(**7**) Comment resolution. The study group chairperson, with assistance from TSB and experts (including electronic correspondence and rapporteur and working party meetings, where appropriate) addresses the comments and prepares a new edited draft recommendation text.

(**8**) Edited text available. The revised edited text, including summary, is provided to TSB.

(**9**) Next step judgement. The study group chairperson, in consultation with TSB, makes the judgement whether:

(**a**) A planned study group meeting is sufficiently close to consider the draft recommendation for approval; or

(**b**) To save time and/or because of the nature and maturity of the work an additional review should be initiated.

(**10**) Director's additional review announcement and posting. The director announces the beginning of the additional review to all member States and sector members with reference to the summary and complete text of the revised draft recommendation. If the revised draft recommendation has not already been electronically posted, it is posted at this time.

(**11**) Additional review judgement. The study group chairperson, in consultation with TSB, makes the judgement whether:

(a) No comments other than those indicating typographical errors have been received. In this case the recommendation is considered approved; or

(b) Comments other than those indicating typographical errors have been received. In this case the process proceeds to the study group meeting.

(**12**) Director's notification. The director notifies the members that the draft recommendation has been approved.

Provisions for developing countries

A number of initiatives have been taken within ITU in an attempt to help developing countries.

- The Telecommunication Development Sector (ITU-D), one of the three sectors of ITU, deals with issues concerning developing countries. The Telecommunication Development Bureau (TDB) works directly with TSB to facilitate the participation of developing countries in the standardization process.
- In 2000, ITU initiated a series of joint meetings between the directors of ITU-T and ITU-D and representatives of developing countries. These meetings, which were held in developing countries, aimed at explaining what ITU was doing and emphasizing the need for greater participation of developing countries in the standardization process. Over the next few years, ITU-T plans to hold several meetings of study groups in developing countries.
- ITU makes provision for a sliding scale of membership fees for developing countries, to the extent that some countries pay no membership fees.
- ITU has a project called Electronic Commerce for Developing Countries that aims to play a central role in promoting and coordinating programmes to accelerate technology transfer to developing countries as well as stimulating cooperation between public and private sectors to create technologies suited to developing countries. The short-term goal is to let developing countries benefit from the expansion of electronic commerce technologies. The long-term goal is to facilitate the expansion of electronic commerce and stimulate the development of the ICT infrastructure.

Discounts of 15% are granted on ITU publications to member States and sector members participating in the work of ITU. A discount of 80% on all ITU publications is granted to administrations of the LDCs, as well as to libraries of educational institutions (for online subscriptions and CD-ROM publications only).

Chapter 4

International Organization of Legal Metrology

(www.oiml.org)

The International Organization of Legal Metrology (OIML, from its French name, Organisation internationale de métrologie légale) was established in Paris in 1955 in order to promote the global harmonization of legal metrology procedures.

OIML's aims are to determine the general principles of legal metrology, promote the global harmonization of legal metrology procedures, and promote the documentation and distribution of information concerned with the inspection and checking of measuring instruments.

OIML's main task is to provide models for establishing harmonized national and regional legal metrology requirements and practices, developed by consensus among OIML members. It publishes international recommendations and documents providing the judicial, metrological and technical foundations necessary for establishing and operating uniform legal metrology services. Governments of member States (and non-member States) are responsible for ensuring correct measurements in areas of public interest such as trade, health, the environment and safety. Another function of OIML is to promote closer relations between the departments of weights and measures or other departments responsible for legal metrology in each of the member States of the organization.

OIML has established a certification scheme for measuring instruments (the OIML Certificate System for Measuring Instruments). An OIML certificate may be issued for categories of measuring instruments that meet international recommendations. These recommendations cover the metrological requirements (e.g. accuracy classes, error limits, units of measurement, environmental conditions for operation, requirements for scales and other indicating devices) for the instrument concerned, the test methods to be used, and a format for reporting test results. Manufacturers may obtain certificates from an issuing authority (issuing authorities being designated by members of the International Committee of Legal Metrology). The certificate, together with the test report, indicates that a given instrument type complies with the requirements of the relevant OIML international recommendations. OIML certificates are accepted by national legal metrology services on a voluntary basis.

Organization

OIML is an intergovernmental treaty organization whose membership includes member States (which participate actively in technical activities and have voting rights) and corresponding members (countries which may participate in OIML activities as observers but without voting rights). OIML has developed a worldwide technical structure that provides its members with metrological

guidelines for the elaboration of national and regional requirements and/or technical regulations concerning the manufacture and use of measuring instruments for legal metrology applications.

OIML has three principal bodies:

- International Conference on Legal Metrology;
- International Committee of Legal Metrology (CIML); and
- International Bureau of Legal Metrology (BIML).

Figure 6 Organizational structure of OIML

In the International Conference on Legal Metrology, OIML member State delegations, observers from corresponding members, and international and regional institutions in liaison meet every four years to define general policy and budgetary lines for the organization and to promote national implementation of OIML metrological guidelines.

CIML is the committee of OIML in charge of supervising most of the technical work. It meets annually to review the organization's technical progress and administrative operation. CIML is made up of appointed representatives of OIML member States.

BIML is the secretariat and headquarters of OIML, managing both the day-to-day running of activities and the planning of longer-term actions. BIML coordinates and informs CIML members of technical work undertaken by the OIML TCs and SCs (in 2002 there were 18 TCs and 49 SCs), organizes the OIML Conference and CIML meetings and manages the finances of the organization. Liaison is also maintained with international, regional and national organizations. These ties are becoming increasingly close, which serves to further legal metrology in a wider context. Another key aspect of BIML work is the issuing of OIML publications: recommendations, documents,

vocabularies, and the quarterly bulletin. BIML also maintains a database on types of measuring instruments with OIML certificates, available from *www.oiml.org*.

The Presidential Council is the advisory body for the CIML President. Technical advisory groups may be formed by CIML for certain tasks.

Membership and fees

OIML membership in 2002 consisted of 58 member States and 51 corresponding members. Corresponding members join OIML as observers.

The organization's expenses are covered by annual contributions from member States. There are four contribution classes:

- **Class 1:** population of 10 million and less;
- **Class 2:** population of between 10 million exclusive and 40 million inclusive;
- **Class 3:** population of 40 million exclusive and 100 million inclusive; and
- **Class 4:** population of over 100 million.

In 2002 the base fee for member States was 12,001 euros and contributions were one, two, three or four shares according to the population of the State. In 2002 the annual membership contribution ranged from 12,001 to 48,004 euros.

New corresponding members have to pay a one-off admission fee of 1,828 euros. The additional annual fee for corresponding members was 914 euros in 2002.

Procedures for the establishment of standards

Most of the standardization work of OIML is undertaken in TCs and SCs. International consensus is reached through these committees. The committees are composed of representatives from member States, and contacts from international standardization and technical organizations, manufacturers' associations, and regional regulatory bodies.

TCs and SCs prepare technical documents that are then submitted to CIML for approval as international recommendations.

The first phase involves defining the technical scope of the future recommendation. After receiving requests and identifying future areas for the development of recommendations, CIML decides on the work programme. The work is allocated to the most relevant TC or SC, or, if no suitable committee exists, a new one is established.

TCs consist of volunteering member States, as either participating members (who are obliged to attend the meetings, comment and vote on documents) or observer members (who have the right – but not the obligation – to comment on documents and attend meetings). Member States and observers representing international and regional organizations in liaison are involved in the drafting and revision of the documents, by presenting their views either at the meetings or in writing.

When the TC or SC has produced a draft document, the secretariat produces a committee draft to be sent to all participating and observer members in that committee for comment. This is the beginning of the second, consensus-building phase involving correspondence and meetings among the members of the TC or SC. The draft may undergo successive revisions until a majority of two-thirds among the participating members of the TC or SC agree on it.

The draft then becomes a draft recommendation and is sent to all CIML members for voting by postal consultation. Comments may also be received at this stage, and the draft recommendation may undergo further amendments.

When the comments have been correctly dealt with, the draft recommendation is submitted for approval at the CIML meeting. If approved, it is published and circulated as an international recommendation. If it is not accepted, it is sent back to the TC or SC concerned for reconsideration in the light of the comments made during voting. Recommendations are then formally sanctioned by the next Conference.

International recommendations are reviewed by the appropriate TC or SC at least every five years. A majority vote of the participating members decides whether the recommendation should be confirmed, revised or withdrawn. If the decision is to review it, the recommendation is considered a new project and the steps for revision are the same as those in developing a new recommendation.

Provisions for developing countries

OIML has created a Development Council to act as a forum for addressing matters of metrological development and as an advisory body to CIML on matters of legal metrology that concern developing countries. In 2002, about half of the 58 OIML member States and about two-thirds of the 51 corresponding members were developing countries. The Council is instructed to:

- Identify, in order of priority, those fields of OIML activity of particular concern to developing countries;
- Consider the means by which OIML assistance may be provided, with minimum delay;
- Identify the technical and financial means for providing assistance;
- Facilitate harmonized development of legal metrology training systems in OIML member States, and make training facilities available for OIML members that do not have such systems; and
- Coordinate the development (by countries and regions) of training material (written, videos, etc.) and their use by other countries and regions.

The Development Council had 38 members in 2002 including both developing and developed countries. The Council coordinates its work with that of other international organizations concerned with development issues that have potential as a source of funding, such as the United Nations Conference on Trade and Development (UNCTAD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Industrial Development Organization (UNIDO) and the World Bank. Its work is also coordinated with that of bodies such as the Asia-Pacific Metrology Programme, the African Regional Organization for Standardization (ARSO), the Arab Industrial Development and Mining Organization (AIDMO), ISO, the Commonwealth-India Metrology Centre, and the Inter-American Metrology System.

Chapter 5

World Health Organization

(www.who.int)

The World Health Organization (WHO), formed in 1948 as a specialized agency of the United Nations, is the directing and coordinating authority for international public health. The goal of WHO is the attainment by all people of the highest possible level of health. In support of its aim it has a number of auxiliary functions, such as to direct and coordinate international health work by assisting governments in strengthening health services and providing appropriate technical assistance in emergencies. In addition, WHO aims to stimulate and to advance work on the prevention and control of diseases.

In terms of international standards, WHO aims to develop, establish and promote international standards for food, biological, pharmaceutical and similar products and it aims to standardize diagnostic procedures. WHO also promotes conventions, agreements, and regulations and provides recommendations on international health issues.

WHO standards, guidelines and recommendations serve as advice to member States. They can be adopted as legally binding national regulations, or they may form the basis of national standards and technical regulations. WHO standards are first and foremost concerned with safeguarding public health and not with trade. Nevertheless, conformity with quality and safety standards helps exporters to place their products on international markets.

Organization

WHO consists of a secretariat with headquarters in Geneva, six regional offices, and more than 100 country offices with major institutions, which are responsible for formulating regional policies and monitoring regional activities.

The organization is governed by the World Health Assembly, which is the overall decision-making body. The Assembly is usually held in Geneva each year in May and is attended by delegations from all member States. The Executive Board is composed of 32 individuals technically qualified in the field of health, each one designated by a member State elected to do so by the World Health Assembly. The World Health Assembly elects the Director-General, decides on major policy, supervises the financial policies of the organization, and reviews and approves the proposed programme budget. The World Health Assembly adopts regulations concerning:

- Sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease;
- Nomenclature with respect to human diseases, causes of death and public health practices;

- Standards with respect to diagnostic procedures for international use;
- Standards with respect to the safety, purity and potency of biological, pharmaceutical and similar products moving in international commerce; and
- Advertising and labelling of biological, pharmaceutical and similar products moving in international commerce.

The Executive Board meets at least twice a year. At the main meeting the agenda for the forthcoming Health Assembly is agreed upon and resolutions for forwarding to the World Health Assembly are adopted. The main functions of the Executive Board are to give effect to the decisions and policies of the World Health Assembly, to advise it, and generally to facilitate its work.

WHO obtains technical guidance and support on particular subjects from expert advisory panels. The Director-General, in consultation with panel secretaries, appoints the members of a panel, regional directors and WHO programme coordinators. In general panels are established for a period of four years but the membership can be renewed.

Expert committees are established by the World Health Assembly and the Executive Board. Members of an expert committee are selected by the Director-General from one or more expert advisory panels taking into consideration the need for representation of different trends of thought, approaches and practical experience in various parts of the world, as well as appropriate interdisciplinary balance. The Director-General communicates the reports of the expert committees to the Executive Board together with observations on their implications and with recommendations on any follow-up action to be taken. These reports are normally published in the WHO Technical Report Series.

Membership and fees

In 2002 the membership of WHO included 192 member States and two associate members. All countries that are members of the United Nations may become members of WHO by accepting its constitution. WHO is funded by the United Nations.

Procedures for the establishment of standards

Draft WHO guidelines, recommendations or codes of good practice are first developed by experts in collaboration with the secretariat of the technical programme concerned. Such drafts then undergo considerable global consultation through expert advisory panels and international scientific societies, and are reviewed by the staff of national regulatory authorities and other relevant organizations, as well as by appropriate international manufacturers' associations. Much review is done by correspondence and includes considerable developing country input. Sometimes further meetings are convened or consultations carried out to develop a consensus.

Following worldwide comment a draft is discussed at a meeting of an appropriate expert committee, where a final version may be prepared and adopted for publication. Adopted recommendations are published as annexes to the expert committee reports.

The standard-setting procedures do not ensure geographical representation, because the process is highly technical rather than political. Since the expert committees are composed of experts in the field being explored, representatives tend to come from developed countries.

WHO sets standards in the areas detailed below.

Pharmaceutical

WHO produces a broad range of instruments for use by regulatory authorities and manufacturers, particularly in developing countries. This includes guidelines on:

- Production of drugs and inspection (good manufacturing practices, inspection guidance for manufacturing sites and distribution channels, hazard analysis);
- Product assessment and registration (especially for generic drugs and herbal medicines);
- Distribution (quality assurance systems in supply);
- Basic tests for quality control and screening; and
- Pharmacopoeia monographs: International Chemical Reference Substances, International Infrared Reference Spectra (physical standards) and trade issues (WHO Certification Scheme on the quality of pharmaceutical products moving in international commerce, import procedures, counterfeit drugs).

The development of international non-proprietary names for pharmaceutical substances involves the consideration of proposed names by members of the Expert Advisory Panel on the International Pharmacopoeia and Pharmaceutical Preparations. International non-proprietary names are globally recognized unique names used to identify each pharmaceutical substance. They are used by drug regulatory authorities in granting marketing authorizations, in labelling, prescriptions and in research.

Biological

WHO develops recommendations and guidelines on production and quality control, design and performance specifications. It also establishes international biological standards and reference materials (physical standards) which form the basis for comparing biological activities worldwide. This concept of using well-characterized preparations as references against which batches of biological products are assessed remains fundamental to ensuring the quality of biological products as well as the consistency of production, and is essential for establishing appropriate clinical dosages.

The norms and standards established by WHO form the basis for assessing the acceptability of vaccines for purchase by international agencies such as the United Nations Children's Fund (UNICEF) and WHO.

The development and establishment of physical international biological standards and reference materials involve considerable international collaboration and coordination of laboratory work in both developed and developing countries. Candidate materials are considered by the Expert Committee on Biological Standardization, and if supported by data they are established as international biological standards or reference materials and are recorded as such in the committee report. A list of WHO International Biological Reference Preparations is published and available on the Internet (*www.who.int/biologicals/IBRP/catalogue.htm*).

Chemical safety

WHO also develops standards on chemical safety and pesticides. Extensive data are evaluated for the assessment of risks to people and/or the environment and this evaluation provides the scientific basis for international and national standards. The evaluations include data on chemicals in food and monographs on environmental health criteria as well as concise international chemical assessment documents, which are based on national and international reviews.

In this way, WHO provides authoritative evaluations of environmental health risks and recommendations for their management that are acceptable to member States regardless of their level of economic development. Recommendations on chemicals in food support the work of the Joint FAO/WHO Codex Alimentarius Commission, which establishes internationally agreed standards for foods.

Assessments performed by the Joint FAO/WHO Expert Committee on Food Additives and the Joint FAO/WHO Meeting on Pesticide Residues are reviewed by Codex Committees at which governments also have the opportunity to comment or request re-evaluation. Draft environmental health criteria monographs and chemical assessment documents are circulated among scientific institutions in developed and developing countries for comments before submission to the working groups and the final review boards.

Other standard-setting areas covered by WHO include guidance on technical specifications for radiological systems and for protection of the human environment (e.g. guidelines on air quality, community noise and vegetation fires).

Provisions for developing countries

In the area of vaccine production and regulation, a global training network works to strengthen vaccine producers and regulatory authorities in developing countries so that all vaccines used in national immunization programs will be of assured good quality and meet international quality standards.

Similar support has been initiated to strengthen regulatory activities in the area of plasma-derived medicinal products, and the International Programme on Chemical Safety has sponsored extensive training on chemical safety. The goal is to develop expertise so that scientists from developing countries can be productive participants in standard-setting and risk assessment committees. A lack of resources has limited this activity.

In relation to the protection of the human environment, seminars, workshops and meetings take place regularly in the six WHO regions.

WHO provides technical support to developing countries on the implementation of standards. For example, during 1990-1991 WHO gave technical support to 14 countries that had indicated their willingness to participate in an in-depth review and evaluation of their own experiences in giving effect to the International Code of Marketing of Breast-milk Substitutes. The 14 governments used a common review and evaluation framework prepared by WHO. As a result of this review and lessons learned in other countries, such as field tests in Ecuador and Thailand, the original framework has subsequently been revised and expanded.

Chapter 6

Codex Alimentarius Commission

(www.codexalimentarius.net)

The Codex Alimentarius Commission (CAC), located in Rome, is an intergovernmental body. Its objectives are the protection of the health of consumers and assuring fair practices in food trade. CAC sets standards on food quality and safety, and is thus responsible for establishing food standards for commodities and guidelines, and codes of hygienic or technological practice. In addition, CAC sets maximum levels for food additives and veterinary drugs, and maximum limits for pesticide residues in foodstuffs. The Agreement on SPS specifically cites Codex standards, guidelines and recommendations, which have become the benchmark against which national food measures and regulations are evaluated within the legal parameters of the Uruguay Round Agreements.

Organization

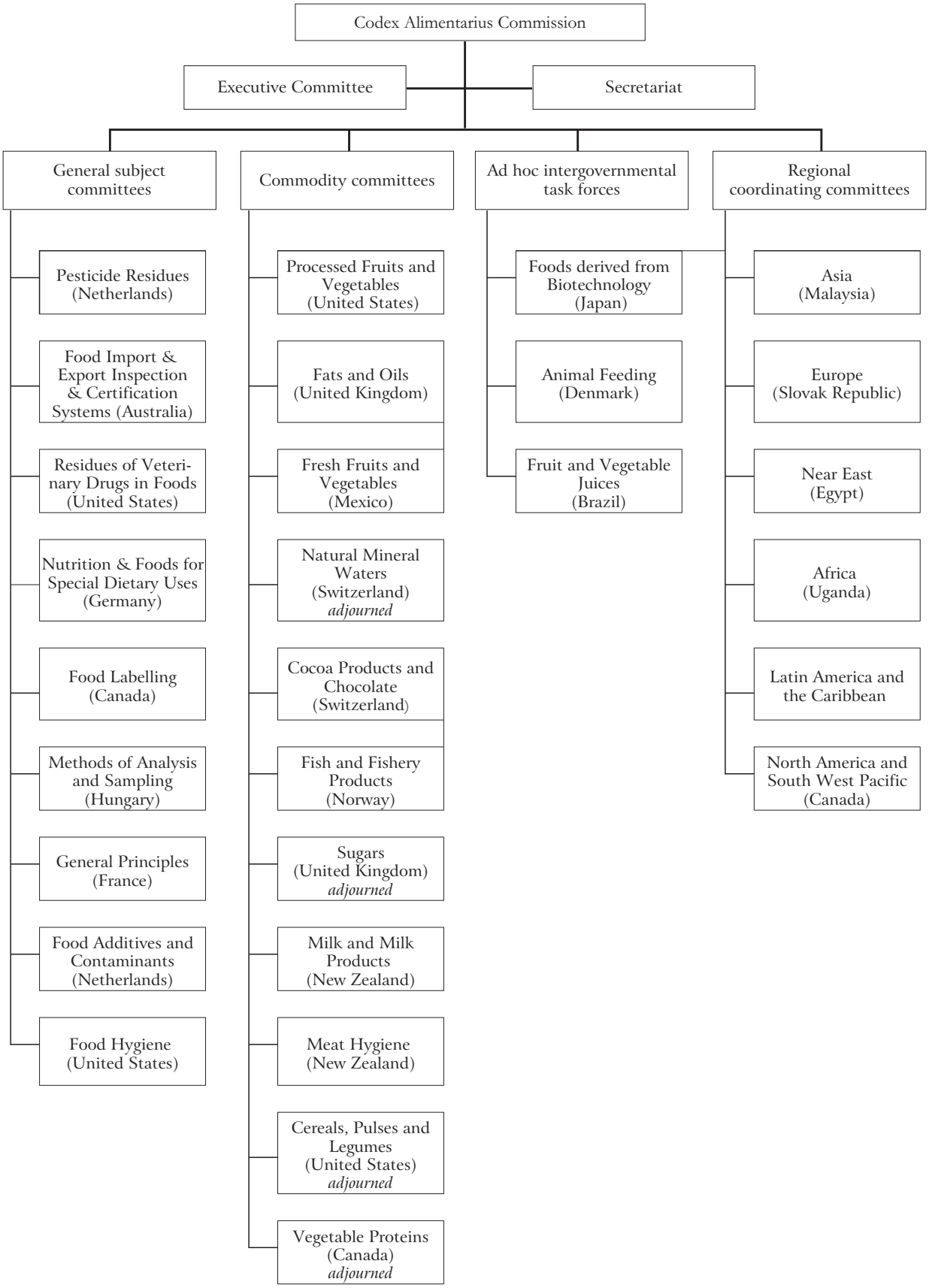
Figure 7 shows the organizational structure of CAC, which was established by WHO and the Food and Agriculture Organization of the United Nations (FAO). The ultimate authorities within CAC are the Directors-General of FAO and WHO. CAC meets every year, in Rome and Geneva alternately.

CAC develops its work through its subsidiary bodies. They are classed as either general subject committees or commodity committees. There are also regional coordinating committees corresponding to six regions of Codex. More recently, however, CAC has formed ad hoc intergovernmental task forces, which have a similar status to committees, but are time-limited. Codex committees prepare draft standards for submission to CAC. Each committee is hosted by a member country, which is responsible for the cost of administration and for providing a chairperson.

Membership and fees

In 2002, the membership of CAC consisted of 167 member governments. Membership is open to all member States and associate members of FAO or WHO. Membership is non-discriminatory – all members have the same status. Member countries do not pay annual dues to CAC, which is funded jointly by FAO (81%) and WHO (19%).

Figure 7 Organizational structure of CAC

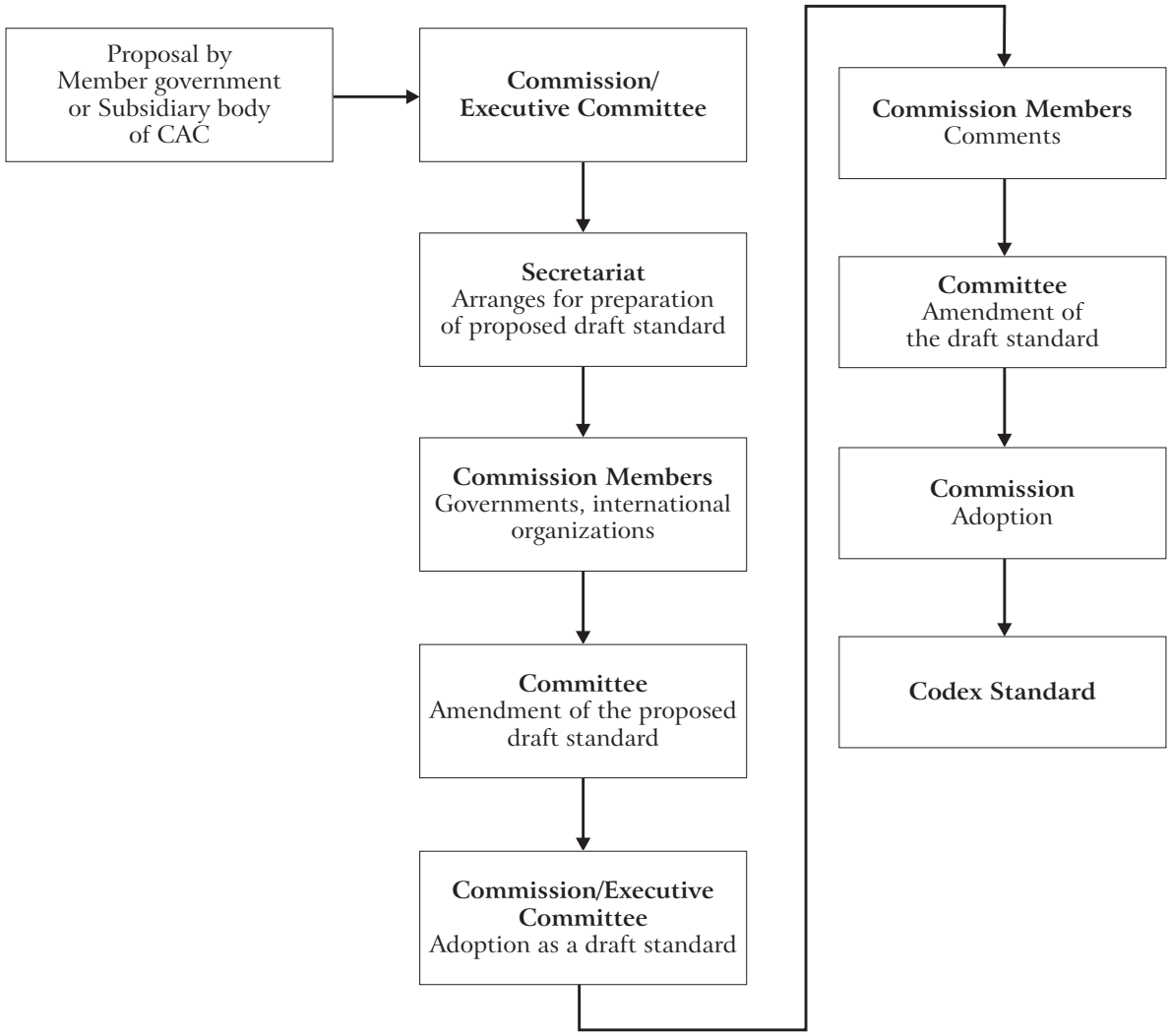


Procedures for the establishment of standards

The standard-setting process within CAC is summarized in figure 8. The first phase in the procedure begins with the submission of a proposal by a national government or a subsidiary committee of CAC. This is followed by a decision of CAC or the Executive Committee that a standard be developed as proposed. There are criteria for the establishment of work priorities and for the establishment of subsidiary bodies to assist CAC or the Executive Committee in their decision-making and in selecting or creating the subsidiary body to be responsible for steering the standard through its development. CAC also decides which subsidiary body or other body should undertake the work.

A proposed draft standard is prepared, as arranged by the CAC secretariat, and is circulated to member governments for comments. The subsidiary body that has been allocated responsibility for the proposed draft standard considers comments and may present the text to CAC for primary adoption as a draft

Figure 8 Standard-setting procedure in CAC



standard. If CAC adopts the proposed draft as a draft standard, it is sent to governments for comments and finalization by the subsidiary committee. If this process is completed satisfactorily, it results in a draft standard becoming a Codex standard. Most standards take a number of years to develop. Once adopted by CAC, a Codex standard is added to the Codex Alimentarius, the food code.

CAC makes every effort to reach agreement on the adoption or amendment of standards by consensus. Decisions may be taken by voting only when efforts to reach consensus fail. Voting is very rare, having occurred on only three occasions by 2002 (in relation to standards for natural mineral waters, bovine somatotropine and beef hormones). Each member of the Commission has one vote and must exercise it at the meeting. There is no electronic or postal voting.

For more details, see the *Codex Alimentarius Commission – Procedural Manual*, 13th edition, published by FAO and WHO, 2004, ISBN 92-5-105005-8.

All standards are free and downloadable from *www.codexalimentarius.net.*

Provisions for developing countries

A number of initiatives have been taken within CAC in an attempt to enhance the participation of developing countries.

- The secretariat makes efforts to hold information and training workshops before or after Codex committee meetings (especially regional coordinating committees). While FAO rules do not permit the travel and subsistence costs of national delegations to be funded, these costs can be covered in the case of workshops. By holding workshops at the same time and place as committee meetings, the costs of participation for developing countries are significantly reduced.
- An FAO/WHO Trust Fund, held in WHO, was launched in February 2003. The focal point of the fund is Codex; it should enhance the participation of relevant experts from developing countries and countries in transition in CAC work and help to build national capacity.
- Codex members that hold the secretariats of Codex commodity and general committees have been encouraged to involve developing country members as cohosts or vice-chairs. This is intended as an interim measure to provide developing countries with experience in the operation of Codex committees.
- Discussions are ongoing within CAC regarding the future of commodity committees. It has been suggested that these committees should be replaced with time-limited ad hoc committees. One potential impact of such a change would be the greater rotation of secretariats among members.
- CAC has increased the frequency of meetings of the Commission from two-yearly to yearly. Given that many developing countries concentrate their resources on attending meetings of the Commission, this could serve to enhance participation.

There is evidence that the participation of developing countries in the activities of Codex Alimentarius is increasing, not only in terms of attendance at meetings, but also in the submission of written comments and oral submissions at meetings of committees and (in particular) CAC. This is particularly the case for countries such as Argentina, Brazil, Chile, China, India, Malaysia, the Philippines and Thailand.

Chapter 7

World Organization for Animal Health

(www.oie.int)

The World Organization for Animal Health (OIE, from its French name, Office international des epizooties) is an intergovernmental organization created by an international agreement in 1924. The Agreement on SPS explicitly refers to the standards, guidelines and recommendations developed by OIE. The mission of OIE is:

- To act as an international information point on the occurrence and cause of animal diseases and how to control them;
- To coordinate internationally the development and dissemination of research on the surveillance and control of animal diseases; and
- To harmonize standards and regulations for trade in animals and animal products among member countries.

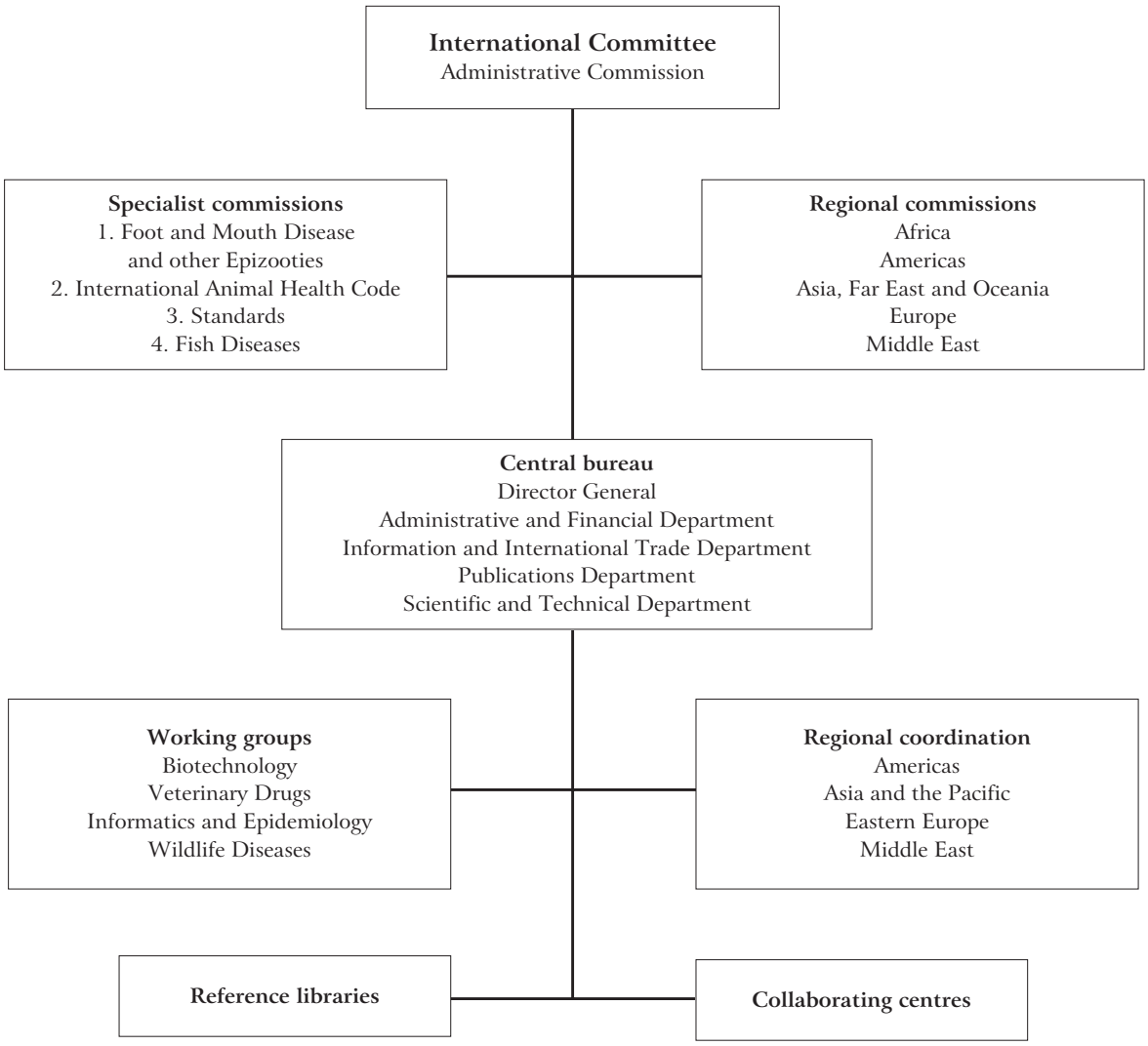
Organization

The organizational structure of OIE is shown in figure 9. The organization operates under the authority and control of an International Committee. The International Committee comprises permanent delegates appointed by the governments of the member countries. The permanent delegate is usually the principal official authority on animal health in a country. The activities of OIE are carried out by a central bureau, located in Paris. In addition to this there are also regional commissions and working groups. Specialist commissions study the problems of disease outbreaks and their control, and issues related to the harmonization of international regulations. There are four specialist commissions: the Foot and Mouth Disease and other Epizooties Commission; the Fish Disease Commission; the Standards Commission; and the International Animal Health Code Commission. The Standards Commission is charged with developing standards for disease diagnostic methods and for testing biological products, while the International Animal Health Code Commission is responsible for regulatory matters. The commissions meet twice a year and the International Committee meets in May each year.

Membership and fees

The membership of OIE is open to any independent State. Although OIE was originally the result of an agreement between 28 European countries, in 2002 the organization had 162 members.

Figure 9 Organizational structure of OIE

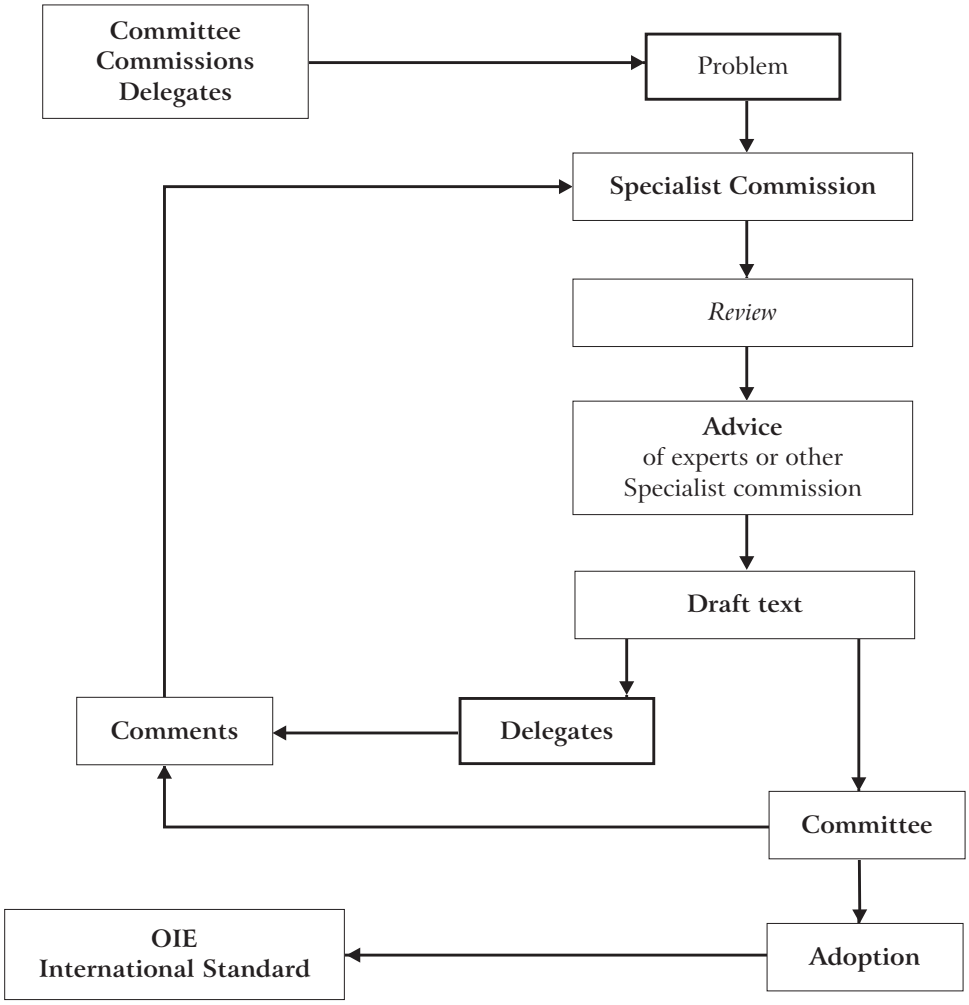


Members of OIE pay an annual fee, which has six categories ranging in 2001 from 12,264 euros to 102,175 euros. Members are free to choose which category they wish to be assigned to. All members have equal rights regardless of the membership fee they pay. Only members that have paid their membership fee are entitled to vote, although generally voting rights are not withdrawn if there are legitimate reasons for non-payment.

Procedures for the establishment of standards

The standard-setting procedure of OIE begins when it is recognized that there is a need for a standard. (See figure 10.) In many cases this is obvious and the appropriate commission or the central bureau initiates the standard development process. However, the process can also be initiated in response to a request from a member country, a regional commission, or an expert.

Figure 10 Standard-setting procedure in OIE



The development of new standards and the revision of existing standards in the OIE codes and manuals are tasks for one of the OIE specialist commissions (for the terrestrial code – the International Animal Health Code Commission; for the terrestrial manual – the Standards Commission; and for the aquatic code and manual – the Fish Diseases Commission).

The specialist commissions comprise members experienced in veterinary science and regulatory issues, elected by the OIE International Committee and drawn from all OIE regions. A standard drafted by a specialist commission is first circulated to all member countries for comment and initial discussion by the International Committee. The specialist commission then revises the draft, taking into account comments received, and usually submits the revised draft for adoption at the next meeting of the International Committee. Once formally adopted, the standard is made available for implementation by member countries.

Wherever possible decisions are made by consensus, although on rare occasions voting has occurred. Member countries attend the annual meeting of the International Committee in Paris every May in order to discuss and adopt the standards proposed.

Provisions for developing countries

OIE has made a number of efforts to increase the participation of developing countries in its work.

- Developing country members from OIE pay lower annual contributions according to the size of their economy. From 2002, the Director-General is empowered to request only 50% of the lowest category of membership fee from LDC members.
- A 'special allowance' is paid to each delegate with voting rights at the annual meeting of the International Committee. This covers at least some of the costs of attending the meeting.
- High-income country members are able to provide funding for the participation of developing countries and to support the activities of OIE.
- There is also assistance for the regional commissions, e.g. assistance is given to the African Regional Commission through the Pan-African Rinderpest Campaign.

While there is no policy committee dealing specifically with developing countries, OIE has established a department dealing with the OIE Regional Commissions. This will help participation by developing countries. OIE also collaborates with other international organizations in providing technical assistance to developing countries.

Chapter 8

International Plant Protection Convention

(www.ippc.int)

The International Plant Protection Convention (IPPC) is a multilateral treaty deposited with the Director-General of FAO and administered through the IPPC secretariat located in FAO's Plant Protection Service in Rome. The main objectives of IPPC are to prevent the spread and introduction of pests of plants and plant products and to promote control measures at the international level. IPPC aims to provide a framework and forum for international cooperation, harmonization and technical exchange in collaboration with national plant protection organizations (NPPOs) and regional plant protection organizations (RPPOs). In the facilitation of global trade, IPPC endeavours to ensure that phytosanitary measures have a scientific basis, rather than being used as unjustified trade barriers, and to provide a mechanism for dispute settlement.

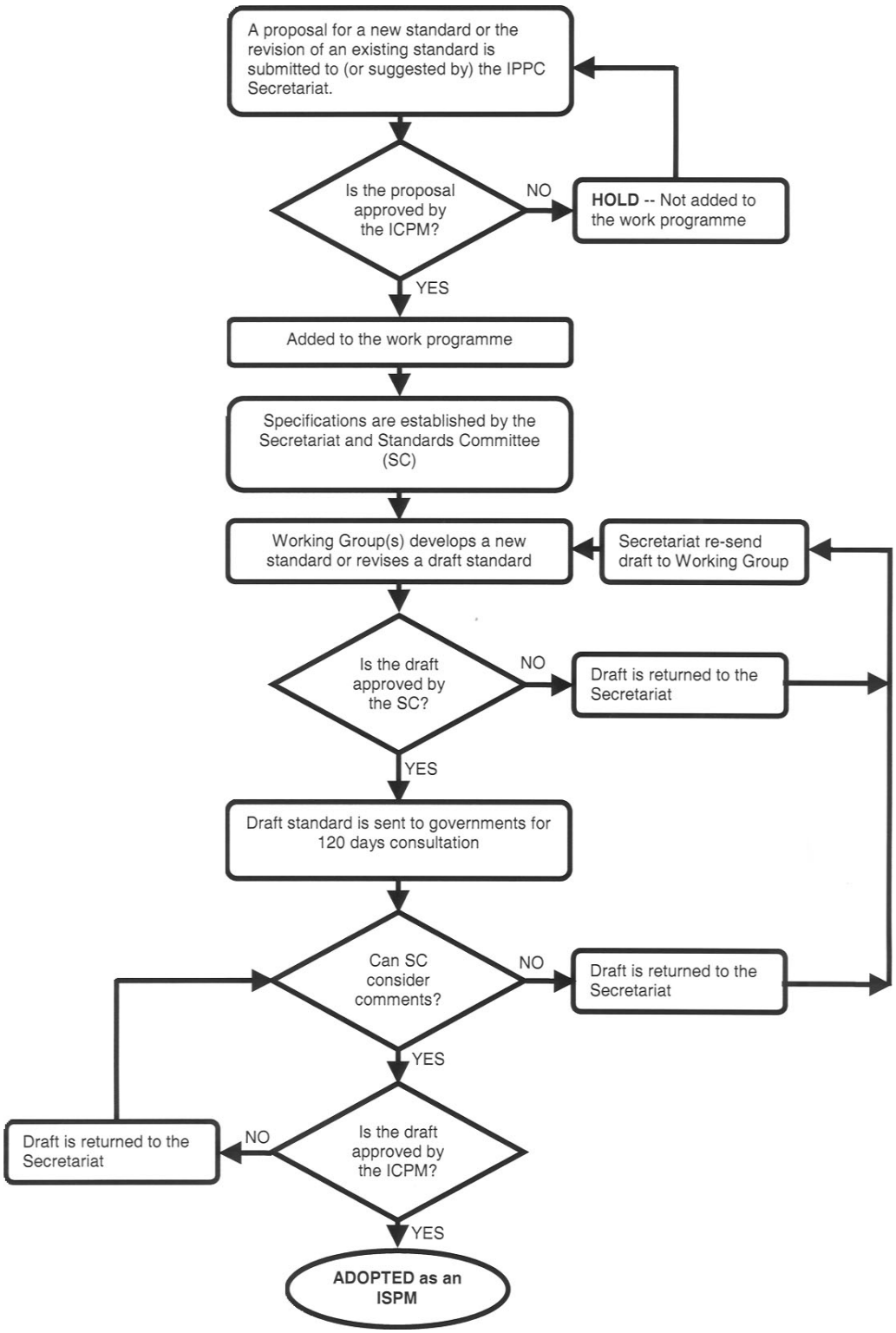
IPPC has undergone much change since it was adopted by FAO in 1951. The Convention was amended in 1979 and again in 1997. The more recent revisions update the Convention to reflect current phytosanitary concepts and the role of IPPC in relation to the Uruguay Round Agreements – specifically the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (the Agreement on SPS). IPPC is recognized in the Agreement on SPS as the source of international standards on phytosanitary measures.

Organization

The Interim Commission on Phytosanitary Measures (ICPM) is the governing body of IPPC. The Interim Commission's functions are to review the state of plant protection in the world, to advise the IPPC Secretariat, and to approve standards. The Interim Commission was preceded by a Committee of Experts on Phytosanitary Measures formed in 1993 to facilitate standard-setting. It was transformed into the Interim Standards Committee in 2000 when it became a subsidiary body of ICPM. In 2002, the Interim Standards Committee became the Standards Committee, operating with rules of procedure and membership established by the Commission. This is a group of 20 international phytosanitary experts who meet twice annually to review and comment on the acceptability of documents prepared by the Secretariat.

The membership of the Standards Committee consists predominantly of phytosanitary experts representing three experts for each of the seven FAO regions. These experts are nominated by governments and confirmed by ICPM. The Secretariat is responsible for coordinating the work programme for the global harmonization of phytosanitary measures under IPPC.

Figure 11 Standard-setting procedure under IPPC



Membership and fees

All FAO member governments and non-members can become contracting parties to IPPC by notifying the Director-General of FAO that they will adhere to the Convention. In 2002 there were 117 contracting parties to the 1979 Convention. Most member governments are also associated with the appropriate RPPO, which helps to provide coordination on a regional level for activities and objectives of the Convention.

FAO provides the Secretariat for IPPC. The regular programme budget of the Secretariat provides core resources for the work programme including the participation of developing country representatives in all meetings except the annual meeting of the Interim Commission on Phytosanitary Measures. Representatives attending IPPC meetings from developed countries pay their own costs of participation.

Procedures for the establishment of standards

The standard-setting process of IPPC is summarized in figure 11. The Interim Commission meets annually to identify subjects and plan for the work of IPPC, which is carried out by the secretariat in cooperation with NPPOs, RPPOs and expert working groups that are convened for the development of specific standards.

There are three main phases in the standard-setting process. In the draft stage, suggestions to develop an international standard on a phytosanitary measure may come from an NPPO or RPPO. The Interim Commission establishes the key priority areas in consultation with the secretariat. Subsequently, phytosanitary experts from NPPOs draft a standard and send it to the secretariat for editing before it is passed to the standards committee. Alternatively, the secretariat may convene an expert working group to draft the standard. Recommendations are made to the secretariat by the standards committee, which then submits the report to governments for comments. In the consultation stage, individual members and RPPOs review and comment on the draft. Suggestions for revisions are made to the standards committee through the secretariat. The standards committee and the IPPC secretariat then agree on the changes to be made based on comments. The accepted draft is sent to the Interim Commission for approval. Once the document is endorsed by the Interim Commission, it is adopted as an international standard on a phytosanitary measure. The standard is published and distributed by FAO, and member countries are expected to implement it.

Provisions for developing countries

IPPC acknowledges the problems that developing countries face for participating in its work. A number of initiatives to address these problems have been taken or are proposed.

- Proposals have been put forward for the establishment of a trust fund to support the participation of developing countries.

- The structure of the standards committee has been revised to facilitate better representation of member countries. The new structure consists of three representatives from each FAO region (with the exception of North America, which has two representatives).
- High-income countries are encouraged to provide funding for developing countries to participate in working groups and to attend the annual meetings of the Interim Commission.
- The Interim Commission has developed and is implementing a self-assessment tool known as Phytosanitary Capacity Evaluation, to be used for identifying strengths and weaknesses in phytosanitary systems and developing a national strategy for capacity building.
- A key element of the work programme of the IPPC secretariat is to facilitate technical assistance. These activities have three focus areas:
  - Understanding and implementing trade-related principles of plant protection under IPPC and the harmonization of phytosanitary measures under the Agreement on SPS.
  - Supporting FAO's technical cooperation programmes, e.g. through capacity building.
  - Multidisciplinary and multinational collaboration through FAO or other organizations to promote regional harmonization and upgrading of phytosanitary systems.

Chapter 9

International Accreditation Forum

(www.iaf.nu)

The International Accreditation Forum (IAF) is the world association of conformity assessment accreditation bodies in the fields of management systems, products, services and personnel, and other bodies interested in conformity assessment. IAF was established in 1992 as an informal cooperation body and was incorporated in the United States in 1998. It is a world association of:

- Accreditation bodies working in relation to the certification or registration of management systems (e.g. certification or registration to ISO 9000 quality management systems and to ISO 14000 environmental management systems);
- Accreditation bodies in the area of product certification; and
- Other interested parties including accredited certification or registration bodies and industry representatives.

Its objectives are to achieve and maintain confidence in the accreditation programmes operated by its members and in the activities of certification or registration bodies accredited by them.

IAF has established the Multilateral Recognition Arrangement (MLA), whose member accreditation bodies recognize the results of each other's accreditation as equivalent in accordance with ISO/IEC Guide 61 and ISO/IEC Guide 62.[2] The purpose of the MLA is to allow the certificates issued by certification or registration bodies accredited by members of the MLA to be accepted by customers in all parts of the world.

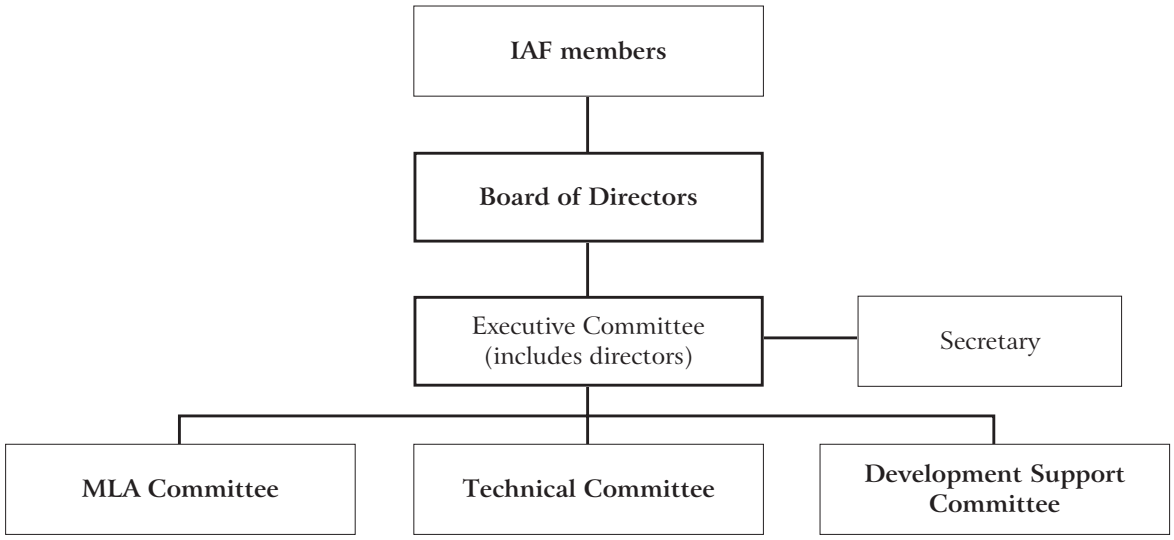
The objective is that the MLA will cover all accreditation bodies in all countries in the world, thus eliminating the need for suppliers of products or services to be certified in each country where they sell their products or services (certified once – accepted everywhere). Membership of the MLA is based on peer evaluation of each applicant and continued surveillance of each member to ensure and confirm that all members of the MLA operate their accreditation programmes, and are implementing the guidelines, consistently and in an equivalent way.

Organization

The terms of reference, tasks and duties of the members, the board of directors and the secretary are defined by the IAF bylaws and Memorandum of Understanding. The highest level of authority in IAF is the members in a general meeting. General meetings make decisions and lay down policy in the name of the members.

2 ISO/IEC Guide 61:1996, *General requirements for assessment and accreditation of certification/registration bodies.* ISO/IEC Guide 62:1996, *General requirements for bodies operating assessment and certification/registration of quality systems.*

Figure 12 Organizational structure of IAF



The board is responsible for legal actions to be carried out on behalf of the members, for developing broad policy directions for IAF and for ensuring that the day-to-day work of IAF is carried out in accordance with policies approved by members.

The executive committee is responsible to the board of directors for the day-to-day work of IAF on the basis of decisions made by the members and directions by the board of directors.

The operations of all IAF committees and subordinate groups, including the executive committee, are subject to the IAF general procedures.

Membership and fees

Accreditation body membership of IAF is open to organizations that conduct and administer programmes by which they accredit bodies for certification or registration of quality systems, products, services, personnel, environmental management systems or similar programmes of conformity assessment. These organizations must declare their intention to join the IAF MLA.

IAF association members are organizations or associations that represent a similar group of entities internationally or within an economy or region. These entities are associated with programmes by IAF accreditation body members supporting IAF objectives.

IAF members may grant special recognition status to organizations that share a common objective with the corporation. Organizations granted special recognition status may be represented and participate at any IAF members' meeting but are not eligible to vote.

Special recognition status may also be granted to regional groupings where the implementation of the IAF MLA is promoted. Regional groups of accreditation

bodies that operate a regional multilateral recognition arrangement based on the equivalence of accreditation to the IAF MLA are eligible for special recognition status in IAF. They have no vote.

There are 41 accreditation body members, 19 association members, four special recognition regional groups and two special recognition interest liaison groups.

To become a member of IAF, first the applicant must submit an application accompanied with the documentation required, which varies for the different classes of membership. The application is not processed until the application fee of US$ 2,000 has been received.

When the board of directors agrees that an applicant is acceptable it recommends to members that they vote to admit the applicant. Then the new member is required to sign the IAF Memorandum of Understanding to commit itself to the objectives and undertakings of members. The application fee is credited to the new member's first year of membership. If the fees due exceed US$ 2,000 they are asked to pay the difference; if the fees due are less than that amount a credit for the difference is carried forward to the following year.

Once members have approved the budget for the coming calendar year a calculation is made of the share of the total budget each member must pay. These shares are calculated on two factors: the strength of the economy in which the member operates and the number of accreditations issued by the member. The annual membership fee varies from year to year depending on the budget. In 2002 the fee ranged from US$ 1,050 to US$ 14,297.

Provisions for developing countries

It is IAF policy to provide technical assistance to emerging accreditation bodies in low and medium income economies. IAF also provides financial assistance to help emerging accreditation bodies, particularly by giving them the means to enable their staff to attend training programmes. It also ensures representation by accreditation bodies of low and medium income economies on the IAF board.

The IAF membership fee structure is designed to encourage accreditation bodies in low and medium income economies to join IAF and benefit from technical assistance available to members.

The IAF Development Support programme includes workshops, seminars and specific training programmes for staff members of emerging accreditation bodies. IAF also provides expert advice and encourages staff from emerging bodies to observe experienced staff from other accreditation bodies conducting assessments.

IAF, UNIDO and ISO have agreed to provide technical assistance to accreditation bodies in developing countries and economies in transition, and to assist them to reach the standards of operation needed to participate in international and regional mutual recognition arrangements. The assistance ranges from consultation with experts to assistance to attend training programmes and a pre-peer evaluation programme. The objective of the pre-peer evaluation programme is to establish international confidence in the ability of an accreditation body from a developing country to assess the performance of certification bodies.

One member of the board of directors is elected from among the accreditation body members from low or medium income economies.

Chapter 10

International Laboratory Accreditation Cooperation

(www.ilac.org)

ILAC is an international cooperation between the various laboratory accreditation schemes operated throughout the world. It was established in 1978, first as an informal conference and, then in 1996, as a formal cooperation between laboratory accreditation bodies with the participation of stakeholders and other interested parties. In January 2003 ILAC was incorporated in the Netherlands as a not-for-profit company.

ILAC is the world's principal international forum for: the development of laboratory accreditation practices and procedures; the promotion of laboratory accreditation as a trade facilitation tool; assistance in developing accreditation systems; and the recognition of competent test facilities around the globe. ILAC also provides advice and assistance to countries that are in the process of developing their own laboratory accreditation systems. These developing laboratory accreditation systems are able to participate in ILAC as associates or affiliates, depending on their stage of development, and access the resources of ILAC's more established members.

ILAC's objectives focus on problems associated with the lack of acceptance of test reports across national borders and related technical barriers to trade. To address these issues, ILAC advocates the use of mutual recognition arrangements among accreditation bodies as the most efficient and effective mechanism for facilitating acceptance of test reports. Its work programme consists of harmonizing accreditation procedures and practices, establishing and maintaining the ILAC Mutual Recognition Arrangement among its members, and assisting developing countries to provide accreditation services through their own organizations or to access such services in other ILAC members. ILAC has been instrumental in the development of a number of international standards and guides published through ISO and IEC. In addition, it has issued various information and guidance documents under its own name.

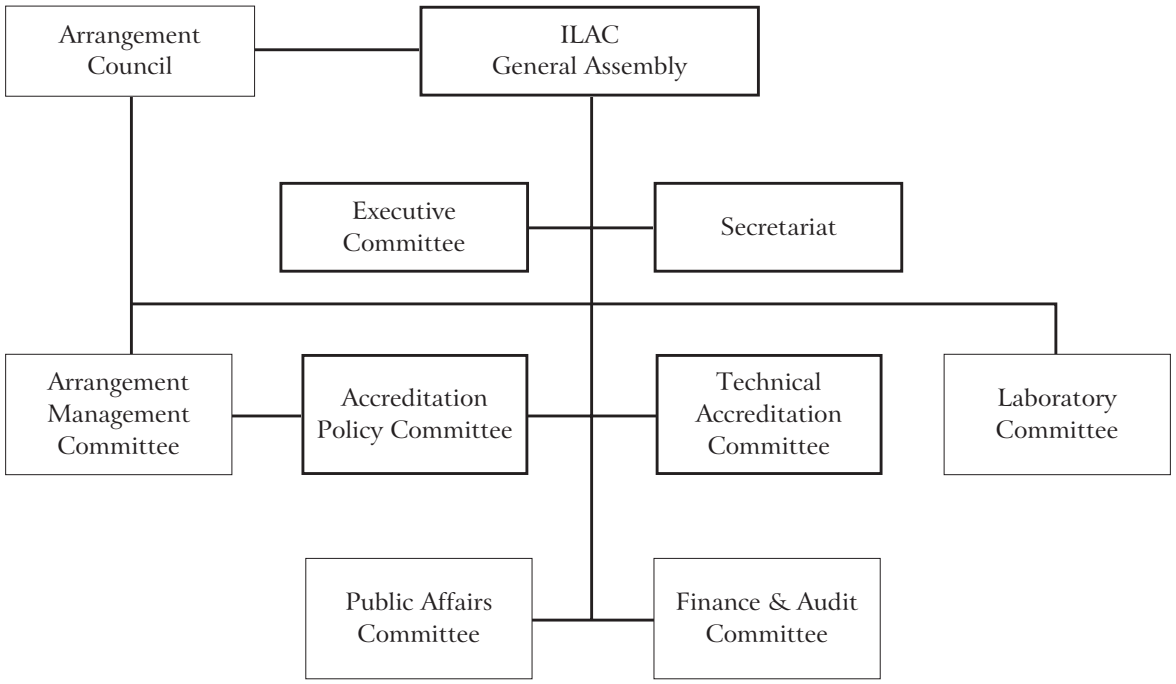
The ILAC Arrangement, which entered into effect on 31 January 2001, provides technical support to international trade by promoting cross-border stakeholder confidence and acceptance of accredited laboratory data. As at May 2003 there were 44 signatories, representing 35 economies.

Organization

There is a general assembly of members to which the executive committee and the six other committees report. ILAC's executive committee oversees the overall direction of ILAC and the work of the six committees established to assist in progressing the work of ILAC. The executive committee consists of an elected chairperson and vice-chairperson, the chairpersons of the six committees, plus a representative of each formally constituted regional

cooperation member and a representative of the unaffiliated economies where an appropriate regional body does not exist. The executive committee meets on a regular basis to review progress and plan further work. ILAC members participate in and contribute to the six committees, or working groups established by the committees to address particular issues or areas of accreditation.

Figure 13 Organizational structure of ILAC



Membership and fees

ILAC has various membership options:

- A full member is an accreditation body that is a signatory to the ILAC Mutual Recognition Arrangement.
- An associate is an accreditation body that is recognized in its economy as offering a laboratory and/or inspection body accreditation service conforming to appropriate international standards and accepts the obligations of the ILAC Mutual Recognition Arrangement.
- An affiliate is an accreditation body currently operating, being developed or intended to be developed for laboratories and inspection bodies.
- A national coordination body is a national body having responsibility for the coordination of laboratory and/or inspection body accreditation activity in its economy. In the ILAC context, such a body has only the authority

delegated to it by the constituent ILAC full members and associates. Any national mutual recognition under the auspices of the coordination body has no status within the ILAC Mutual Recognition Arrangement.

- A regional cooperation body member is a formally established regional laboratory accreditation cooperation having aims and objectives similar to and compatible with ILAC.
- Stakeholder members are formally constituted and representative international, regional or national organizations having an interest in the work of ILAC. They include bodies such as associations of laboratories, associations of laboratory practitioners, inspection body associations, purchasing organizations, regulatory authorities, consumer associations and trade organizations.

In 2002, there were 44 full members, 14 associates, 18 affiliates, 1 national coordination body member, four regional cooperation body members and 19 stakeholder members.

The fees for full members and associates are variable and are assessed on the basis of 'ability to pay' as determined by the strength of the economy in which the body is located and on the size of the accreditation body (as a measure of its financial strength). Annual fees range from US$ 1,162 to US$ 10,230. Stakeholder members pay a flat fee of US$ 200 a year. Fees for affiliates range from US$ 220 to US$ 660 a year.

Provisions for developing countries

As part of its global approach, ILAC provides advice and assistance to countries that are in the process of developing their own laboratory accreditation systems. These countries are able to participate in ILAC as associates or affiliates, and access the resources of ILAC's more established members.

In October 2000 ILAC signed a memorandum of understanding with UNIDO and ISO. Cooperation between the three organizations has resulted in the first stage of a pre-peer evaluation programme being completed for accreditation bodies in developing countries. The programme aims to help accreditation bodies from developing countries along the path to becoming a signatory to the ILAC Mutual Recognition Arrangement. Other activities such as training courses and workshops have also been conducted in cooperation with UNIDO and ISO.

Part Two

Country reports on technical barriers to trade (TBT)

Chapter 11

Jamaica

Jamaica, the third largest island in the Caribbean, has an area of 10,991 square kilometres and a population of about 2.7 million inhabitants.

In 2000 the mining sector accounted for 9.1% of gross domestic product (GDP), agriculture (including forestry and fishing) for 7.1%, and manufacturing for 15.9%. Tourism contribution to GDP is estimated to be around 13%. Tourism accounts for most of the economy's invisible earnings.

The manufacturing industry is the biggest contributor to GDP. Its activities include the processing of sugar, food, beverages and tobacco, as well as the production of chemicals, metals and construction materials, and the assembly of electrical appliances and apparel.

The main agricultural export crops are sugar and bananas; other traditional agricultural export products are cocoa, coffee, copra and citrus. The agricultural sector accounts for about 20% of labour force employment.

Jamaica's main merchandise export product is bauxite, which is used for conversion into alumina. However, agricultural commodities and apparel are important export products. The main export partners are Canada, the United Kingdom and the United States.

The major imports of Jamaica are raw materials, consumer goods, capital goods and fuels. Jamaica's main import partners are the United States, the United Kingdom, the Caribbean Community, Canada and the Netherlands.

Administrative arrangements and responsibilities for technical regulations

Imported products

Responsibility for TBT measures affecting the quality of processed food, manufactured goods for domestic consumption and controls on import lies principally with the Jamaica Bureau of Standards (JBS).

JBS implemented a Standards Compliance Programme in 1993 to ensure that goods entering Jamaica are of acceptable standards. JBS is the agency mandated to ensure that products for which there are compulsory national standards and labelling regulations conform to health, safety, performance, environmental and labelling requirements. The Pharmaceutical Division, Ministry of Health, monitors imported drugs and pharmaceutical items.

Whenever possible domestic legislation is based on national standards.

Exported products

Responsibility for TBT measures affecting the quality of processed foods, manufactured goods for domestic consumption and controls on export also lies principally with JBS.

JBS is mandated by the Processed Food Act to certify prescribed processed foods for export.

Standardization and conformity assessment infrastructure

National standards body

JBS is the national standards body which was established as a statutory body in 1968. JBS is responsible, *inter alia*, for standardization, testing and calibration, food control, product and plant certification, training, legal metrology, and technical information on standards, technical regulations and conformity assessment procedures. It also maintains the national measurement standards.

Standards

One of the main functions of JBS is to develop, promulgate and implement the use of Jamaican standards: it has established 364 standards. Standards are formulated through 36 standing committees. These committees comprise representation from consumer interest, the public and manufacturing sectors, and others. The committees that write standards are now set up by industry under the facilitation of the Standardization Division. JBS has set up a Standardization Division forum website to facilitate participation by technical committee members. This website is used in the development of national standards.

In keeping with guidelines of the WTO Agreement on TBT, JBS makes efforts to adopt international standards. When this is not possible, international standards will continue to be adapted in the development of national standards.

JBS develops and enforces technical regulations for those commodities and practices that affect health and safety.

Certification

JBS operates a National Certification Mark Programme for Products and Plants, and quality management system registration. This is a specially designed programme aimed at improving product quality and marketability. Marks of quality or conformity marks are awarded to manufacturers for products, processes and practices that conform to relevant standards.

The Bureau's team of analysts examines the manufacturer's processes, equipment, records, raw materials and quality control systems, and the finished product to ensure consistent adherence to standards. International guides and standards are used for conformity assessment.

JBS has developed the following conformity marks:

- The National Certification Mark is the mark of quality awarded to products, processes and practices that conform to relevant standards.

- The Jamaican Made Mark is the Bureau's mark for products that, in addition to satisfying the criteria for the National Certification Mark, contain 45% or more Jamaican input.
- The Plant Mark is awarded to companies whose systems satisfy stringent quality assurance requirements and consistently meet the required standards.

JBS is also gearing up for the certification of quality management systems to ISO 9001 and of environmental management systems to ISO 14001. Fifteen ISO 9000 certificates and four ISO 14000 certificates have been issued by six foreign registrars.

Testing

JBS has testing capabilities in the following areas:

- Chemical analysis;
- Hydrostatic testing;
- Appliance testing;
- Building materials;
- Metallurgy testing;
- Microbiological testing;
- Mass metrology and calibration;
- Energy efficiency testing;
- Electrical testing;
- Electronic testing;
- Packaging; and
- Non-metallic testing.

The Electrical Department is authorized to carry out testing on behalf of Underwriters Laboratories (an independent, not-for-profit product-safety testing and certification organization in the United States). The Pesticides Control Authority's Registration System utilizes the services of the Chemistry Laboratory for analysis of pesticide formulations.

The chemistry, microbiology, energy efficiency, electrical and electronics, metallurgy, building materials, packaging and non-metallic laboratories are not accredited but they operate in accordance with international standards and measurements are traceable to international standards.

Metrology

JBS has calibration services in the following areas:

- AC/DC: volt, current, resistance;
- Pressure and force;
- Flow and volume;
- Temperature;
- Mass;
- Dimensional (linear and angular); and
- Electrical energy.

National measurement standards are calibrated at:

- National Institute of Standards and Technology (United States);
- Physikalisch-Technische Bundesanstalt (Germany); and
- National Metrology Institute of Mexico (CENAM).

JBS's Mass Metrology and Calibration Laboratory is accredited by PTB, Germany.

Accreditation

It is intended that some aspects of conformity assessment should be covered under a national accreditation programme to be implemented through the National Quality Infrastructure Project. This project is managed by the Ministry of Commerce, Science and Technology, and funded by Sida (Swedish International Development Cooperation Agency). The Swedish organization responsible for the project is SWEDAC. Under the accreditation programme laboratories will be assessed against international standards such as ISO/IEC 17025.[3] Jamaica has no membership in IAF or ILAC.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The Ministry of Foreign Affairs and Foreign Trade is the national focal point of WTO. It is responsible for the implementation of the Agreement at the national level.

The International Programmes Officer at JBS receives all documents from WTO through the Geneva mission and the Ministry of Foreign Affairs and Foreign Trade. It also has the necessary password to permit direct access to information from WTO. The documents are lodged in the Technical Information Centre.

An Enquiry Point has been established at JBS; the notification authority is the Ministry of Foreign Affairs and Foreign Trade. The International Programmes Officer at JBS operates the Enquiry Point, which handles queries and provides information to the Ministry of Foreign Affairs and Foreign Trade to fulfil notification obligations.

JBS shares responsibility for the implementation of TBT measures with the related public sector organizations. Where no such bodies can be identified, the responsibility is assumed by JBS itself (e.g. for furniture-related concerns). JBS receives national technical regulations originating in Jamaica from ministries and relevant authorities for transmission to WTO.

It was acknowledged that there has been a certain amount of overlap and fragmentation with respect to the responsibility of the various authorities, and proposals for a coordinating committee have been floated. The proposals range from a permanent secretariat with an annual budget to a member of staff of JBS as secretary to a committee, which would meet from time to time.

3 ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories.*

Implementation of the Agreement on TBT

The Government of Jamaica has informed WTO about measures to ensure the implementation and administration of the Agreement on TBT, as required by Article 15.2 of the Agreement. JBS accepted the Code of Good Practice for the Preparation, Adoption, and Application of Standards in 1996.

It was observed that 30 notifications had been made about technical regulations. Information is often received after measures have already become technical regulations and it is too late for comment, although proposed technical regulations should be notified before they are finalized. The Official Secrets Act, which prevents disclosure of proposed technical regulations until they are gazetted (i.e. made official), was identified as a constraint to satisfying the provisions of the Agreement on TBT regarding notification of national technical regulations. Industry and government departments are informed of the receipt of relevant notifications, by e-mail where available. Responses tend to be slow in coming. Foreign notifications are sorted by the International Programmes Officer at JBS and circulated to the concerned sectors for comment or implementation. Approximately half of the interested parties have e-mail facilities and this medium is used for circulation whenever possible.

Contacts are made with industry and with public sector bodies, and the documents are circulated for comment. Comments are also solicited from national technical committees within the JBS structure. The comments are collated by the Standardization Division and considered within JBS, and the resulting position is conveyed to the originating bodies by the International Programmes Officer. The coordination and communication between JBS and the government departments and private sector agencies involved in the Agreement on TBT appeared to be as good as could be expected considering the limited awareness of the importance of the Agreement on TBT in trade and commerce.

Attendance at TBT Committee meetings is irregular and depends on the availability of the staff of the Jamaican delegation in Geneva. Attendance is infrequent because of the limited number of staff. The degree to which the country is able to participate effectively is limited by lack of funding for attendance at meetings of the TBT Committee. Other limiting factors include a lack of interest by industry; this results, it has been suggested, from lack of knowledge of the part TBT plays in trade. Decisions on the level and nature of participation in the TBT Committee are made on a pragmatic basis depending on the availability of funds to attend specific meetings.

There has been no regular participation in the discussions at the TBT Committee meetings themselves. The procedures through which national interests and concerns with respect to the Agreement on TBT could be identified and reflected in negotiating positions tend to be of an ad hoc nature and amount to discussion of specific points among the staff of JBS and such government departments and private sector partners as can be persuaded to respond.

No dispute settlement procedures have been used in the TBT area.

Only a limited cadre of personnel recognize the benefits of participation in the Agreement on TBT on the trade of the country, and that recognition is largely due to their concern with the notifications received.

Awareness and understanding of TBT issues

Interaction with representatives of government organizations, some private sector organizations and consumers suggests that there is at least a minimum level of awareness of WTO and TBT issues among members of the private and

public sectors. At least one awareness seminar has been held, but it was readily admitted that there is need for further training and awareness seminars to sensitize the public about these matters.

Industry does not appear to be aware of the impact, obligations and benefits to their operations of the WTO Agreement on TBT nor of the importance of taking part in international standardization.

The main sources of information on the Agreement on TBT and the role of international standard-setting organizations are JBS and its technical committees. Information is disseminated by formal seminars as well as informally through requests for comments on draft standards and notifications.

Problems experienced because of TBT measures in export markets

Exporters of processed food products, for example hot pepper sauces, have had considerable problems complying with United States food labelling requirements including nutrition labelling, use of imperial weight and volume measures, or design and positioning of labels. These problems reflect the very detailed nature of United States labelling requirements.

JBS provides advice on label design and content and undertakes nutrient analysis for the purpose of nutritional labelling. However, exporters have complained about the considerable period of time required to obtain approval for a label and the costs associated with border rejections when a label is judged to be non-compliant.

Needs assessment for international standards

Jamaica's greatest need for international standards is in the agricultural sector. This is addressed in the section on SPS.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

JBS is a full member of ISO and a participant in the Affiliate Country Programme of IEC. Through the Ministry of Industry, Commerce and Technology Jamaica is a member of ITU. Jamaica is not a member of OIML. The official contact point for CAC is JBS. JBS is the representative to all the international standard-setting organizations, so coordination and communication takes place within JBS.

Level of participation in international standard-setting organizations

JBS attends the ISO General Assembly, the ISO Committee on Developing Country Matters (DEVCO) and the ISO Committee on Conformity Assessment (CASCO). In 2001 it was a participating member of 20 ISO TCs and an observer member of 76 TCs. However, JBS representatives had attended the meetings of only one TC (TC 207, Environmental management), when funds were made

available by the ISO Development Programme. JBS was on the ISO Council and had recently been appointed to the ISO Developing Country Task Force. In 2003 JBS took up the secretariat of ISO/TC 93, *Starch*.

Documents are circulated by JBS to public sector departments and private sector organizations in an attempt to reach a national position but, too often, comments are slow in coming.

Decisions regarding the level and nature of participation in the different activities of international standard-setting organizations are usually made by the management of JBS, taking into account the national needs as perceived by JBS. However, it has recently been decided that decisions on standards to be developed should be led by industry, to the extent that even the secretary of the technical committee may come from industry. This practice is expected also to influence significantly the extent of participation in international standard-setting organizations.

Knowledge and technology transfer are seen as benefits of participation in international standard-setting organizations.

National interests and concerns with respect to the development of international standards are identified by discussions within JBS and within the related technical committees or ad hoc committees set up for the purpose. JBS has not taken a very active part in the development of particular international standards; it was involved in the development of the ISO 9000 and ISO 14000 series of standards through the submission of comments.

Participation in regional arrangements for standard-setting

JBS is a member of the Pan American Standards Commission (COPANT) and the CARICOM Regional Organisation for Standards and Quality (CROSQ), and participates in the annual meetings of these bodies. The members of CROSQ are the national standards bodies of the countries of the Caribbean Common Market, many of which are also members of ISO. The members of COPANT are the national standards bodies of the countries of the Americas. Many of these bodies are also members of ISO, and COPANT is in official liaison with ISO.

JBS contributes to the technical work of CROSQ but takes only a limited part in the technical work of COPANT because that work is done in Spanish.

It is the policy of both CROSQ and COPANT to use ISO standards wherever possible, and to create a regional standard only when no other standard satisfies the regional need.

Constraints on effective participation in international standard-setting organizations

The direct cost of participation (e.g. travel and subsistence for staff) was given as the main constraint on effective participation in the work of the international standard-setting organizations. It was pointed out that earlier identification of dates and venues for the meetings would permit the cost of attendance to be budgeted for in the annual budget of JBS and would thus improve the likelihood of attendance.

Concern was expressed about the need to improve the level of interest shown by industry in helping to develop a national position on draft international standards. Lack of awareness and understanding of the role of international standards in trade was also seen as a factor contributing to ineffective participation.

Specific technical assistance requirements

Implementation of the Agreement on TBT

Technical assistance is required for strengthening the WTO TBT enquiry point. Assistance is particularly required to improve the communications infrastructure (i.e. information technology). Software for handling the notification process and procedures would enhance Jamaica's compliance with WTO TBT obligations and ensure that provisions of the Agreement are met. The needed communications infrastructure also includes access to e-mail and the Internet, to enable Jamaica to participate in electronic forums for discussions, electronic modes of voting on international standards, remote meetings and access to information sources relevant to international standard-setting. Technical assistance would also be useful to adapt facilities already available in commercial software packages (e.g. MSN Net Meeting) for use in international standardization work. These improvements to the communications infrastructure are suggested as a way to get around the request for funds to attend technical meetings, which could only be supported in the short term.

Technical assistance is also required in the harmonization of some of the laws of Jamaica to make them WTO TBT compliant. The population of Jamaica needs to be made more aware of the importance and relevance of WTO and TBT issues.

Participation in international standardization

Technical assistance is required in the form of support for the attendance of technical staff at technical committee meetings. It was emphasized that specific attention should be paid to ensuring that the meetings dealt with technical discussion rather than policy issues, and that the staff chosen should have well-researched or developed contributions to make, preferably based on national positions.

Maintenance of equipment

The need was expressed for technical assistance to develop a centre for the maintenance of laboratory equipment, both analytical and metrological. It is envisaged that the centre would serve a regional need. This technical assistance could take the form of persuading the manufacturers of analytical equipment to assist in the setting-up of joint repair facilities (rather than having the equipment sent back to their individual facilities for repair or servicing).

Further, technical assistance was needed in the development of facilities for:

- Legal and chemical metrology;
- Determining energy efficiency (household appliances); and
- Safety of vehicles.

Training

Technical assistance was required for training to assist industry to become HACCP compliant. It was considered that this programme should be of the train-the-trainer type so that trainees could eventually reduce the dependence on external trainers and the programme would become self-sustainable over time.

Overall assessment

Jamaica has a good infrastructure for metrology, standards, testing and quality assurance. Its participation in international standardization work has been limited.[4] It participates at the policy level in the affairs of international and regional standard-setting organizations but on only a very limited basis at the level of the technical committees where standards are developed. Jamaica is constrained by a lack of finance to fund participation in the committees as well as lack of personnel to take an active part. The level of participation should increase regionally at the level of the technical committee where standards are developed following the establishment of CROSQ.

JBS has taken a bold step to make standards development industry-driven, to the extent of drawing the secretaries of its technical committees from industry rather than from among its own staff. It has also begun using readily available commercial software to assist in reaching out to its stakeholders and encouraging electronic interaction. JBS has accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards.

Maintenance of laboratory equipment causes problems for testing and calibration laboratories. This could be solved by setting up a maintenance centre for laboratory equipment, which could also serve the region. There is a need to make the National Accreditation Programme operational and for Jamaica to participate actively in activities of ILAC and IAF. In the first instance, testing and calibration laboratories could be accredited.

Jamaica has established a structure for implementing the Agreement on TBT. Notifications about national technical regulations tend to be made after they have become law, instead of when they are at draft stage when comments can still be made. This should be remedied. Foreign notifications are circulated to stakeholders and comments submitted when necessary. Industry does not appear to be aware of the importance to operations of the Agreement on TBT or of the importance (to competitiveness) of taking part in international standardization. There is thus need to make industry aware of the importance of the Agreement on TBT.

4 In 2003 JBS took up the secretariat of ISO/TC 93, *Starch*.

Chapter 12

Kenya

Kenya, which is situated on the east coast of Africa, has an area of 582,650 square kilometres and a population of about 31.6 million inhabitants. It is the most industrially developed country in East Africa.

Kenya's major economic activity is agriculture (including forestry and fishing), which contributes about 26% to GDP. Manufacturing contributes about 13% to GDP. The service sector is dominated by tourism, the second largest export revenue earner after tea.

The tea industry is by far the largest export earner, and Kenya is now the world's leading supplier of black teas. Horticulture was the fastest-growing agricultural subsector in 2000; the leading markets were France, the Netherlands and the United Kingdom.

Kenya's exports are mostly agricultural products. Tea, coffee and horticultural products account for over half of all Kenya's merchandise exports. Other export products are petroleum products and cement. The main export trading partners are Pakistan, Uganda, the United Kingdom and the United Republic of Tanzania.

The manufacturing sector is quite small. The major manufacturing activities are agro-processing and the manufacture of ceramics, paper, chemicals, pharmaceuticals, textiles, apparel and engineering products.

Kenya's main imports are capital goods, industrial inputs and fuel. In recent years there has been an increase in the import of processed foods and beverages. The main import trading partners are Japan, the United Arab Emirates, the United Kingdom and the United States.

Administrative arrangements and responsibilities for technical regulations

Imported products

The responsibility for control of imports lies with the Kenya Bureau of Standards (KEBS), as specified in the Quality Inspection of Imports Order (Legal Notice No. 155 of 1998). All imported products must comply with local mandatory standards. Should a product be imported for which a local standard is not available, the relevant regional or international standard is used. However, it may occur that products are imported for which national, regional or international standards are not available. In such a case the standard of the exporting country is evaluated; if it is found acceptable, the product is expected to comply with the requirements of that standard. All consignments have to comply with the requirements of the specified standards; inspection including sampling is undertaken at ports of entry.

KEBS works in close collaboration with the Ministries of Agriculture and Health, and in particular with the Kenya Plant Health Inspectorate Services (KEPHIS), which is responsible for SPS related aspects. These organizations have close links with the Customs and Excise Department, which will release products from bond only after their approval is received.

Exported products

Horticultural products, fish products, tea and coffee exports are subject to quality inspection. Horticultural products are inspected by the Horticultural Development Authority. Fish products are inspected by the competent authority, consisting of the Fisheries Department, KEBS and KEPHIS. Tea and coffee exports are subject to inspection at auction by exporting agents.

Standardization and conformity assessment infrastructure

National standards body

KEBS, the national standards body of Kenya, started its operations in 1974. Its aims and objectives include development of standards, testing of products, calibration of measurement instruments, consumer protection, quality management, training for industry and dissemination of information relating to standardization. KEBS has established regional offices in Mombasa, Kisumu and Eldoret. It is funded by levies on all products manufactured under technical regulations, and receives only funds for building development from the Government. Resources are therefore limited. KEBS has a staff of approximately 650 people.

Standards

Kenyan standards are based on international standards whenever these are available; they are either adopted without change or adapted to allow for local requirements. In a few instances Kenyan standards have been developed for unique local products.

There are some 3,000 Kenyan standards, and some 1,000 of them have been made mandatory under the Standards Act of 1974. About a quarter of these mandatory standards are identical to international standards. All standards projects are industry-driven; in the case of health and safety, standards projects may also be initiated by the Government. Proposals are submitted through the industrial standards committees which are advisory bodies to the National Standards Council. The latter approves the standards projects after considering justification studies. The National Standards Council represents all stakeholders from Government to small business, whereas the industrial standards committees consist of representatives of industry and business.

Kenyan standards are developed by technical committees, which are representative of all stakeholders and comprise experts representing interested parties such as producers, consumers, technologists, and research and testing organizations, in both the private and public sectors. KEBS acts as the secretariat for the committees. Kenyan standards are developed through consensus.

Certification

KEBS operates two voluntary product certification schemes. Permits to use the KEBS Diamond Mark have been granted to 140 firms, whereas one permit has

been granted for the use of the KEBS Safety Mark. Nine foreign firms have been granted permits to use the Diamond Mark. These two product certification schemes operate according to ISO/IEC Guide 65.[5]

KEBS operates an ISO 9000 certification scheme under which 25 firms have been certified. The scheme operates according to ISO/IEC Guide 62[6] and has been accredited by the Quality System Accreditation Committee. In 2001 there were two foreign certification firms operating in Kenya. A total of 117 firms have ISO 9000 certification and 4 have ISO 14000 certification.

Testing

KEBS provides testing services in:

- Food analysis;
- Microbiological analysis;
- Chemical analysis;
- Engineering; and
- Textiles.

Although laboratories for testing samples for import and export consignments are available at KEBS and other agencies, equipment available in these laboratories is ageing and, in some cases, becoming inoperable. Five laboratories at KEBS have been accredited by the United Kingdom Accreditation Scheme; others are preparing for accreditation.

KEBS participates in inter-laboratory proficiency testing schemes in the areas of microbiology, food and agriculture, and organic and inorganic chemistry with laboratories in France and the United Kingdom. It also coordinates the national harmonized inter-laboratory proficiency testing scheme in Kenya. Under the East African Community, inter-laboratory testing is undertaken by the National Standards Bodies of Kenya, the United Republic of Tanzania and Uganda.

Metrology

KEBS is the custodian of the national measurement standards and offers calibration services in the fields of mass, torque, force, length, dimensional metrology, pressure, time and frequency, electricity, temperature, density and viscosity, and volume and flow. It ensures traceability of its measurement standards. Its laboratories for testing volume and flow, and electrical current have been accredited by DKD (Germany). KEBS participates in several inter-comparison measurement programmes run by SADCMET (SADC countries), MENAMET (North African countries), PTB (Germany) and ASTM (United States). It also participates in an inter-comparison measurement programme with EOS (Egypt). The areas covered by these programmes are mass, force, temperature, electrical current, and reference materials. The Weights and Measures Department of the Ministry of Tourism, Trade and Industry is responsible for legal metrology. KEBS is an associate member of the International Measurement Confederation (IMEKO), the General Conference of Weights and Measures under the Metre Convention (CGPM) and the SADC Cooperation in Measurement Traceability (SADCMET).

5 ISO/IEC Guide 65, *General requirements for bodies operating product certification systems.*
6 ISO/IEC Guide 62, *General requirements for bodies operating assessment and certification/registration of quality systems.*

Accreditation

The Quality Systems Accreditation Committee is responsible for the accreditation of ISO 9000 certification bodies and the registration of quality system auditors. It has accredited four ISO 9000 certification bodies operating in the country, but one of these has since stopped its ISO 9000 certification activities in Kenya.

In 1999 the Quality Systems Accreditation Committee underwent the Pre-Peer Evaluation Programme of IAF, UNIDO and ISO. Following the Pre-Peer Evaluation Programme, it was decided to upgrade the Quality Systems Accreditation Committee to the Kenya National Accreditation Service, to provide accreditation services to personnel, certification bodies, calibration centres, training, consultancy and laboratories. The Kenya Accreditation Service will take over the activities previously performed by the Quality Systems Accreditation Committee. After the Kenya National Accreditation Service becomes operational, it will apply for membership of IAF and ILAC; Kenya is not yet a member of these accreditation bodies. KEBS sponsored two staff members to the IAF/ILAC conference held in Berlin in 2002.

KEBS operates a laboratory accreditation scheme under which the KEBS Calibration Mark is issued to those laboratories that qualify under the National Calibration Service operated by the KEBS Metrology Division. Twenty laboratories have been accredited to ISO/IEC Guide 25[7] by the National Calibration Service. These laboratories are being required to comply with ISO/IEC 17025.[8] The National Calibration Service will be transferred to the Kenya National Accreditation Service when it is set up.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The Ministry of Tourism, Trade and Industry is the focal point for WTO. There is a National Committee on WTO which, *inter alia*, has responsibility for:

- Studying in-depth the WTO Agreements and assessing their impact on the Kenyan economy; and
- Monitoring on a continuous basis the implementation of the Agreements by WTO Members and recommending appropriate action by Kenya.

Membership of this committee is open to all stakeholders from government institutions, non-governmental organizations, industry and business.

The National Committee on WTO meets regularly. Committee members have been given a technical handbook on notifications from WTO. There are several subcommittees, and focal points have been established for the main WTO bodies and committees. The focal points for sanitary and phytosanitary measures are the Ministry of Health and the Ministry of Agriculture and Rural Development (KEPHIS). KEBS is the focal point for technical barriers to trade.

The national enquiry point for TBT is within the KEBS Standards Information Resource Centre. The national enquiry point serves as a referral service focal

7 ISO/IEC Guide 25, *General requirements for the competence of calibration and testing laboratories*.
8 ISO/IEC 17025 replaces ISO/IEC Guide 25.

point in Kenya for trade information about standards and technical regulations. Its staff members respond to written, telephonic, electronic or personal requests for information on standards, technical regulations and conformity assessment procedures. The national enquiry point has access to the Standards Information Research Centre's comprehensive reference collection of Kenya, foreign and international standards and other hard-copy and electronically stored trade-related documentation.

A procedure for notifications of domestic technical regulations has been set up. KEBS prepares the notification and sends it to the Director of External Trade at the WTO desk, who is the coordinator for WTO matters and should transmit the notification to WTO through the Geneva mission.

Implementation of the Agreement on TBT

No statement had been submitted by Kenya about the measures in existence or being taken to ensure the implementation and administration of the Agreement as required by Article 15.2.

KEBS has accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex 3 of the WTO Agreement on TBT. It prepares work programmes every six months as required by this Code.

Although there is a procedure for notifications, it was observed that no notifications had been made about technical regulations. Many Kenyan standards have been made mandatory. These have not been notified although they are now technical regulations.

The national enquiry point downloads notifications from the WTO website. These are categorized and disseminated to the technical committees, which include industry representatives. Furthermore, KEBS has a database of customers who buy standards, and this database is linked with the activities of the national enquiry point for dissemination of notifications. The national enquiry point also maintains records of notifications of proposed foreign regulations and disseminates them through a monthly bulletin to interested parties in Kenya for their review and comments. Comments have been made on issues of concern to Kenya. These comments by Kenya's stakeholders are channelled to the countries originating these proposals, for further consideration.

The national enquiry point is fully operational, replies to queries and provides information on standards and TBT measures. It has prepared an information brochure, which it distributes during seminars, trade exhibitions and agricultural shows, and in its information pack for visitors to KEBS.

Problems are being experienced with providing information relating to older standards in electronic format. For example, some German and French companies had inquired about standards matters relating to products that were earmarked for export to Kenya. The standards could not be supplied to them electronically, but had to be mailed in hard copy, which caused a delay. The reason for this is the inability of the Standards Information Research Centre to transform older standards into electronic format. It has purchased a printer, and was donated a suitable processor, to enable it to supply standards on a print-on-demand system, or provide new standards through electronic media, but it needs a high-speed quality scanner to convert older standards to electronic format.

Officers of the Kenya Permanent Mission in Geneva participate in meetings of the TBT Committee on an ad hoc basis.

Since December 1999 there has been a mutual recognition arrangement for product certification within the East African Community. Parties to the agreement are Kenya, Uganda and the United Republic of Tanzania. The purpose of East African Standards is to harmonize the regulatory provision of quality of products and services in the East African region. The East African Standards specify quality requirements for various products (e.g. primary batteries, concrete roof tiles) and methods of testing for conformity assessment.

Awareness and understanding of TBT issues

Public officials had been trained in workshops presented by WTO, and most of the interviewed personnel seemed to be conversant with the role of international standards in international trade. Following the establishment of the National Committee on WTO, TBT issues have been communicated effectively to most of the represented role players in all sectors of industry and business, but only at higher levels. Communication of this information to lower levels of industry, and in particular to small and medium-sized enterprises, has thus far not been effective, probably because of the short period since the establishment of the National Committee on WTO.

The Kenya National Chamber of Commerce and Industry was quite critical about the fact that information was not effectively disseminated to them from KEBS and the National Committee on WTO. According to the Kenya National Chamber of Commerce and Industry, it is in an excellent position, with 68 branches and more than 3,000 members, to disseminate information to the lower levels of industry.

A further concern expressed was that it appears that organizations close to or in Nairobi seem to be much better informed than those in other cities and outlying areas.

Problems experienced because of TBT measures in export markets

Problems in the area of TBT are limited, and most export problems seem to be SPS related. There have been problems in the area of fish and processed fish exports to the European Union (EU) because of SPS measures. These problems are described below as they have led to preventive measures which cover both TBT and SPS issues.

Kenya had no opportunity to comment or make representations to the EU during the development of the EU Directives for fish. As a result it now perceives the requirements of the directives for fish processing, hygiene and handling as unrealistic and difficult for local producers to satisfy. The EU placed a ban on the importation of fish from Kenya from March 1999 to November 2000. Seventy per cent of the fish from Kenya is exported to the EU; therefore, finding alternative markets for that amount (approximately 17,000 tons) at short notice was extremely difficult. For canned fish no alternative markets could be found, but eventually the fresh and frozen fish was exported to Hong Kong, Malaysia and the United States. The problems experienced with fish exports seem to have been temporarily overcome after negotiations with the EU. However, it is uncertain whether these solutions will be permanent since no changes were made to the EU Directives.

Many of the fish products originate from small-scale local fresh-water and marine fishermen who do not know anything about international standards and EU Directives. Larger corporations who process or freeze the fish for export

purchase the fish from them. Most of the problems originate in the unhygienic handling of the fish by the fishermen, and a large-scale education programme may be the only solution. In order to accommodate this, new Kenyan legislation had to be developed, and existing legislation reviewed and updated. Legislation for hygiene and sanitation of fish and fishery products was promulgated under the new Fisheries Act (Fish Quality Assurance Regulations, 2000). The Ministry of Agriculture and Rural Development was appointed the competent authority for fish and fish products in the country. However, this legislation must now be implemented at industry and Government levels to ensure continued access to the lucrative markets of the EU. All processes, from catching, processing and packaging to transportation of the product, are covered by this Act.

Needs assessment for international standards

The current wide range of international standards produced by ISO, IEC and CAC seems to be more than adequate to cover the small range of products that Kenya exports. Some unique local products are exported to neighbouring countries, and those products are covered by national standards, which may eventually become harmonized regional standards. Their effect on international trade would be minimal.

Most of the relevant international standards are considered appropriate, and in the majority of cases these standards are being adopted as Kenyan standards unchanged. In a few isolated cases small changes have been made to international standards to provide for local conditions.

The specific needs for development of new international standards or revision of existing standards were overshadowed by criticism of the EU Directives for fish and horticultural products. No immediate needs could be identified for new ISO, IEC or Codex standards, and no desire expressed to revise existing standards at that level. In contrast the EN European Standards and EU Directives, to which Kenya could not contribute, were regarded as unrealistic, barriers to trade, and unreadable to the general public.

The last criticism was also levelled at international standards, i.e. that the format of the standards made them difficult to follow, and that the language used was difficult to understand by the 'layperson' or average reader. There seems to be a need for documents explaining how to interpret the standards. There seems to be a further need, apart from this, for documents explaining how to achieve the requirements set out in any particular international standard. It was felt that a set of requirements, whether performance or descriptive, is useless without information on ways to achieve those requirements or manufacture the product.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

KEBS is a member body of ISO, a participant in the Affiliate Country Programme of IEC and the official contact point of CAC. Through the Ministry of Transport and Communication, Kenya is a member of ITU. The Ministry of Commerce and Industry is a member of OIML. KEBS was also the ISO Regional Liaison Office for Africa (excluding the Arab countries) for 2003.

The benefits derived from adopting international standards, were summed up as follows:

- Time and cost saving in preparation of standards;
- The benefit of international acceptance;
- Easier access to international markets;
- Networking possibilities (if meetings are attended); and
- Gaining technical knowledge and experience.

Level of participation in international standard-setting organizations

Shortage of funds prevents KEBS from playing an active role in the technical work of the international standard-setting organizations. It holds no secretariat, and has hosted two technical committee meetings. KEBS is a participating member of 42 ISO TCs and an observer member of 92 TCs. It was also a member of the ISO Council for 2002 to 2003.

Participation in the development of new international standards is a priority for KEBS since it bases all its new standards on international standards. Comments and submissions to international technical committees relating to new standards are the responsibility of national technical committees.

Some agencies stated that the follow-up and review of draft international standards by the national technical committees are not adequate. According to them, too much emphasis is placed on analysing new foreign national and international standards for technical correctness. The possible effects of such standards on the export of Kenyan products, whether barriers will be created, and whether local products can comply with such standards, are not being thoroughly investigated.

Participation in regional arrangements for standard-setting

KEBS represents Kenya in ARSO and it participates in the COMESA Subcommittee of SQMT. Kenya, the United Republic of Tanzania and Uganda have harmonized 383 standards in line with the MSTQ Protocol within the East African Community.

Constraints on effective participation in international standard-setting organizations

Membership fees, travel and subsistence fees are the most important constraints on participation by KEBS in international standards development.

Specific technical assistance requirements

Understanding of the Agreement on TBT

It has become clear that, at higher levels within Government and industry, those directly associated with WTO have a definite understanding of TBT matters. This is, however, not true for all, and definitely not for SMEs struggling to survive or build business to acceptable levels.

Trainers need to be trained and structures such as the pyramid system within the Kenya National Chamber of Commerce and Industry identified and used to organize country-wide workshops to transfer information and create a broad base of understanding.

Accreditation

Assistance will be required to set up the Kenya National Accreditation Service and strengthen it so that it can become a signatory to the IAF Multilateral Recognition Arrangement and to the ILAC Arrangement.

Standards Information Research Centre

The Standards Information Research Centre needs to convert existing standards to electronic format to provide for more efficient operation of the national enquiry point. A suitable high-speed scanner, a second printer (high speed) and two computers to supplement this equipment are needed. The Standards Information Research Centre is also in need of software to convert files into PDF format.

Instrumentation centre

A long-term project, which could mean large savings for Kenya as a country, would be the strengthening of the maintenance centre for laboratory and other equipment. This could be Government assisted, but could also develop into a business venture, with sustained benefits if properly managed. A regional centre seems to be the most financially viable option. Consideration should be given to upgrading the maintenance workshop of the metrology laboratory of KEBS into a national service for the whole country, in which such services are not readily available or are extremely expensive. This could develop into a profitable business venture for KEBS.

Overall assessment

Kenya has a well-established infrastructure for metrology, standards, testing and quality assurance (MSTQ). The product certification scheme of KEBS has an outreach beyond domestic firms, as nine foreign firms are licensed to use the KEBS Diamond Mark. Its testing laboratories participate in proficiency testing schemes and five of its laboratories have been accredited. Its metrology laboratories participate in inter-comparison measurement programmes and some of them have been accredited.

The Kenya National Accreditation Service should be made operational as soon as possible and should incorporate the National Calibration Service of KEBS. It should then apply for membership of ILAC and IAF.

The maintenance workshop in the metrology department of KEBS could be upgraded into a national service for Kenya and could also service the region.

There is a structure for implementation of the Agreement on TBT. However, WTO has not been notified of the arrangements which are in place. KEBS has accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex 3 of the WTO Agreement on TBT. There is a good system for the processing of foreign notifications.

However, the system for domestic notifications needs to be made operational. Many Kenyan standards have been made mandatory but these have not been notified although they are technical regulations. Active participation in international standardization work of technical committees is limited. On the other hand, KEBS has played an active role at policy level through its membership on the ISO Council in 2002-2003 and was actively involved through the appointment of its Chief Executive Officer as ISO Regional Liaison Office for Africa (excluding the Arab countries).

Chapter 13

Malaysia

Malaysia is located in South-east Asia and has a population of 23.1 million. Its area is 329,750 square kilometres.

Malaysia's main export partners are the United States, Singapore, Japan, Hong Kong, the Netherlands, Taiwan Province (China) and Thailand. Malaysia's main import partners are Japan, the United States, Singapore, the EU, Taiwan Province (China), the Republic of Korea and China.

In 2000 manufacturing represented 29.2% of GPD. In the same year, agriculture contributed 7.4% of GDP and mining 4.2%.

Manufactured products account for 82.8% of total exports. They include: electrical and electronic products; chemical and chemical products; machinery and appliances; textiles and clothing; wood products; manufactures of metal; and other manufactures. Electrical and electronic products constitute 71% of manufactured products. Electronic goods form the fastest growing and the single most important category, and Malaysia now occupies a strong international position in some parts of this sector.

Agriculture accounts for 6.5% of total exports. Palm oil and other vegetable oils represent about 50% of the exported agricultural products. In the world markets for some of its commodities, Malaysia plays a leading role. It is still an important source of rubber, although no longer the largest single supplier. It produces over half of the world's palm oil. Within the primary commodities category, earnings from relatively new items – palm oil, timber, and oil and gas – now predominate.

Mining products, mostly petroleum and liquefied natural gas, account for 9.6% of total exports.

In the last 20 years Malaysia has industrialized rapidly. It has been transformed from a country that depended for its prosperity and economic resilience on producing a wide range of mineral and agricultural export commodities into an economy dominated by manufacturing.

Administrative arrangements and responsibilities for technical regulations

Imported products

Responsibility for technical regulations on non-food manufactured goods, both domestically produced and imported, lies with specific regulatory agencies of the Government. Specific agencies are authorized to implement technical regulations for main sectors such as electrical safety, fire safety, road safety and general consumer safety. The Department of Standards Malaysia (DSM) and SIRIM Berhad assist the regulatory agencies by providing technical advice and

conformity assessment services respectively. Some of these regulatory agencies are the Fire Service Department for fire safety systems, the Energy Commission for electrical and gas safety products, and the Communications and Multimedia Commission for telecommunication products.

In many instances voluntary national standards are referenced in domestic legislation.

Exported products

Malaysia does not generally enforce technical regulations for exports. Only the technical regulations of importing countries are applicable.

Standardization and conformity assessment infrastructure

National standards and accreditation body

DSM is the national standards body and the national accreditation body of Malaysia. DSM was established in 1996 following the transformation of the Standards and Industrial Research Institute of Malaysia (SIRIM) from a government agency into a government-owned company (SIRIM Berhad), to undertake the statutory roles in national standardization formerly carried out by the Institute.

In addition, DSM took responsibility for accreditation activities, which were previously undertaken by the Malaysian Accreditation Council under the Ministry of Science, Technology and Environment.

The objectives of DSM are:

- To promulgate and promote national standards;
- To manage the national accreditation schemes in accordance with international practices;
- To maintain the credibility, integrity and competency of the national standardization and accreditation systems;
- To safeguard the interest of Malaysia at regional and international level in the fields of standardization and accreditation; and
- To develop Malaysian standards and to promote standardization and quality assurance for greater competitiveness.

The Malaysian Standards and Accreditation Council operates with membership from government agencies, consumer interests and the trade and industrial sector. It has established a National Standards Committee (with industry representatives), a National Accreditation Committee and a National IEC Committee. Sixteen Industrial Standards Committees report to the National Standards Committee. The committees are responsible for the development of Malaysian standards and also for participation in international standardization.

Standards

One of the main functions of DSM is to develop, promulgate and promote the use of Malaysian standards. In the development of Malaysian standards and in carrying out international standardization activities, DSM is responsible for

the policy and strategy, and it appoints SIRIM Berhad to undertake implementation at technical level. SIRIM Berhad has been appointed as the sole standards development agency in Malaysia. By October 2001, there were 2,679 Malaysian standards. Malaysian Standards are prepared by more than 120 technical committees and working groups, which are established under 16 Industry Standards Committees.

There is an agreement that national standards in selected priority areas in ASEAN member States should be aligned with international standards. National standards are harmonized with international standards wherever possible. Thirty-eight per cent of Malaysian standards are aligned with international standards and this proportion is rapidly growing as more standards are revised and new standards developed are increasingly based on international standards.

All final draft Malaysian standards are circulated for public comment locally as well as overseas. These final drafts for public comment are announced through mass media and on SIRIM Berhad's website.

Certification

SIRIM QAS Sendirian Berhad, which is a wholly owned subsidiary of SIRIM Berhad, operates certification, inspection and testing services to determine compliance with standards.

SIRIM QAS provides services in:

- Certification of products to national and international standards;
- Certification of products to Electromagnetic Compatibility standards;
- Certification of Quality Management Systems to MS ISO 9000 and the QS 9000 standards;
- Certification of Integrated Quality Management Systems (ISO 9000) and HACCP;
- Certification of Environmental Management Systems to MS ISO 14001;
- Certification of Forest Management and Chain-of-Custody;
- Certification of Occupational Health and Safety Management Systems to OHSAS 18001;
- Certification of Communications Equipment.

SIRIM QAS has been accredited for:

- ISO 9000, QS 9000 and ISO 14001 by the United Kingdom Accreditation Service; and
- ISO 9000 by the Department of Standards Malaysia.

Additionally there are several foreign-based certification bodies providing quality system registration and other forms of conformity assessment services. A total of 3,195 ISO 9000 certificates and 367 ISO 14000 certificates had been issued by December 2001. There are several certification bodies for ISO 9000 and ISO 14000 certificates, with SIRIM QAS being the market leader.

Testing

SIRIM QAS also provides testing services in the chemical, electrotechnical, construction and building materials, mechanical products, fire engineering,

electromagnetic compatibility and communications equipment (including approval of import permits) sectors. It also provides inspection services and audits on behalf of foreign certification bodies and purchasers.

About 150 testing laboratories are accredited by DSM. The fields in which they are active are: chemical testing; food and microbiological testing, electrical testing; mechanical and physical testing; palm oil testing; rubber and SMR testing, and construction materials testing.

Metrology

The National Metrology Centre, within SIRIM Berhad, is responsible, *inter alia*, for:

- Establishment and maintenance of national physical standards of measurement; and
- Dissemination and promotion of traceable measurement standards and technology.

The National Metrology Centre maintains the national measurement standards for length, mass, time interval, DC resistance, electric voltage, thermo-dynamic temperature and luminous intensity. There were 34 DSM-accredited calibration laboratories in October 2001.

Accreditation

DSM is the national accreditation body of Malaysia. Its main responsibilities are to:

- Accredit organizations in Malaysia that are engaged in conformity assessments;
- Maintain a register of accredited organizations and of their marks of conformity;
- Accredit testing laboratories, calibration laboratories and training organizations engaged in training personnel in conformity assessment;
- Register people engaged in conformity assessment services, such as consultancy, and maintain a register of qualified people; and
- Represent Malaysia in international and regional accreditation activities, and ensure that Malaysia's interests are represented at all levels within the regional and international organizations.

Skim Akreditasi Makmal Malaysia (the Laboratory Accreditation Scheme of Malaysia) was set up by the Government in 1990 and is now operated by DSM. There are 188 accredited laboratories under this scheme.

DSM has signed the following international recognition arrangements:

- The Pacific Accreditation Cooperation Multilateral Agreement in 1998; and
- The IAF Multilateral Recognition Arrangement in 1999.

DSM is a full member of ILAC and of IAF. It is also a signatory of the IAF Multilateral Recognition Arrangement for Quality Management Systems. DSM takes part in the activities of ILAC and IAF.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The Ministry of International Trade and Industry has responsibility for WTO. To ensure the fulfilment of Malaysia's obligations under the Agreement, an inter-agency committee on TBT has been established. There is also a main committee covering multilateral trade issues. Members of the committee are representatives of the regulatory agencies and relevant agencies concerned.

An enquiry point for TBT has been established at SIRIM Berhad. It also serves as the notification authority under the Agreement on TBT. Industry and government departments are informed of the receipt of relevant notifications by newsletters and e-mail. The enquiry point coordinates the submission of comments with the assistance of the Ministry of International Trade and Industry.

SIRIM Berhad and DSM have access to information on TBT issues as well as WTO notifications. SIRIM Berhad receives information about technical regulations and conformity assessment procedures originating in Malaysia from Ministries and relevant authorities for transmission to WTO.

Texts of technical regulations adopted by the Malaysian Government are published in the Malaysian Gazette (*Warta Kerajaan*).

Implementation of the Agreement on TBT

Malaysia had submitted about 165 notifications on technical regulations and conformity assessment procedures by mid-2002. Malaysia has informed WTO about measures to ensure the implementation and administration of the Agreement as required by Article 15.2 of the Agreement on TBT. DSM accepted the Code of Good Practice for the Preparation, Adoption, and Application of Standards in 1995.

Good contacts exist with industry by way of regular dialogue with industry and by ongoing collaboration with industry associations such as the Federation of Malaysian Manufacturers, the American Malaysian Chamber of Commerce and European/Malaysian business organizations. The notifications received by SIRIM Berhad are circulated to relevant public sector bodies such as the Ministry of Health (for processed food) and the Ministry of Primary Industries (for palm oil and rubber).

Consumer associations are well organized in all states and are a source of comments at all levels. They are represented on standards technical committees.

There is reasonably good compliance with commitments under the Agreement on TBT and participation in its institutions and procedures.

The following agreements have been concluded at a government level:

- APEC MRA on toy safety (information exchange only);
- APEC MRA on electrical and electronic products (information exchange only);
- ASEAN MRA on electrical and electronic products (not yet operational).

There are several arrangements at certification body and accreditation body level between organizations in Malaysia and those of other countries.

SIRIM Berhad attended a meeting of the TBT Committee where the triennial review of the implementation and operation of the Agreement on TBT was considered, and staff from the Malaysian Mission in Geneva usually attend TBT Committee meetings. No dispute settlement procedures have been used in the TBT area. The extent to which the country is able to participate effectively is limited by insufficient funds for attendance at technical meetings.

The coordination and communication between SIRIM Berhad and the government departments and private sector agencies involved in the Agreement on TBT appeared to be reasonably good. The advent of e-mail has resulted in a reduction in communication problems and a marked improvement in responses from the private and public sectors. Responses to notifications are required within 60 days.

While there appears to be some level of awareness of WTO issues among some sectors, in others the lack of awareness of WTO matters and understanding of TBT issues and the role of international standards was seen as a factor contributing to the ineffective participation of those sectors.

Awareness and understanding of TBT issues

The main source of information on the Agreement on TBT is the Ministry of International Trade and Industry. Information is disseminated through formal seminars as well as informally through requests for comments on draft standards and notifications.

There appears to be good interaction with other government bodies and private sector organizations (such as the Federation of Malaysian Manufacturers) and a well-organized Consumers Association. This suggests that there is more than a passing awareness of WTO and TBT issues among the members of the private and public sectors.

There is increasing general awareness of TBT matters because of the reporting of these matters by the media.

Problems experienced due to TBT measures in export markets

No problems were identified which could be placed specifically within the TBT area in the country's major export markets. (Some problems were identified in the SPS area.)

Needs assessment for international standards

At present 38% of Malaysian standards are aligned to international standards. Increasing alignment will depend on an increase in participation, as this will make the standards committees more willing to adopt international standards. While, in general, many standards are considered appropriate, some concern has been expressed about some of them. An example is the case of the environments specified for testing of products: the conditions specified are appropriate for temperate countries and the feeling expressed is that some consideration should be given to developing acceptable tropical environments for testing. The current requirements militate against the development of testing capability in many developing countries, because of the recurrent cost of operating the laboratories at the low temperatures required.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

SIRIM Berhad is appointed by DSM to coordinate and participate in international and regional standardization activities.

DSM is a member of ISO, and the Malaysian National Committee of IEC is a member of IEC. Through the Ministry of Energy, Communications and Multimedia, Malaysia is a member of ITU. The official contact point for CAC is the Ministry of Health. SIRIM Berhad represents Malaysia in International Bureau of Weights and Measures (BIPM) structures, as Malaysia is a signatory to the Metre Convention, and in OIML as a corresponding member.

Level of participation in international standard-setting organizations

SIRIM Berhad operates national-level technical committees on standards that facilitate the participation of Malaysia in international standardization.

DSM/SIRIM Berhad has taken part in the annual meetings of ISO and takes part in ISO CASCO and ISO DEVCO meetings. DSM holds the secretariat of TC 45 (*Rubber and rubber products*), of TC 45/SC 4 (*Products other than hoses*) and two working groups, and of TC 157 (*Mechanical contraceptives*). It is a participating member of 66 TCs or SCs and an observer member of 124 TCs or SCs within ISO and IEC. Documents are circulated to public sector departments, consumer organizations and private sector organizations, and to national technical committees in order to reach a national position.

Decisions regarding the level and nature of participation in the various activities of international standard-setting organizations are usually made by DSM taking into account the national needs arrived at by discussions with stakeholders.

Knowledge, technology transfer and the possibility of influencing the direction of a standard are seen as some of the benefits of participation in the work of international standard-setting organizations.

SIRIM Berhad coordinates Malaysian participation in technical committees and facilitates attendance at some meetings, but lack of funds prevents its regular attendance at many meetings.

National interests and concerns with respect to the development of international standards are identified by discussions within DSM/SIRIM Berhad and with stakeholders (in the related technical committees or ad hoc committees set up for the purpose). Malaysia participates in major international standards bodies such as ISO, IEC, CAC and ITU at both technical and policy level. It has been increasing its participation at the technical level in the past five years. There is an interest in further increasing participation as it is felt that there is no participation in several sectors of significance to the national economy.

Participation in regional arrangements for standard-setting

DSM/SIRIM Berhad participates in the meetings of the APEC Subcommittee on Standards and Conformance. DSM/SIRIM Berhad coordinates and contributes to the technical work of the ASEAN Consultative Committee for Standards and Quality (ACCSQ) and its working groups.

It is the policy of ACCSQ to encourage its members to align their national standards to ISO and IEC standards. There is also a push for cooperation among the members on participation in ISO and IEC technical work.

Constraints on effective participation in international standard-setting organizations

Direct costs of participation (e.g. travel and subsistence for staff), were given as the main constraint on effective participation in the work of international standard-setting organizations.

In some areas identifying the right expertise was a problem, while in others getting the time off (from an employer) to attend the meetings was the difficulty. It was stated that some trade organizations do not see standardization as one of their major responsibilities.

Specific technical assistance requirements

Technical assistance is required for increasing awareness and training in international standardization. IT facilities are already routinely in use among some groups and the assistance would take the form of facilitating the spread of this practice.

Technical assistance of the 'soft' infrastructure type was requested to make stakeholders more aware of the importance and relevance of WTO and TBT issues. This would then make it easier for SIRIM Berhad to develop a national position on issues sent to Malaysia for comment.

Overall assessment

Malaysia appears to be at the upper end of the spectrum of activity among the countries participating in the study, having a well-established infrastructure for SQAM. It participates at the policy level in the affairs of international and regional standard-setting organizations. It holds the secretariat of two technical committees where standards are developed for rubber and for mechanical contraceptives. It faces the constraints of a lack of finance to fund participation in other committees as well as a lack of experts in specific areas to take an active part in those committees' deliberations.

There is reasonably good compliance with commitments under the Agreement on TBT and participation in its institutions and procedures.

A higher level of awareness is needed by industry of the importance to their operations of the WTO Agreement on TBT and of the importance of taking part in international standardization.

Chapter 14

Mauritius

Mauritius is a small island country with a population of approximately 1.2 million people. Manufacturing, tourism, sugar and financial services constitute the four major growth pillars of the economy. Mauritius has managed a growth rate of between 5% and 8% over the past number of years, excluding 1999 when a severe drought resulted in a drop to 2%. Exports increased from 33.7 billion Mauritian rupees in 1997 to 41.1 billion rupees in 2000, while imports increased from 46.1 billion rupees to 54.7 billion rupees over the same period. Mauritius is a net importer of food and most other commodities, with the exception of sugar and textile products.

Mauritius's main export partners are the United Kingdom, the United States, France and Germany. Its main import partners are South Africa, France, India and the United Kingdom.

Textiles and clothing are the single largest sectors within the manufacturing domain. These export-orientated manufacturing sectors, which have been the backbone of the economy during the past decades, account for 12% of GDP, employ about 80,000 workers, and generate over 27 billion rupees of export earnings per annum.

Mauritius's access to raw materials is extremely limited, and raw materials and basic products used for processing have to be imported. An example of this is the importation of fibre for its textile industry and the importation of basic manufactured parts for the assembly of watches, clocks and spectacles.

Manufacturers participating in the export processing zone receive some tax benefits and relief, and preference on airfreight. This has stimulated the growth of the textile industry, and also aided diversification of manufactured products for export.

Administrative arrangements and responsibilities for technical regulations

Imported products

The responsibility for import control lies mainly with the Ministry of Commerce, supported by the Department of Customs and Excise. Testing of samples is carried out by the laboratories of the Mauritius Standards Bureau (MSB). There are some regulatory agencies for specific products and testing is carried out in their own laboratories.

Activities responsible for import control are coordinated by computer links and electronic communication. Customs and Excise only release consignments after notification from the inspectorates.

The main legislation governing import control seems to be centred on:

- The Fair Trading Act (1988);
- The Consumer Protection Act (1991); and
- The Supplies Control Act (1991).

Government inspectors have the authority to inspect and sample import consignments. Provision has been made for the acceptance of imported products which have been certified or tested abroad by recognized conformity assessment bodies. Most consignments of products are accepted into Mauritius on the basis of such certification or testing, with local product sampling and occasional random testing for verification only.

Exported products

Importers or purchasers of textile products from Mauritius often station their own agents in Mauritius. These agents then work with the manufacturers to ensure the quality of the products before they leave the country. These agents may also take samples for testing and submit them to MSB or any other laboratory; they decide whether or not to accept a product based on the results of the tests.

Standardization and conformity assessment infrastructure

National standards body

MSB was established as a division of the Ministry of Commerce and Industry in 1975 and was converted into a corporate body in 1993. It provides services related to: standardization; product and quality system certification; testing and calibration; training; and technical information on standards, technical regulations and conformity assessment procedures. It also maintains the national measurement standards.

Standards

Standards writing for the voluntary sector is carried out within the ambit of MSB through a number of technical committees involving a wide spectrum of interests from the public as well as the private sector. Mauritian standards are based on international standards or foreign national standards. The policy of MSB is to adopt or adapt international standards whenever they are available and applicable. In total about 150 Mauritian standards have been developed. Of these standards, 40 are adopted ISO international standards, and 13 are mandatory through a process by which authorities make reference in legislation to Mauritian standards. These 13 standards cover products such as PVC pipes, steel bars for the reinforcement of concrete, electric cables and toys. No standards for unique local products have been developed.

Certification

MSB operates MAURICERT, a certification marking scheme, under which firms are licensed to use the MSB Certification Mark when their products or processes comply with the requirements of the relevant Mauritian Standard. This scheme was launched in 1979 with the twin objectives of upgrading the

quality of local products and boosting customer confidence in Mauritian manufacturing. MSB has certified products in a wide range of technological areas. By the end of 2002 MSB had issued 41 licences to 29 companies.

A number of woollen knitwear companies have obtained licences to use the woolmark of the International Wool Secretariat.

Schemes for certification of quality management systems and environmental management systems are available in Mauritius. In the area of ISO 9000, MSB shares the market with five foreign certification bodies. These foreign certification bodies are accredited by four different foreign accreditation bodies, whereas MSB is accredited by RvA, the Dutch Council for Accreditation. Some 235 ISO 9000 certificates have been issued, and MSB has certified 47 organizations.

Five ISO 14001 certificates have been granted but it is expected that this area will expand in the future.

In the area of HACCP (Hazard Analysis and Critical Control Point) in the food sector, several companies have already been certified. Certification in the area of environmental management systems and HACCP has been carried out by foreign bodies as MSB is building its capacity for certification in these areas.

Testing

Mauritius has around 130 laboratory units in various fields of testing such as medical, environmental, food, sugar analysis, textile, civil engineering and metrology. The share of private testing work is increasing and most public sector laboratories operate either on the regulatory front (e.g. environment or food toxicology) or as a service (pathology testing services). Many of the export manufacturing companies have their own in-house quality control laboratories and some of these are bilaterally accepted as competent by overseas purchasing concerns. Sometimes these laboratories have to be recognized separately by different purchasers. Lately, there have been additional demands from overseas purchasers to have such laboratories accredited or alternatively to use other accredited laboratories in Mauritius. In one case, a firm was asked to show evidence that its laboratory had participated in external quality assurance schemes (e.g. proficiency testing). As expected, the need for laboratory accreditation is being felt as an urgency as no local laboratory was accredited in 2002.

It has happened that equipment was not available locally to carry out the necessary test work on some sophisticated products. In such cases samples have had to be submitted to overseas laboratories, at high costs, to carry out the required test work. Fortunately this is not a regular occurrence.

The single most important constraint identified in the area of testing is the lack of facilities, in either the public or private sector, to maintain, repair or calibrate laboratory equipment. Equipment requiring service has to be shipped to South Africa, Singapore or even Australia for maintenance. This is not only costly, but results in long periods of unavailability of the equipment.

The University of Mauritius planned to establish a maintenance centre for laboratory equipment. However, the high running costs, shortage of expertise and high capital outlay required prevented this. If these problems could be addressed it would save the country large amounts in terms of costs, time, spares, shipment, downtime, etc. and allow for a more efficient testing service.

Metrology

The Metrology Division of MSB maintains national standards for mass, length, pressure, force, temperature and voltage and ensures that these are traceable to International System (SI) units. MSB presently has metrology laboratories providing calibration services in various fields for industrial metrology on a commercial basis. Calibration of weights and measures used in trade falls within the purview of another organization, the Legal Metrology Division of the Ministry of Industry and Commerce.

The Metrology Division of MSB should be playing an important role in calibration of equipment used for conformity assessment. The unavailability of a humidity and temperature-controlled laboratory seems to be one of its most urgent problems.

The Legal Metrology Division of the Ministry of Commerce is responsible for measurement in trade and may also keep internationally traceable standards for specific fields such as flow meters. However, the Legal Metrology Division derives its traceability from the international measurement standards of MSB.

Accreditation

Under the Mauritius Accreditation Service Act 1998, the Government of Mauritius has established MAURITAS as a department within the Ministry of Industry and International Trade to provide accreditation services to testing and calibration laboratories, inspection bodies, and bodies operating certification of products, personnel, quality systems and environmental management systems. MAURITAS is not operational yet. However, several activities have been undertaken so far:

- Managerial, technical and support staff have been recruited;
- A consultancy was conducted by the United Kingdom Accreditation Service (UKAS) to recommend the establishment of a national accreditation infrastructure;
- A consultancy was conducted by the National Association of Testing Authorities (NATA) of Australia to design the quality system of MAURITAS and assist in drafting its quality manual;
- The Quality Manual and procedures for accreditation were finalized; and
- Several seminars on accreditation have been conducted.

MAURITAS is a member of IAF and an affiliate member of ILAC. It is not a signatory to the ILAC Arrangement or the IAF Multilateral Recognition Arrangement.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The International Trade Division of the Ministry of Industry and International Trade is the national focal point for WTO. It has the role of formulation, negotiation, implementation and monitoring of trade policies. It also has a role of coordination to ensure that trade-related policies are implemented or formulated in accordance with the obligations of Mauritius to WTO. It is responsible for submitting all notifications, including those for TBT, to WTO, via the Mauritian Mission in Geneva.

The Permanent Mission of Mauritius in Geneva is the official communication link with the WTO secretariat. All communications pass through this office to WTO, or from WTO through this office to the Ministry of Industry and International Trade in Mauritius. Mauritius attends meetings of the TBT Committee regularly through the office of the Permanent Mission of Mauritius. Officials from relevant Mauritian organizations such as MSB and MAURITAS occasionally attend these meetings.

A standing coordinating committee has been established at the Ministry of Industry and International Trade. Communications to and from the Permanent Mission of Mauritius are handled by this committee. It comprises representatives of relevant ministries and organizations, both public and private, and oversees the overall implementation of the WTO Agreements. However, it does not handle any technical matters. Technical issues are examined at the level of relevant technical departments or organizations and are cleared by their respective parent ministries. Technical matters are brought to the standing coordinating committee only if they are deemed to have cross-cutting policy implications.

MSB has been designated as the WTO TBT enquiry point for Mauritius. The national enquiry point is part of the library and information service centre of MSB, and one of the centre's two members of staff is responsible for its activities.

Implementation of the Agreement on TBT

Mauritius has informed WTO about measures to ensure the implementation and administration of the Agreement as required by Article 15.2 of the Agreement on TBT. MSB accepted the Code of Good Practice for the Preparation, Adoption, and Application of Standards in 2000.

It was observed that no notifications had been made about technical regulations. A mechanism was in place to deal with the WTO notification process, but it was not working.

It is imperative that a mechanism be established to ensure that proposed technical regulations, including those which make reference to standards and which may affect trade, are communicated to WTO. Since technical regulations are issued by a number of ministries this mechanism could be in the form of a national TBT Committee along the lines of the national SPS Committee.

The effective functioning of the national enquiry point is limited. It occasionally circulates a newsletter to inform industry and the public of TBT matters. The national enquiry point received five requests in 2001 for information from overseas.

No comments have been submitted about foreign notifications. This was because information regarding these notifications is not submitted to industry. This situation can be remedied by taking the action described below.

The national enquiry point has the latitude to download notifications on TBT from the WTO website and to process them. It need not wait to receive copies of notifications from the International Trade Division to be able to do the necessary processing. The national enquiry point should regularly assess the WTO website and download all notifications made on TBT. These notifications should then be examined and immediately sent to all stakeholders concerned for their views and comments. The objective should be to assess the implications of the measures being taken for the specific sector in Mauritius. At the same time, if it is felt necessary, the countries which have made the notifications should be queried and additional information sought. If the proposed measures to be taken by the notifying countries are not found to be in

the interest of Mauritius, then appropriate observations and proposed recommendations should be sent to the International Trade Division for consideration and for further action at the WTO TBT Committee. The suggested national TBT Committee, which would deal with domestic notifications, could also assist in reviewing foreign notifications.

In general, Mauritian officials felt that the Agreement on TBT provided limited benefits in terms of minimum control measures, yet it imposed a lot of obligations relating to technical requirements that Mauritius, as a signatory to the Marrakesh Agreement, had to meet.

It was emphasized that developed countries had to provide the necessary technical and capacity building assistance to enable the country to meet these obligations, taking into account the specific situation of Mauritius as a small economy.

It has not been necessary to use any dispute-settling procedures since all matters that could have given rise to disputes had been settled by negotiation.

Awareness and understanding of TBT issues

Only ministerial personnel at the higher levels of Government, and some members of industry and of MSB seem to understand the issues surrounding the Agreement on TBT. In the circles of commerce and industry adequate awareness seemed to be centred in the management teams of organizations such as the Mauritius Chamber of Commerce and Industry, or those organizations represented on the WTO Standing Coordination Committee of the Ministry of Industry and International Trade, or the Council of MSB.

This awareness was not evident at lower levels of the organizations. In isolated cases, individual members of the personnel (management included) of more prominent companies, and particularly those that export their products, were well informed about the implications of the Agreement on TBT. The majority of companies, including the 2000+ registered small enterprises, may have heard of the Agreement on TBT, but either do not realize its implications or are unaware of its requirements.

The reasons for this inadequate understanding are related to the fact that the Standing Coordinating Committee, its representatives from industry, or the national enquiry point does not disseminate information effectively. This seems to be an internal problem, which could be easily resolved if the systems were reviewed and functions clearly defined.

Problems experienced because of TBT measures in export markets

Only a small variety of products are exported from Mauritius, so problems are limited and not very serious in nature. Most of these problems seem to be SPS related rather than TBT matters. Problems have been experienced in venison, chicken and tuna.

Preserved fruits and vegetables exported to France had been rejected. The reasons for this rejection could not be established beyond doubt, but it appears that quality and labelling requirements had not been met.

Needs assessment for international standards

MSB is mandated through its Act to develop national standards. The advocated policy of MSB is to adopt or adapt international standards when they exist and are applicable: of the more than 150 national standards it has developed, 40 are identical to ISO international standards. In the absence of suitable international standards, Mauritian standards are based on foreign national or regional standards. Some national standards had not been based on the relevant international standard because the ISO standards either were not applicable or did not exist. Examples of some of these product standards are:

- Steel bars for the reinforcement of concrete;
- Concrete building blocks;
- Fireworks; and
- Paints.

A number of products have been identified for proposed future standardization at the national level and for which international standards do not exist. These are standards for:

- Liquefied petroleum gas hoses/regulators for domestic use;
- Rock sand for building;
- Nail wire; and
- Protective and industrial shoes.

Most of these may be available as national or regional standards.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

MSB is a member of ISO and a participant in the Affiliate Country Programme of IEC. It regularly receives IEC standards under IEC's 'registered subscription scheme'. The Legal Metrology Division of the Ministry of Commerce is a corresponding member of OIML. Official contact points are the Ministry of Information Technology and Telecommunications for ITU and Agricultural Services (within the Ministry of Agriculture, Food Technology and Natural Resources) for CAC.

Coordination of activities relating to standards development within ISO takes place through the standards committees and their subcommittees at MSB. This includes the development of national positions or interests, and comments on international projects.

Level of participation in international standard-setting organizations

MSB is a participating member of five ISO Technical Committees, including ISO/TC 176, *Quality management and quality assurance*, and ISO/TC 207, *Environmental management*. MSB has taken a particular interest in these two TCs and has actively participated in their meetings. In addition, MSB is an observer

in about 40 TCs. It hosted a meeting of ISO/TC 34/SC 7, *Spices and condiments*, in September 1997. MSB attends the ISO General Assembly and DEVCO, and attended meetings of CASCO in the past.

MSB would like to host the secretariat for an ISO TC or SC but cannot do so because of financial constraints which also inhibit more active participation in ISO TCs.

Comments on draft ISO standards may be provided by correspondence. However, comments are rarely submitted because of lack of expertise in the particular fields and the resulting poor attendance of standards committee meetings by representatives when draft ISO documents are discussed. It was also stated that DEVCO-sponsored participation in ISO meetings was ineffective, since it was limited to only one delegate compared to the large delegations from developed countries such as the United Kingdom and the United States.

Participation in regional arrangements for standard-setting

Mauritius is a member of SADC, COMESA, IOC (Indian Ocean Commission) and the Indian Ocean Rim Association for Regional Cooperation. MSB represents Mauritius in ARSO, whose objectives include the elaboration and harmonization of regional standards. It participates in the COMESA Subcommittee on SQMT, the SADC Committee on Standardization (SADCSTAN), the IOC Committee on Standardization and the SADC SQAM Programme which includes SADCSTAN. Mauritius is quite active within the SADC SQAM Programme and has become involved in the first efforts to harmonize technical regulations within SADC. Harmonization procedures have been initiated, and are carried out by correspondence or by electronic means.

Constraints to effective participation in international standard-setting organizations

Participation in the ISO General Assembly and DEVCO meetings takes place regularly. However, participation in technical committees is limited by financial constraints and depends on sponsorship by DEVCO.

It is desirable and important that experts fully participate in international standards activities, but because of resource constraints it has not always been possible for Mauritius to be represented in all international forums. Nevertheless, it is crucial to reinforce capacity building in technical matters so that Mauritius gets the maximum exposure to developments taking place worldwide in SQAM matters.

Specific technical assistance requirements

Implementation of the Agreement on TBT

Assistance is required to review and suggest measures and arrangements which could assist the implementation and administration of the Agreement on TBT by relevant authorities and non-governmental bodies, such as:

- To cooperate and coordinate at the domestic level and, *inter alia*, to increase awareness of the TBT requirements at the national level; and

- To involve all interested parties, including government agencies, authorities, MSB, the private sector and other interested parties, in supporting implementation by national authorities.

Participation of officers from MSB and other relevant bodies in meetings of the TBT Committee should be envisaged on a regular basis.

The standards information centre of MSB and the national enquiry point will be increasingly requested to provide standards, standards information and general information in electronic format. No provision has been made to accommodate such requirements, and assistance in this field should be considered. A high speed, high-capacity scanner, a high-capacity computer and a high-speed printer will be required.

Dissemination of information on standards and TBT matters to SMEs and lower levels of personnel in government and other organizations, needs serious consideration.

Only a select group of Mauritians seem to be well informed about TBT matters and standards development. Training of identified people, who could in turn provide training for other larger groups, is needed.

Participation in international standardization

Training of MSB personnel and technical committee members in standardization, including ISO and IEC standardization procedures, is necessary. MSB personnel, in particular, should be trained to provide for efficient national standardization and increased participation in international standards development. It appears that the lack of understanding of international standardization procedures contributes to the uncertainty and unwillingness to participate, and also adversely affects the efficiency of local standardization.

Development of expertise, experience and confidence of trained personnel could improve the current limited participation in international standards development and enhance the national standard-setting process. This is an issue that should be seriously considered by the Mauritian Government and MSB, and assistance should be provided in this area.

Conformity assessment

Assistance is required to allow testing personnel to acquire experience in laboratories elsewhere, outside of their own working environment and even Mauritius. All the organizations visited and interviewed identified this as a definite need.

The lack of a humidity- and temperature-controlled laboratory has been identified as a constraint in the activities of the Metrology Division at MSB. There is need to upgrade the metrology laboratories of MSB to ensure traceability of measurements, and to have the testing and calibration laboratories of MSB accredited.

There is an urgent need to make MAURITAS operational to enable local conformity assessment bodies, such as certification bodies and testing laboratories, to be accredited at reasonable cost and to issue certificates and reports which are recognized overseas. This organization seems to be at a point where it cannot start functioning because of lack of guidance and expertise. Training, guidance and assistance in this instance is of utmost importance. Training is required in the areas of HACCP and ISO 14000.

Maintenance of equipment

Maintenance of equipment in Mauritius is a major issue of concern. Facilities for this are extremely limited, spares are unavailable and servicing of expensive equipment is difficult to achieve. Equipment often has to be shipped overseas for servicing. A national or regional maintenance facility, possibly with the cooperation of major suppliers and manufacturers, should seriously be considered. A long-term project, which could mean large savings for Mauritius as a country, would be the establishment of a maintenance centre for laboratory and other equipment. This could be Government assisted, but could also develop into a lucrative business venture, with sustained benefits if properly managed. A regional centre seems to be the most financially viable option, as the probability that a centre could become a viable business proposition in Mauritius alone is low.

Overall assessment

Mauritius has a well-established infrastructure for metrology, standards, testing and quality assurance (MSTQ) which was strengthened under a World Bank project on 'Technical Assistance to Enhance Competitiveness'.

MAURITAS has to be made operational as soon as possible for Mauritius to have an adequate SQAM infrastructure. There is need to upgrade the Metrology Division of MSB to ensure traceability of measurements. The testing and calibration laboratories of MSB should be accredited.

Maintenance of equipment poses a real problem because of the unavailability of facilities, expertise and spares for this purpose. Funding of equipment should not be considered without some form of insurance that maintenance would be carried out. Coordination of such assistance is essential, and should be supplied on the basis of needs.

Mauritius has in place a structure for the implementation and administration of the Agreement on TBT. However, this needs to be reviewed and made operational as domestic notifications have not been made and foreign notifications are not being processed. Information on TBT matters is not being disseminated adequately to industry. MSB has accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards. On the other hand, participation in international standardization work at technical committee level is limited.

Chapter 15

Namibia

Namibia, which is situated on the south-western coast of Africa, has an area of about 825,000 square kilometres and a population of about 2 million inhabitants.

An important economic activity in Namibia is mining, which contributes about 9% to GDP. Mining generates the largest share of Namibia's foreign exchange earnings.

Agriculture is the main economic activity for the majority of the people. It contributes about 8% to GDP but accounts for about 48% employment of the labour force. The mainstays of the agricultural sector are cattle and sheep. In the high rainfall area agricultural crops – such as maize, wheat and millet – are also grown.

The manufacturing sector is constrained by the small domestic market, close economic integration with South Africa and a shortage of skilled personnel. Food processing is the main activity, with one-third of all manufacturing firms engaged in fish and meat processing, brewing and soft drinks, dairy produce, and other food products. Other products of the manufacturing sector include metal components, fish cans, furniture, paints, soap and detergents, paper and plastic packaging, clothing, and leather goods.

Namibia's economy has always been highly export-oriented. Most commodities are exported in unprocessed or semi-processed form. The principal exports are diamonds, uranium oxide, and semi-processed fish and beef. The main destinations for Namibia's exports are the United Kingdom, South Africa and Spain.

Namibia imports most consumer goods, mainly from South Africa, its major trading partner.

Administrative arrangements and responsibilities for technical regulations

Imported products

With regard to products coming into the country, there is no formal import inspection scheme. However, customs officials do inform the relevant authorities when they come across suspicious products at the ports of entry. The main officials involved in this arrangement include customs officials and officials from the Ministry of Health and Social Services. This arrangement is ineffective and is essentially based on 'fire-fighting', which cannot assure consumers of good quality and safe products on a continuous basis.

Exported products

There is control on exports of fish products. This is an SPS issue which is reported in the Namibian SPS case study.

Standardization and conformity assessment infrastructure

National standards body

The Namibian Standards Information and Quality Office (NSIQO) was established as a unit under the Directorate of Internal Trade of the Ministry of Trade and Industry in 1996. The office consists of seven people including three standards officers. The objectives of NSIQO are:

- To provide information on standards and technical specifications used worldwide;
- To facilitate access to information on quality issues in Namibia and abroad;
- To promote the concept of quality within industry and the general public; and
- To encourage Namibian companies to produce and supply safe products and services.

The Government has already enacted a Standards Law and has also earmarked a building in Windhoek for the future Namibian Standards Institute.

Standards

Currently, there are very limited standardization activities undertaken by NSIQO. A technical committee on ISO 9000 was established and reviewed the ISO 9000 series of standards with a view to their adoption. The actual adoption will be done by the Namibian Standards Institute once the legal framework is in place. In the meantime the manufacturing sector relies on South African standards. Manufacturers do not know whether these South African standards are identical to international standards but assume that they are equivalent.

Certification

There are no local schemes for certification of products, quality management systems or environmental management systems. However, there is a desire to have these services localized in order to save time and money. Certification services are offered by the South African Bureau of Standards (SABS), which has been accredited by the South African National Accreditation Service. As the latter is a signatory to the IAF MLA and the ILAC Arrangement, the certificates issued by SABS are recognized abroad. A total of 24 ISO 9000 certificates and 4 ISO 14000 certificates had been issued by December 2001.

It will take some time before Namibia can build enough capacity and experience to be able to offer accredited certification services. In the meantime it would be worthwhile for Namibia to continue using the services offered by SABS concerning conformity assessment. This lack of local capacity leads to increased costs because of the need to import services; this could be avoided by building local technical capabilities.

Testing

Namibia does have a limited number of independent routine test laboratories in various organizations such as the University of Namibia, the Ministry of Health and Social Services, and the Ministry of Agriculture and Rural Development. However, these facilities are dedicated to their own work. Moreover, they may not have the capacity to handle large amounts of outside work such as might be required for product certification.

The Ministry of Trade and Industry, which has been designated as the 'competent authority' by the European Union, does not have any testing facilities. However, the contracted agency SABS has limited microbiology laboratory facilities in Walvis Bay. There are also laboratories at local government level that can test foodstuffs. These are located in the various regions.

There was also an indication that the Government would use private testing facilities if available. Where they do not exist, laboratories could be established under the future Namibian Standards Institute.

Metrology

The national authority for legal metrology is the Trade Metrology Division, which is located in the Ministry of Trade and Industry. This division is responsible for ensuring that measurement instruments used in trade and commerce are as accurate as demanded by the weights and measures regulations, which are defined in the Trade Metrology Act and the Measuring Units and National Measuring Standards Act.

The Trade Metrology Act lays down the hierarchy of standards used in the approval and verification process of instruments used in trade to ensure traceability to national standards and for inspection of goods. The Measuring Units and National Measuring Standards Act makes provision for establishing national standards and requires that any standard used for legal purposes must be traceable to national standards. Traceability of national standards is obtained via the National Measurement Laboratory of South Africa.

The Trade Metrology Division presently undertakes the inspection and verification of instruments used in trade. It maintains a testing and calibration laboratory but is understaffed.

Accreditation

Namibia does not have an accreditation body and is not likely to have one in the near future. Like many other countries in Southern Africa, Namibia would like to utilize services available in the region until it can develop its own local service.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The Ministry of Trade and Industry is the national focal point for WTO; its Directorate of Trade is responsible for following and coordinating WTO-related matters. NSIQO is the national enquiry point for TBT.

There is no clear procedure for domestic notifications for technical regulations affecting trade or for the treatment of foreign notifications which can have an impact on export.

Implementation of the Agreement on TBT

Major stakeholders in the implementation of the Agreement on TBT include the Ministry of Trade and Industry, the Chamber of Commerce and Industry, the Ministry of Health and Social Services (concerned with food safety), and various enterprises.

In accordance with Article 15.2 of the Agreement on TBT, Namibia informed WTO that all standardization and quality assurance in Namibia is administered and performed by SABS. Therefore, all technical regulations, standards and conformity assessment procedures are drafted and passed by SABS. SABS publishes all information regarding regulations, standards and conformity assessment procedures in the South African Government Gazette. Interested parties can lodge their written comments before a stated deadline, which should be at least two months. This procedure is applicable in Namibia. NSIQO accepted the Code of Good Practice for the Preparation, Adoption, and Application of Standards in 2000.

Only one person works at the enquiry point. At her disposal there is a computer, a desk and access to the information technology network in the ministry, including Internet access through the ministry's local area network.

Namibia has not been participating in TBT activities largely because of lack of technical experts and funds for participation. Because of poor coordination and communication between various stakeholders, it has not been possible for people other than those in the ministry to attend WTO meetings. The ministry does not attend meetings of the TBT Committee. There is no national system for effective consultations on matters regarding WTO TBT issues in which people from various institutions can make inputs. Therefore Namibia is unable to present a national position on TBT issues at WTO meetings.

Many officials in the Government and in the private sector were of the view that there was a need for more consultations between all stakeholders regarding TBT issues, especially between the Ministry of Trade and Industry and other agencies. Resource constraints, human and material, are Namibia's obstacles to the implementation of the Agreement on TBT. This makes it even more difficult to fulfil all required tasks under the Agreement. Namibia has not made any domestic notifications, mainly because of lack of human and material resources.

It is also important to note that communication between institutions in Namibia is not always easy because not all institutions have electronic mail facilities.

Namibia has not used the dispute settlement procedure for TBT matters.

The main benefits derived from the Agreement on TBT seem to be very few and basically limited to seminars and workshops. On the other hand, many officials interviewed were not very clear about what benefits could be derived from the Agreement on TBT.

Awareness and understanding of TBT issues

There is some awareness and understanding of the Agreement on TBT among senior officials in the Ministry of Trade and Industry and in some organizations. However, the level of awareness gets lower and lower among junior officials, not only in the Ministry of Trade and Industry but also in other ministries and public institutions. The level of awareness of the Agreement on TBT in the private sector is very low even among senior officials. Most of the people interviewed were not aware of the Agreement on TBT. However, those who knew about the Agreement, especially through the awareness seminars conducted so far, admitted that the seminars were not enough.

The main source of information on the Agreement on TBT should be the Ministry of Trade and Industry. However, it appears that information flow

from the ministry to other agencies is inadequate. Consequently other agencies claimed that they did not have much information about the WTO or the Agreement on TBT. The ministry has organized some sensitization seminars on WTO issues, including the Agreement on TBT but those have been few because of lack of resources.

Problems experienced because of technical measures in export markets

No problems have been experienced in export markets because of TBT measures. Problems have been experienced with SPS measures for, *inter alia*, beef, fish, grapes and these are described in the case study on SPS.

Needs assessment for international standards

Namibia has not established Namibian standards. Many industries rely on South African standards. Concerning the use of international standards, exporters felt that the only way they could continue to export was by complying with technical requirements of importing countries. Many people interviewed were not even aware of the existence of any international standards. The exporters are therefore more worried about meeting the requirements of the importing countries regardless of their equivalence to international standards.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

NSIQO is a correspondent member of ISO and a participant in the Affiliate Country Programme of IEC. Through the Ministry of Works, Transport and Communication Namibia is a member of ITU. Namibia is not a member of OIML. The official contact point of CAC is the Ministry of Agriculture, Water and Rural Development.

The Ministry of Trade and Industry should seek membership on the National Codex Committee because there many TBT-related issues from CAC are discussed.

Level of participation in international standard-setting organizations

As a correspondent member of ISO, Namibia's level of involvement is limited to attending the annual General Assembly. Namibia can be an observer member of ISO TCs but it cannot vote like participating members. However, it can still participate by making comments on draft standards that are sent to the National Standards Body.

There is no formal structure for handling issues relating to ISO draft international standards since Namibia does not participate in any ISO TCs. Namibia could at least make comments on circulated draft standards if it had the required human resources, but at this stage the office in Namibia has

limited human and financial resources. Nevertheless, there is a need to have some mechanism for distributing draft standards from ISO so that major stakeholders can make comments which could be sent to ISO.

Participation in regional arrangements for standard-setting

Namibia is a member of both COMESA and SADC. It has no membership in ARSO.

As a member of SADC, Namibia is expected to participate in the development of standards in the region, but when this activity involves extensive travelling, it creates a problem for the country, as it does for many other countries in this region.

Senior officials of NSIQO attend all the meetings of the SADC SQAM expert group, SADCSTAN and the COMESA subcommittee on SQMT.

Constraints on effective participation in international standard-setting organizations

There are a number of factors that militate against the capability of Namibia to participate effectively in the work of the international standard-setting organizations. These include:

- Inability to pay full membership in organizations such as ISO, making Namibia opt for correspondent membership;
- Inability to fund participation in the work of TCs;
- Shortage of technical experts; and
- Weak information and communications technology infrastructure.

Specific technical assistance requirements

Implementation of the Agreement on TBT

Seminars on the Agreement on TBT should be conducted for a selected group of people from the public and private sectors who are familiar with the Agreement on TBT to enable them to become trainers on TBT.

An information management system should be set up at the TBT enquiry point to enable it to communicate better with major stakeholders in Namibia and the international standard-setting organizations. IT equipment should be provided to facilitate the work of the enquiry point.

Development of road map for SQAM

A national workshop should be organized by the Ministry of Trade and Industry to discuss with major stakeholders priority areas for development in standardization, quality assurance, accreditation and metrology.

Conformity assessment

The Namibian metrology service should be strengthened to enable the country to provide timely services to the private and public sectors. An inventory of the existing capacity to provide calibration services should be undertaken by the country itself. The information collected could be used as a basis for discussions on the priorities for capacity building.

Testing and inspection services should be established to enable Namibia to monitor the quality of locally made products as well as those that are imported or exported.

Training

Training should be provided in ISO 9000 and ISO 14000. Practical training should be provided for auditors in assessment of quality management systems and environmental management systems.

Overall assessment

The standardization activity is very limited, as no Namibian standards have been established. It is necessary to have an adequately structured Namibian Standards Institute to replace NSIQO. It is noted that NSIQO has accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards. National capability should be developed for product certification and system certification as these do not exist now. The domestic testing and calibration capability should be strengthened to reduce dependence on foreign services for routine testing.

The implementation of the Agreement on TBT is limited. Namibia should urgently establish a national TBT Committee under the responsibility of the TBT enquiry point and start organizing meetings to discuss TBT issues. The national TBT Committee could advise the Government about appropriate actions to be taken to enhance Namibia's participation in the Agreement on TBT and to meet its TBT obligations. Procedures should be established for the notification of domestic TBT measures and the treatment of foreign notifications which can affect Namibia's exports.

Chapter 16

Uganda

Uganda, which is situated in East Africa, has an area of 199,000 square kilometres and a population of about 25.6 million inhabitants. Agriculture is by far the most important sector of the economy, accounting for about 42% of GDP and employing about 80% of the labour force.

Food production is the primary activity. Food crops represent 65% of agricultural production, followed by livestock products, which account for about 17%. Export crops (traditionally coffee, tea, and tobacco) represent about 10% of agricultural production.

Uganda's exports are dominated by agricultural products. Coffee has been the most important export crop since the 1950s, when it overtook cotton. Other important agricultural export products are tea and fish. In the year 2000 agricultural products made up more than 61% of Uganda's exports. Most of Uganda's exports have traditionally gone to markets of the EU, such as Germany, the Netherlands, Spain, and to the North American region. These markets accounted for 67% of exports in 2000.

In Uganda most manufacturing is based on the processing of agricultural commodities, including cotton, coffee, sugar and food crops. Manufacturing accounts for about 9% of GDP. The contribution of manufactured products to Uganda's exports is very limited.

Uganda imports most of its manufactured products to supplement local production, such as road vehicles, petroleum products, industrial machinery, iron and steel. Kenya is the main source of imports; other import partners are the United Kingdom, India and South Africa.

Administrative arrangements and responsibilities for technical regulations

Imported products

Uganda has a quality control system for imports. The scheme covers products that have an impact on health, safety or the environment. Under this scheme, two agencies are involved, namely the Uganda National Bureau of Standards (UNBS) and the Uganda Revenue Authority (URA). There are 25 entry points but only 18 are active. Under the import inspection programme, URA informs UNBS of consignments being imported. UNBS inspects, collects samples and tests them in their laboratories. While the samples are being tested, a consignment is held by URA pending the outcome of the laboratory tests. Once the results are received, URA takes appropriate action on the consignment. It seems that there is good cooperation between UNBS and URA for import control.

In order to assist URA in its work, UNBS has provided URA with staff training in inspection and has provided the criteria for inspections. URA has a number of trained scientists but it does not have any laboratories. However, URA plans to establish its own laboratories in future. The laboratories will be used for materials analysis and product classification. In the meantime URA is using laboratories at UNBS for testing products. However, not every product can be tested at the Bureau because of inadequate capacity.

The responsibility for implementation of compulsory standards falls under UNBS. Under the Act, the Minister is empowered to declare compulsory standards, which are then monitored by the Bureau. Implementation rests with various ministries; UNBS implements mandatory Ugandan standards when there is no other local capability available.

Exported products

Uganda does not export many manufactured products in significant quantities except filleted fish, which is exported to Europe. The other products, whose quantities are fairly small, are exported mainly to East African countries. The only product subjected to export control is fish. This is done to ensure compliance with EU directives and requirements of other countries with respect to chemical and biological contaminants.

There is an export certification scheme run by UNBS on a voluntary basis. Under this scheme any exporter can request the Bureau to test its products for export based on standards stipulated by the importing country. The Bureau then issues a test report and a certificate of compliance.

Standardization and conformity assessment infrastructure

National standards body

UNBS was established by the Government in 1983 through the Uganda National Bureau of Standards Act and became operational during 1989. The Bureau falls under the Ministry of Tourism, Trade and Industry through which it receives a government grant to finance its activities. Its mandate is to develop and promote standardization, quality assurance, metrology and testing practices to enhance the competitiveness of Uganda's industry. UNBS operates through five divisions concerning standards, quality assurance, metrology, and testing as well as documentation and information services.

Standards

Ugandan standards are as much as possible based on international standards developed by international standard-setting organizations such as ISO. UNBS has established 256 national standards and 48 draft standards were under preparation. The national standards include adoptions of ISO standards and Codex standards, as well as adoption of African regional standards and East African standards. Ugandan standards are generally voluntary unless the Ministry of Tourism, Trade and Industry declares them to be compulsory standards.

The role of UNBS in the process of standards formulation is to provide technical secretariats that work with technical committees. These committees

consist of various stakeholders, such as consumers, traders, academicians, manufacturers and Government as well as other major stakeholders. Committees may also co-opt other experts if necessary.

Certification

The Uganda National Bureau of Standards (Certification) Regulations 1995 lays down the conditions for both product certification and quality system certification.

The UNBS product certification scheme is operational. UNBS as a third party assures customers of the quality of a product by granting a permit to use the UNBS quality mark on the product. The scheme is based on type testing and assessment of factory quality control. Acceptance into the scheme is followed by surveillance that takes into account the audit of factory quality control and the testing of samples from the factory and/or the open market. The products covered include foam mattresses, hand water pumps, electrical wires and cables, and fruit products (jams, ketchup, juices, etc.) and honey. There are 24 products certified by UNBS. This number is considered to be still relatively small. UNBS is in the process of operationalizing the import inspection scheme. Under this scheme all imports covered by the compulsory Ugandan standards will be inspected (if need be sampled and analysed) for compliance with the requirements of the relevant standards.

UNBS has adopted the international standards for quality management systems, namely the ISO 9000 series of standards, and has established a method for auditing and certification of quality management systems. The Bureau has 12 trained quality management system auditors, four of whom are registered as auditors with the International Register of Certificated Auditors (IRCA) of the United Kingdom. UNBS has not yet registered any company's quality management system but it is in the process of undertaking this activity. Additional resources will be required from the Government to enable its ISO 9000 certification scheme to be accredited.

A total of 60 firms have ISO 9000 certification and no firm has been certified to ISO 14000.

Testing

A number of Ugandan institutions have laboratories, such as UNBS, the Government Chemist and the University of Makerere.

The testing division of UNBS includes:

- Microbiology laboratory;
- Chemistry laboratory;
- Building materials laboratory; and
- Electrical laboratory.

The laboratories provide routine services to industry and have basic equipment to do some of the work required by law. The laboratories were developed with technical assistance from UNDP under a project which was executed by UNIDO. The project was scaled down by half due to lack of funds.

The microbiology laboratory of UNBS is accredited by SANAS while other laboratories are preparing for accreditation.

The laboratory facilities at UNBS have a number of operational constraints which include inadequate operational funds, lack of spares to maintain the equipment when it breaks down, and lack of local maintenance services for

laboratory equipment, which necessitates the importation of maintenance services at great cost to the organization. Lack of spares is also blamed on frequent changes in the equipment specifications by manufacturers.

Under the East African Community, inter-laboratory testing is undertaken by the National Standards Bodies of Kenya, the United Republic of Tanzania and Uganda.

Metrology

The metrology laboratory is the custodian of Uganda's national measurement standards, which are used as the basis for maintaining the traceability of Uganda's measurement standards to international standards. The national measurement standards are traceable to PTB of Germany. The laboratory also operates two mobile units for calibration of large storage tanks *in situ* and weighbridges. The laboratory equipment is still new and not immediately requiring recalibration. The issue of recalibration will be decided when the need arises.

UNBS has calibration laboratories in the areas of mass, dimensional measurements, volume and flow, density, viscosity and electrical measurements (limited capability in this area). UNBS is the only organization providing services in the area of industrial metrology and is also responsible for legal metrology. Manuals are being developed for calibration in the areas of mass, density and viscosity, and volume and flow, for eventual accreditation to ISO/IEC 17025.[9]

Accreditation

A proposal for the setting up of a national laboratory accreditation scheme is under consideration. UNBS will provide help for setting up the scheme and then hand it over to the appropriate authority. The scheme will be outside UNBS since the latter has its own laboratories and cannot be judge and party at the same time. UNBS is operating a laboratory recognition scheme based on ISO/IEC Guide 25,[10] the purpose being to recognize laboratories that can competently undertake analytical work on behalf of UNBS. The scheme is being upgraded to ISO/IEC 17025.

Administrative arrangements for and implementation of the Agreement on TBT

Administrative arrangements for the Agreement on TBT

The Ministry of Tourism, Trade and Industry is the national focal point for WTO and is responsible for implementing the provisions concerning notification of TBT measures.

9 ISO/IEC 17025 replaces ISO/IEC Guide 25.
10 ISO/IEC Guide 25, *General requirements for the competence of calibration and testing laboratories.*

There is an Inter-institutional Committee on WTO, on which all stakeholders are represented, which meets regularly. The procedure is that the Ministry obtains notifications for TBT from WTO in three sets and one copy is sent to UNBS. However, the TBT notifications had not been sent to UNBS.

UNBS has been designated as the WTO TBT enquiry point of Uganda.

The enquiry point in Uganda has only one staff member and it has to share other resources with other sections of the Bureau. The responsibilities of the enquiry point include:

- Receipt of notifications from the Ministry of Tourism, Trade and Industry for distribution to other organizations;
- Sending out notifications from Uganda; and
- Collection of information on TBT-related issues.

Implementation of the Agreement on TBT

Uganda has informed WTO about measures to ensure the implementation and administration of the Agreement as required by Article 15.2 of the Agreement on TBT. UNBS accepted the Code of Good Practice for the Preparation, Adoption, and Application of Standards in 1997.

Uganda has made no notifications about technical regulations although there is an established procedure for the notification of TBT measures. Furthermore, although a number of Ugandan standards that have become mandatory are technical regulations, they have not been notified to WTO.

UNBS has not attended any meetings of the TBT Committee, mainly because of lack of funds. It was observed that coordination between the agencies involved in the Agreement on TBT is weak. There were complaints that information is not flowing as much as was expected. The main contacts were through meetings, which were infrequent.

Uganda has not used the dispute settlement procedures of WTO. It was argued that there was little knowledge or understanding of the procedures and its intricacies. Most of the officials interviewed were not even aware of such a provision.

Although Uganda does not participate effectively in the Agreement on TBT, there was an acknowledgement that the country has benefited from it, mainly in the form of training assistance that has enabled people from UNBS to attend seminars or workshops.

No procedures exist for collecting national interests in order to build up negotiation positions. However, there were consultative meetings held to discuss issues to be presented at negotiation meetings. There were no procedures on how notifications of TBT measures are handled, or the manner in which the potential impact on export is assessed.

Since December 1999 there has been a mutual recognition arrangement for product certification within the East African Community, based on East African standards. Parties to the agreement are Kenya, Uganda and the United Republic of Tanzania. The purpose of East African standards is to harmonize the regulatory provision of quality of products and services in the East African region. The East African standards specify quality requirements for various products (e.g. primary batteries, concrete roof tiles) and methods of testing for conformity assessment.

Awareness and understanding of TBT issues

In Uganda there was an indication that there was some awareness and understanding of the Agreement on TBT among senior officials in the Ministry of Tourism, Trade and Industry and other government agencies. However, the level of awareness was lower and lower among junior officials. This was largely attributed to a poor awareness campaign, with a lack of financial resources for mounting an effective programme of information dissemination.

The level of awareness of the Agreement on TBT in the private sector is very low even among senior officials. People interviewed were not aware of the Agreement on TBT. However, those who knew about the Agreement, especially through the awareness seminars, admitted that these seminars were not enough.

The main source of information on the Agreement on TBT should be the TBT enquiry point, which is run by UNBS, but it was pointed out that the flow of information to other organizations was very slow and very little. Consequently, other agencies claimed that they did not have much information about WTO or the Agreement on TBT. The Ministry has organized some sensitization seminars on WTO issues, including the WTO Agreement on TBT but these were few because of lack of resources to extend the programme over a longer period.

Problems experienced because of TBT measures in export markets

Uganda does not export most of its manufactured products. When it does so, its products are mainly exported to the East African Community or COMESA where problems have not been experienced. There have been problems with the export of fish but this is an SPS issue.

Needs assessment for international standards

Coffee and fish standards are covered under CAC. However, in the case of Ugandan fish EU directives are used and exporters tend to use them if they have to export to Europe. With regard to the imposition of national technical regulations, many exporters interviewed felt that it was more prudent for them to adhere to the specifications required by buyers. This limits their markets because what is acceptable in one market may not necessarily be acceptable in another.

For domestically consumed products, international standards are needed for food items, electrical appliances, machinery components, construction materials, and so on.

Since Uganda's manufactured products are mainly exported to countries in the region, harmonized East African standards or standards agreed under COMESA may be more important then international standards. Uganda is already involved in standards harmonization work in East Africa under the East African Community.

In principle, international standards are considered to be too stringent by some people. This may be due to the level of development in the country's industries or may be a mere perception. On the other hand, it might be because Uganda, and especially the private sector in the country, is not very much involved in the development of international standards. This makes people feel that these standards are meant for developed markets and not for them.

Uganda needs to be able to revise its national standards and update them regularly. Consequently, UNBS must have the means to revise these standards. In view of the limited human resources, the use of information technology would go a long way to enhance the capacity of UNBS to handle international standards. In addition Uganda must be able to attend meetings of international standard-setting organizations. If not, it must be able to make its views known in the international standard-setting organizations. This can be achieved if UNBS has the capacity to communicate easily with local organizations and with international standard-setting organizations.

Participation in international standard-setting organizations

Administrative arrangements with international standard-setting organizations

UNBS is a correspondent member of ISO, a participant in the Affiliate Country Programme of IEC and the official contact point of CAC. Uganda is not a member of OIML or ITU.

Level of participation in international standard-setting organizations

As a correspondent member of ISO, Uganda's level of involvement is limited to attending the annual General Assembly and DEVCO meetings. Uganda can be an observer member of ISO TCs but it cannot vote like participating members. A correspondent member can still participate by making comments on draft standards that are sent to the national standards body, but UNBS has not made such comments because human and financial resources are limited.

The main benefit Uganda has derived from participation in international standard-setting bodies such as ISO is training.

Participation in standard-setting organizations is limited to their annual meetings which essentially address policy issues. There is no participation at the technical level. The explanation is that it is expensive to send experts to these meetings. At the same time, there was low awareness among stakeholders about the international standard-setting organizations.

Participation in regional arrangements for standard-setting

UNBS represents Uganda in ARSO and it participates in the COMESA Subcommittee on SQMT. It is also an Affiliate member of the SADC Cooperation in Measurement Traceability (SADCMET).

Constraints to effective participation in international standard-setting organizations

There are a number of factors that militate against the ability of Uganda to participate effectively in the work of the international standard-setting organizations. These include:

- Inability to pay full membership in international organizations such as ISO, making Uganda opt for correspondent membership;
- Inability to fund participation in the work of technical committees;
- Shortage of technical experts;
- Weak information and communication technology infrastructure; and
- Low awareness, at all levels, of the role of standards in international development.

Specific technical assistance requirements

Implementation of the Agreement on TBT

National training seminars on the Agreement on TBT and associated issues should be conducted for a selected group of people from the public and private sectors conversant with the Agreement to enable them to become trainers on TBT.

The enquiry point should be strengthened by providing computers and peripherals to enable it to communicate more effectively with national stakeholders as well as the outside world. The enquiry point should have full-time access to Internet to download notifications from the WTO website and to be able to communicate with stakeholders locally as well as with international standard-setting organizations.

Training

Training should be provided in ISO 9000 and ISO 14000. Practical training should be provided for auditors in assessment of quality management systems and environmental management systems.

Technical assistance in providing awareness seminars for consumers as well as for the public and private sectors is needed. In view of the low awareness in the country about the Agreement on TBT and its implications, it is necessary to conduct seminars countrywide to sensitize people and organizations about the Agreement. Assistance will be needed to organize local seminars in each region. The seminars will also enable consumers and the private sector to understand the importance of Uganda's membership of WTO and the need to fully implement the provisions of the Agreement on TBT.

Conformity assessment

Testing and inspection services in Uganda should be strengthened by providing additional assistance to complement the assistance which UNBS has so far received from UNDP and UNIDO. The strengthening of testing and inspection

services will also enhance Uganda's capacity to apply the provisions of the Agreement on TBT and to assure other WTO members of the quality of Ugandan products.

Given the importance of exports to Uganda's economy in general and export of agricultural products in particular, it is strongly recommended that assistance be provided to UNBS to develop adequate laboratory capacity to test products such as coffee, tea, fish, vegetables, honey, and fruits to protect these vital exports. For instance, it is known that the EU may impose certain requirements on coffee with regard to mycotoxins and pesticide residues. UNBS could help the coffee industry to meet this new requirement. However, this can happen only if investment is made in laboratory capacity.

Overall assessment

Uganda has an infrastructure for metrology, standardization, testing and quality assurance (MSTQ) which is functional but needs to be strengthened. Certification activities are limited to product certification; the capability of UNBS for ISO 9000 certification should be developed. The microbiology laboratory of UNBS is accredited; the other testing laboratories as well as calibration laboratories should also be accredited. This will be facilitated by the setting up of a national laboratory accreditation scheme.

There is a structure for the implementation and administration of the Agreement on TBT. However, it should be made fully operational as there have been no notifications about domestic technical regulations and foreign notifications are not processed to assess their impact on exports and to take appropriate action. UNBS has accepted the Code of Good Practice for Preparation, Adoption and Application of Standards. However, there is no participation in international standardization work at technical committee level.

Part Three

Country reports on sanitary and phytosanitary measures (SPS)

Chapter 17

Jamaica

Agricultural and food exports

Jamaica's major commodity exports are crude materials, food and miscellaneous manufactured goods, which collectively accounted for over 72% of exports by value in 2000. Food accounted for 16.2% of exports in 1999 and 14.7% in 2000. Jamaica's main export markets are the United States, the European Union and CARICOM countries.

Jamaica imports a wide range of commodities, of which the most important are machinery and transport equipment, food, and miscellaneous manufactured goods. The major import countries are the United States and CARICOM countries; the EU accounted for only 7.8% of imports in 2000.

In 2000, 'traditional' products accounted for almost 72% of agricultural and food exports by value. Historically, the most important exports have been raw sugar and bananas, which enter the EU under preferential trading agreements. However, these exports are under threat as the preference granted under these agreements is being eroded over time, and Jamaican exports of sugar and bananas are not price competitive on the world market. For example, over the period 1996 to 2000, exports of bananas declined by 34%.

Other important traditional exports include coffee and rum. Exports of these products are stable or, especially in the case of coffee, increasing. Indeed, export earnings from both coffee and rum exceeded earnings from banana exports in 2000.

In 2000, non-traditional products accounted for over 27% of agricultural and food exports. These exports are dominated by fresh produce, in particular yams, and fish, crustaceans and molluscs. The major market for non-traditional products is the United States, followed by the United Kingdom and Canada. Collectively, these markets accounted for 95% of non-traditional product exports in 2000.

Agricultural and food products are a major export for Jamaica. Historically, exports of agricultural and food products have been dominated by traditional products, although more recently exports of non-traditional products have grown in importance. Major export markets are the EU (in particular the United Kingdom), the United States and Canada. Food and agricultural products are also a major import; indeed, by value food imports exceeded food exports in both 1999 and 2000.

Administrative arrangements and responsibilities for SPS measures

Responsibility for SPS controls in Jamaica is highly fragmented, involving a number of government ministries and agencies and more than 20 different pieces of legislation and attendant regulations. The key institutions are:

- Ministry of Health (in particular Health Promotion and Public Health Division, National Public Health Laboratory and Pesticides Control Authority);
- Ministry of Agriculture (in particular Plant Quarantine/Produce Inspection Unit, and Veterinary Services Department);
- Ministry of Industry, Commerce and Technology (in particular Food Storage and Prevention of Infestation Division); and
- Jamaica Bureau of Standards (JBS).

Overall responsibility for food safety in Jamaica lies with the Ministry of Health under the Public Health Act (1975) and the Food and Drugs Act (1974). The Ministry of Health has three divisions:

- Standards and Regulation Division;
- Health Promotion and Public Health Division;
- Planning and Integration Division.

The Health Promotion and Protection Division is responsible for establishing policy and guidance with respect to food safety and veterinary public health. For the purposes of enforcement, the Ministry of Health is decentralized into four regional authorities that provide health services in their regions, including food safety inspection (150 inspectors) and veterinary public health inspection (14 inspectors). The Environmental Health Unit of the Health Promotion and Protection Division, which works with regional inspectors to provide training and develop work plans and priorities, however, has only one food safety officer and one veterinary public health officer.

The Food Storage and Prevention of Infestation Division of the Ministry of Industry, Commerce and Technology is responsible for controlling the infestation of food entering commerce and has the power to condemn and destroy infested foods. Its activities include controls on rodents, residues (including mycotoxins and pesticide residues), microbiological contaminants and pests in domestic production, as well as imports and exports. In 2001 it had 15 inspectors, including three senior inspectors. Further, there are provisions for private pest control operators that are licensed in conjunction with the Pesticides Control Authority.

JBS is responsible for inspecting and registering establishments that manufacture processed foods under the Processed Food Act 1959. JBS was established in 1968 as a statutory body reporting to the Ministry of Industry, Commerce and Technology. In 2001 it had 12 food inspectors. However, the Ministry of Health has responsibility for sanitation and quality of milk produced at processing plants approved by JBS. Therefore, some commodities are regulated by more than one agency, each of which may apply different requirements.

JBS is also responsible for the development of both mandatory and voluntary standards for agricultural and food products. In the case of food and food products, it establishes mandatory standards under the Processed Food Act 1959 and voluntary standards under the Standards Act 1973. Wherever possible, international standards are used as the basis of national standards.

The Veterinary Services Department of the Ministry of Agriculture is responsible for issuing permits for imports and exports of meat and fish products. The control of slaughtering and processing facilities at the local level is the responsibility of the Ministry of Health and export processing/slaughtering facilities the responsibility of the Veterinary Service Division. The Veterinary Services Department also operates a laboratory for screening of meat and meat products for veterinary drug and pesticide residues.

Control of pesticides in Jamaica is the responsibility of the Pesticides Control Authority, an autonomous agency of the Ministry of Health. It is responsible for registration and approval of pesticides, controls on imports and domestic production, and residue and quality analysis. The staff of the Pesticides Control Authority consists of four technical and two support staff. Jamaica does not have national maximum residue levels for pesticides in foodstuffs, although use is made of Codex maximum residue levels as required.

The formulation of policy on the control of genetically modified organisms in Jamaica is the responsibility of the National Biosafety Committee. This committee was formed by the National Committee on Science and Technology within the Office of the Prime Minister to develop a coherent national policy, taking account of consumer interests and national economic interests.

Controls on plant pests and diseases under the Agricultural Produce Act 1926 and the Plant Quarantine Act 1993 are the responsibility of the Plant Quarantine/Produce Inspection Unit of the Marketing Division, Ministry of Agriculture. The unit has 23 inspectors working out of three regional offices that are responsible for inspection of imports and exports, and domestic controls. The Plant Quarantine/Produce Inspection Unit works in conjunction with other government agencies, in particular the Rural Agricultural Development Authority, the Plant Protection Division of the Ministry of Agriculture and the Food Storage and Prevention of Infestation Division of the Ministry of Commerce, Industry and Technology.

Assessment of SPS infrastructure

The National Public Health Laboratory provides laboratory testing facilities for the purposes of food safety controls in Jamaica. Facilities at the National Public Health Laboratory are relatively modern and capable of undertaking a wide range of the analyses required by major export nations. However, there is a need for upgrading of facilities and retraining of staff and for international accreditation of testing facilities. Furthermore, current capacity is considered inadequate to undertake high-volume quick-turnaround analyses.

The Food Storage and Prevention of Infestation Division operates five laboratories, covering entomology, microbiology, pesticide residues, mycotoxins and post-harvest technology, which are staffed by three personnel. Both of these laboratories participate in a results comparison programme with the National Institute of Science and Technology in Jamaica, but not with other laboratories in the region. The residue chemistry laboratory is well equipped to undertake most of the required residue tests, although not for heavy metals. However, the capacity of the current equipment is limited and a backlog can develop when there are sudden surges in the number of samples. Furthermore, the equipment is operating at 40%-50% capacity because of shortages of solvents and other chemicals due to financial constraints. The mycotoxin laboratory is able to undertake semi-quantitative tests only. If mycotoxins are detected, samples have to be sent elsewhere for quantitative tests to be undertaken.

A major cost for the Food Storage and Prevention of Infestation Division is the maintenance of equipment. For example, the only engineer in the region that can maintain the equipment in the residue chemistry laboratory is based in Trinidad and Tobago and has to be flown in at great cost. Furthermore, the software library of this equipment needs to be updated every three years to incorporate new chemical residues. Likewise, pesticide standards have to be imported from overseas.

The laboratory of the Veterinary Services Department is able to undertake analyses for most microorganisms, and some antibiotics and pesticide residues. Although these facilities were upgraded at a cost of 10 million Jamaican dollars, they are in need of further investment. However, the lack of staff with appropriate skills and high rates of staff turnover are a major problem. For example, the laboratory had purchased a high-performance liquid chromatograph at a cost of US$ 80,000, which was not operational because of lack of the required expertise. The Veterinary Services Department laboratory would like to achieve laboratory accreditation for biotoxin and residue testing in order to perform analyses on a regional basis.

It was acknowledged that food safety legislation needs to be updated in order to comply with international standards and to be consolidated to enhance the effectiveness of enforcement efforts. In certain areas efforts have been made to modernize legislation, usually to address the requirements of export markets. For example, the Aquaculture, Inland and Marine Products and By-Products (Inspection, Licensing and Export) Act 1999 implements hygiene requirements for fish and fishery products that are equivalent to those in the EU. Subsequent legislation has implemented equivalent requirements for meat and meat products, aimed at facilitating exports to the EU and the United States. This legislation was first drafted some 15 years ago, but was eventually implemented only because of the demands of potential export markets.

There is also considerable scope for overlap of responsibilities and repetition of tasks between the different agencies responsible for regulating food safety. Furthermore, responsibilities are not always allocated in an efficient and effective manner. For example, while the Ministry of Health is responsible for inspection of slaughter facilities and inspection of carcasses, the Ministry of Agriculture has responsibility for issuing permits for imports and exports of meat and fish products.

Across the agencies responsible for food safety controls there are limitations in skills and experience in risk analysis and equivalence. While the implementation of HACCP is in its initial stages in Jamaica, generally speaking the Veterinary Services Department's staff of around 30 inspectors is fully trained in HACCP. Further, the fish processing sector is fully HACCP-based and in compliance with international standards. Overall, however, there is a need to enhance further capacity with respect to HACCP. Indeed, a number of overseas agencies have provided training in this area. For example, the Food Storage and Prevention of Infestation Division has received HACCP training from the Canadian Food Inspection Agency.

In 1987, a National Food Protection Committee was established within the Ministry of Health. The National Food Protection Committee has no legal status, but brings together a wide cross-section of representatives and experts from various ministries, trade, industry, and research organizations. It provides advice and develops strategies, plans of action and position papers on food safety and protection in Jamaica. Furthermore, it advises on food legislation and regulations. Over time, however, attendance at meetings of the Committee has lapsed and it is being reformed as part of the Ministry of Health's overall programme of reform of the health sector.

Many of the controls on animal health in Jamaica are implemented under rather dated legislation, including the Animal Diseases and Importation Act 1943 and Pets Import Regulations 1943. The Veterinary Services Department monitors the incidence of animal disease, operates a quarantine facility and enforces quarantine requirements, including the inspection of imported animals and animal products. The Veterinary Services Department has a staff of 55, of which 48 are technical personnel.

Routine surveillance is undertaken for bovine tuberculosis, bovine brucellosis, classical swine fever, and Newcastle disease. Jamaica is listed by OIE as free of all List A diseases (with the sole exception of Newcastle disease) and most other diseases of importance to international trade. Jamaica is, however, free of Newcastle disease and is petitioning OIE to be registered as such. However, leptospirosis and screwworm are endemic and cause problems for certain export markets. In 2001 a screwworm eradication programme was underway in Jamaica.

Whilst considerable efforts have been made to upgrade the capacity of the Veterinary Services Department, for example to facilitate exports of fish and fishery products to the EU, further investment is required. For example, laboratory facilities and facilities in the field need to be upgraded, more vehicles are required for surveillance work, record-keeping and data storage systems need to be computerized, and additional animal health technicians and inspectors are required.

Three dedicated cold storage facilities are used to inspect imports. There are no other dedicated inspection facilities for imports. Imports increased significantly through the 1990s and the Plant Quarantine/Produce Inspection Unit has struggled to maintain an adequate level of inspection in the face of under-resourcing.

There are two export complexes (one at each international airport) dedicated to the inspection and certification of exports, mainly air shipments. The facility at Kingston has two cold storage rooms. These facilities generally operate well. Exports to the United States are subject to pre-clearance by Animal and Plant Health Inspection Service inspectors based in Jamaica. Exporters are required to have a pack-house that meets certain minimum requirements and has been inspected and approved by plant quarantine inspectors.

Jamaica is free of most plant pests and diseases that are of importance to international trade. However, certain species of fruit fly are present and prevent exports of some products, for example mangoes to the United States. However, capacity to undertake pest risk assessments is limited and Jamaica's status with respect to certain pests and diseases is not confirmed.

The Plant Quarantine/Produce Inspection Unit works closely with the Rural Agricultural Development Authority to implement controls on plant pests and diseases in domestic production. The Rural Agricultural Development Authority has 60 extension officers stationed across the island. Each office has a computer terminal where data can be stored and downloaded for use centrally. Surveillance programmes are operational for fruit fly, scale insects, papaya ring spot virus, papaya mealy bug (which is not present in Jamaica), pink mealy bug and hot pepper gall midge. The Rural Agricultural Development Authority is informed when export consignments are rejected and is supposed to investigate. However, this is not working well. The Rural Agricultural Development Authority's operations are hindered by budgetary constraints.

There are certain weaknesses in controls of plant pests and diseases in Jamaica. Firstly, legislation requires updating and is not compliant with international standards. Secondly, there are not enough inspectors to provide adequate surveillance coverage, both for domestic production and at air and shipping

terminals. Thirdly, there is lack of expertise and diagnostic laboratory capacity in pathology and pest identification. As a result of these weaknesses, the Jamaican Government has found it difficult to defend its position in disputes over phytosanitary controls on exports, in particular to the United States.

A number of initiatives have been taken to identify weaknesses in SPS capacity in Jamaica and to implement reforms in a bid to comply with international standards. The most important of these are detailed below.

The Inter-American Institute for Cooperation on Agriculture has undertaken two assessments of the SPS system in Jamaica. These reviews identified weaknesses in legislation, administrative structures and controls on food safety, animal health and plant pests and diseases.

The Swedish International Development Cooperation Agency has funded a project that aims to support the development of the national quality infrastructure in Jamaica. This takes the form of a technical cooperation project between the Ministry of Industry, Commerce and Technology and SWEDAC from 2001 to 2004.

The aims of the project were:

- To develop an overall policy for the organization of the national quality infrastructure in Jamaica;
- To adapt one important product sector to the new principles for technical regulation and conformity assessment;
- To establish a national accreditation body;
- To prepare selected laboratories for accreditation;
- To enhance the activities of the Packaging Department in JBS.

Specifically related to food, the project was to develop food safety legislation based on the HACCP approach, consistent with international requirements, through review of existing legislation and liaison with relevant agencies. Furthermore, proposals were to be developed for the reorganization of enforcement mechanisms for food safety.

The Government of Jamaica received funding from the Inter-American Development Bank for an Agricultural Support Services Project that aims to enhance the competitiveness of Jamaican agriculture in domestic and global markets, making a substantial contribution to the goal of increasing the incomes of agricultural producers. One element of this project is the strengthening and consolidation of agricultural health and services. This aims to improve the effectiveness of animal health, plant health and food safety systems to protect domestic consumers from illness and domestic production from disease and contamination, while ensuring that Jamaica's exports meet international standards. The budget is US$ 31.5 million. The key outputs are:

- Development of an appropriate policy, updating and enacting legislation and strengthening of coordination mechanisms;
- Hiring and training of personnel in the areas of food safety, animal health and plant health;
- Acquisition of equipment and supplies;
- Strengthening and upgrading of infrastructure;
- Implementation of a public awareness campaign;
- Development of databases and strengthening of record-keeping systems;
- Updating of methodologies; and
- Implementation of surveillance programmes.

As part of this component of the project, the Government is to establish an Agricultural Health and Food Safety Coordination Committee to coordinate SPS controls. Furthermore, memoranda of understanding will be formulated to formalize and strengthen the working relationships between, for example, the Ministry of Health, the Ministry of Agriculture and the Ministry of Commerce, Industry and Technology.

JBS has established 65 standards specifically for food products, including canned and frozen fruit and vegetables, fruit and vegetable juices and nectars, meat products, sauces and dressings and other products (as at September 2001). There are also standards governing the labelling of products in general, and food products and alcoholic beverages in particular. Jamaican standards are largely based on CAC or CARICOM standards, although sometimes with some adjustment to meet local requirements. Jamaica has, however, experienced considerable problems getting its standards accepted internationally. In certain cases, this may be due to Jamaica's tardiness in harmonizing its national standards with those of CAC. However, in practice regulatory agencies in importing countries may accept certification by, for example, JBS under informal arrangements.

Administrative arrangements for the Agreement on SPS

Jamaica has a Permanent Mission in Geneva. However, the mission is very small and has only two officers and an ambassador to deal with WTO and all the United Nations agencies based in Geneva. This is acknowledged to be inadequate. However, the mission does monitor forthcoming issues in the SPS Committee and requests a briefing and/or a person to be sent from Kingston if it is deemed necessary. Funds are rarely available for the latter.

The enquiry point for the Agreement on SPS is the Plant Quarantine/Produce Inspection Unit of the Ministry of Agriculture and the national notification authority is the Chief Plant Quarantine/Produce Inspector of the Ministry of Agriculture. However, notification procedures need to be better coordinated; indeed at least one notification has been made directly by an agency. Furthermore, there is no SPS coordination committee and there are problems with internal communication between the various departments and agencies responsible for SPS issues.

The Ministry of Foreign Affairs and Foreign Trade receives hard copies of documents relating to the Agreement on SPS, but it lacks the human resources to sort and prioritize notifications and distribute them for comments. However, the Plant Quarantine/Produce Inspection Unit has taken on the responsibility of monitoring notifications and distributing them for comments. The unit consults the WTO website on a weekly basis. Use is made of software provided by the United States Department of Agriculture which automatically downloads new notifications and compiles a newsletter. This includes all new notifications – there is no sorting or prioritization. This newsletter is distributed to a list of 18 individuals within the Jamaican Government. However, problems with this software due to changes to the WTO website meant that newsletters could not be produced from May 2001 to February 2002 when the software was modified. Furthermore, computer access and human resource limitations have been a problem. The unit has requested a dedicated person with a computer to undertake this task. The unit is also planning a workshop to enhance awareness of the importance of notifications and to increase the number of officials on the distribution list.

By September 2001, the Plant Quarantine/Produce Inspection Unit had received three requests for further information following Jamaican notifications of veterinary measures – from the United States, Canada and Mexico. Reportedly, the Plant Quarantine/Produce Inspection Unit was not able to respond to these inquiries because of difficulties in obtaining the necessary documentation.

More generally, Jamaica's compliance with obligations under the Agreement on SPS and its ability to exploit its rights under the Agreement are dependent on the coordination and consultation processes between the ministries responsible for SPS matters. As described previously, responsibilities for SPS controls are highly fragmented, including the Plant Quarantine/Produce Inspection Unit and the Veterinary Services Department of the Ministry of Agriculture, the Ministry of Health, JBS and the Food Storage and Prevention of Infestation Division, and there is a need for more effective organization of activities. There are concerns that this fragmentation compromises Jamaica's ability to identify and respond to emerging issues in an effective and timely manner.

SPS matters form just one part of the wider portfolio of the Ministry of Foreign Affairs and Foreign Trade. In 1992, the Trade Coordination and Policy Committee was established within the Ministry as a mechanism for the coordination of international trade matters and to facilitate cooperation between the public and private sectors. In light of the central role of non-State actors in the formulation and implementation of trade policy, particularly under the Cotonou Agreement, a new trade policy has been implemented which seeks to deepen and widen the consultative process through the Jamaica Trade and Adjustment Team, established in September 2001. The latter will also assist in formulating and reviewing programmes and policies designed to improve competitiveness and to guide trade negotiations with the EU as identified in Jamaica's Country Support Strategy, 2001.

Although Jamaica has established an enquiry point and a national notification authority as required under the Agreement on SPS, it is evident that much of the existing legislation relating to food safety and plant and animal health controls is not compliant with the Agreement. The need for legislation to comply with international standards, for example, has been acknowledged and is being addressed by the Agriculture Support Service Project and other initiatives. The Ministry of Foreign Affairs and Foreign Trade has recognized the need to compile a status report on Jamaica's compliance with the Agreement on SPS. This was being discussed in 2001.

Jamaica has not raised any specific trade issues through the SPS Committee, although it has attended some meetings – on one occasion an official from the Food Storage and Prevention of Infestation Division in Kingston attended. The Permanent Mission in Geneva participates under the instruction of ministries responsible for SPS and trade matters domestically. The need to participate more fully in the work of the Committee has been acknowledged but is constrained by available resources, in particular the limited size of the mission in Geneva and funding for officials in Kingston to attend WTO meetings.

By September 2002, Jamaica has made five notifications under the Agreement on SPS. Of these, three were emergency measures.

Awareness and understanding of SPS issues

Amongst senior officials in the government departments and agencies responsible for SPS controls there is good awareness and understanding of the importance of SPS measures both domestically and in international trade.

However, it is generally acknowledged that awareness at lower levels, for example among field staff and inspection officers, is lacking. Furthermore, SPS controls in Jamaica are hampered by the fragmentation of responsibilities and lack of coordination and communication between the responsible departments and agencies. Efforts are underway to improve coordination through the establishment of an Agricultural Health and Food Safety Coordination Committee.

It is evident that efforts are made to consult interested parties when promulgating new legislation on food safety, animal health and plant pests and diseases. However, consultation is hampered by government legislation on secrecy that prevents information being disseminated on legislation once it has entered the drafting stage. Consequently, the input of interested parties is limited to the pre-drafting stage of the legislative process. Furthermore, a culture of industry participation in the development of legislation and of standards does not seem to have developed. For example, JBS has difficulty getting industry representatives to attend technical committee meetings.

A variety of agencies provide information to exporters in Jamaica on SPS requirements in major export markets. These include the Jamaica Promotions Corporation, the Jamaican Exporters Association and JBS. However, many of these organizations lack the organizational structures and resources required to monitor effectively changing requirements in export markets.

Problems experienced due to SPS measures in export markets

Jamaican exporters face routine problems exporting agricultural and food products. There have been a number of United States border detentions of Jamaican exports of agricultural and food products. The products subject to most frequent detentions are sauces, chutneys and seasonings, processed vegetables and beverages.

The specific problems faced by Jamaican exporters of agricultural and food products are described below.

Restrictions on exports of fresh and processed ackee to the United States

In 1973, because of concerns about hypoglycin, a toxin present in unripe ackee fruit, the United States imposed an import alert on canned ackee. In 1993, this was extended to all forms of ackee, thus effectively prohibiting all ackee exports to the United States. In order to regain access to the United States market, the Jamaican authorities were required to implement a United States-approved system of prior approval and regulation of ackee processors by October 1999. This included a requirement to implement HACCP. By September 2001 four processors had been approved under this system for export to the United States.

Phytosanitary requirements for fresh fruits and vegetables in the United States

Jamaica is not approved to export mango to the United States because West Indian and Caribbean fruit flies are present. Exports could be undertaken if mangoes were first subject to hot water treatment, although no such facility exists in Jamaica.

In 1998, the United States detected an infestation of gall midge on hot peppers from Jamaica, although this pest is not normally a problem with peppers. As a result of this infestation in Jamaica, a mandatory requirement for fumigation of peppers with methyl bromide was implemented in the United States. This requirement has a significant impact on the competitiveness of Jamaican exports, in terms of both price and quality. Indeed, most Jamaican peppers can be sold only for processing rather than for the fresh market.

Yam exports to the United States have been subject to mandatory fumigation since the 1940s to eradicate a weevil that is found in Jamaica. A survey of yam production in Jamaica has identified pest-free areas and the Government has requested that a pest risk assessment be undertaken by APHIS with the aim of lifting the requirement for fumigation of exports from these areas.

A pre-clearance programme for exports of fresh produce to the United States is undertaken by APHIS. Around 80% of all exports to the United States are now pre-cleared.

Exports to other destinations are inspected and certified separately from the pre-clearance programme.

Maximum residue levels for fruits and vegetables in the United States and EU

Jamaica has experienced periodic problems with exports of yams to the United States relating to fungicide use. The fungicide most widely used is not registered for such use by the Food and Drug Administration. Spot checks, periodically undertaken by the United States authorities, detected residues of the fungicide in 2000. The United States did not place a ban on Jamaican yams, however, but gave them provisional entry: the subsequent five consignments required certification as residue-free by an approved laboratory.

In the case of callaloo (a spinach-like vegetable), consignments are regularly detained at the United States border, and some are found to have residues of pesticide. Subsequently, all consignments by the same exporter are subject to automatic detentions until a history of compliance has been re-established. There are acknowledged to be problems with controls on pesticide use in Jamaica, particularly among small farmers, which dominate the supply chain for callaloo.

To a large extent, the problems that Jamaica has experienced with pesticide residues reflect weaknesses in controls on pesticide use, in particular:

- There is a lack of crop-specific approval of pesticides in Jamaica – chemical agents are approved for agricultural use in general.
- There is almost chronic misuse of pesticides in Jamaica, with application of chemicals that are available, often at the wrong concentration, frequency and/or interval before harvest. To a certain extent this is exacerbated by the pre-clearance programme for exports of fresh produce to the United States, which has a zero tolerance for pests. Producers have responded by increasing pesticide use in an attempt to prevent rejection. Furthermore, there are limited resources to monitor pesticide use and residue levels.
- Facilities for pesticide residue testing in Jamaica are limited. The laboratories of JBS and the Food Storage and Prevention of Infestation Division of the Ministry of Industry, Commerce and Technology can undertake residue tests, although not in large volumes. Consequently, routine testing of fresh produce for pesticide residues does not take place. Furthermore, these laboratories are not accredited.

- Considerable work is required to inform farmers of the need to restrict pesticide use and to adopt good agricultural practice. There is considerable resistance against change by the majority of small farmers.

Sanitary requirements for fish and fishery products in the EU

The Food and Veterinary Office of the European Commission undertook an inspection visit of Jamaica in April 1999, during which a number of discrepancies were identified:

- Before EU requirements, no specific legislation existed in Jamaica for sanitary standards for fish and/or marine gastropods. Jamaica implemented legislation, based on the relevant EU directives, in order to comply. Although the relevant national legislation was broadly equivalent to EU legislation, it had not been entirely implemented. Furthermore, monitoring of production conditions was not considered adequate and was not fully documented – before the implementation of the legislation there had been no systematic inspection of fish and marine gastropods.
- The majority of processing establishments did not comply with EU requirements, for example regarding water control, pest and vermin control and general conditions of maintenance and production.
- Although the implementation of HACCP had commenced in many processing plants, in most cases critical control points had only been identified and were not being implemented, monitored or verified.
- Laboratory facilities for certain microbiological analyses and residue testing were considered inadequate.

A second inspection visit undertaken in April 2000 identified limited continued discrepancies. The Jamaican Government subsequently provided written assurances that these discrepancies had been rectified. Consequently, Jamaica is now fully approved for the export of both fish and fishery products and marine gastropods. Three plants were approved for export to the EU and a further five were close to achieving the required standard.

Sanitary requirements for cheese in the EU

No processing facilities in Jamaica are approved for the export of milk and dairy products to the EU. Indeed no facilities have applied for approval. The cheese concerned is manufactured from curd imported from New Zealand and is unlikely to comply with EU rules on product origin.

Pre-registration of processed products for export to the United States

Exporters of packaged food products are required to file details of their production process with the United States Food and Drug Administration before they are permitted access to the United States market. Furthermore, producers of low-acid and acidified canned food are required to obtain prior approval of their product and production process. A significant number of product consignments have been rejected because they have not complied with this requirement and/or the importer has failed to submit the required documentation.

In Jamaica, the Scientific Research Council provides a service to exporters wishing to export processed food products to the United States. For a fee, they will gather the required information and complete the required registration and/or prior approval documentation. Despite this, however, a significant number of exporters continue to export without having submitted this documentation and have consignments rejected at the border.

Needs assessment for international standards

Jamaica's major need for international standards relates to indigenous fruits and vegetables that, although minor in terms of international trade, are important exports for Jamaica. Furthermore, such products are an important source of livelihood for small farmers and a key component of Jamaica's strategy for the diversification of agriculture away from traditional exports such as sugar and bananas. In particular, there is a need for maximum residue levels to be established for pesticides in indigenous fruits and vegetables.

Level of participation in international standard-setting organizations

Jamaica, along with other Small Island Developing States, has recognized the need to enhance participation in international standard-setting organizations relating to agricultural and food products. Collectively, the Small Island Developing States have requested assistance to facilitate participation through the WTO Agriculture Committee.

CAC

Since 1968, the contact point for Codex Alimentarius has been the Jamaica Bureau of Standards. JBS receives official documents from CAC and maintains a collection in its Technical Information Centre. Draft standards, codes of practice and guidelines are distributed for comments internally and sent to interested parties; in the case of large documents, notice is sent that the document is in the Technical Information Centre. In the past, the National Food Protection Committee discussed all proposals from CAC. However, since this procedure stopped, there has been no structured process to ensure that documents are reviewed and comments communicated to CAC.

Jamaica does not have a National Codex Committee. At the ninth and tenth sessions of the Codex Coordinating Committee for Latin America and the Caribbean in 1995 and 1997, the English-speaking Caribbean highlighted the need for increased awareness by Governments regarding their obligations to facilitate the implementation of the Agreements on SPS and TBT. Furthermore, the strengthening of national CAC structures was considered an absolute necessity for the continuation of international trade from the region.

A regional workshop sponsored by FAO on establishing and administering National Codex Committees in the English-speaking Caribbean was held in Jamaica in November 1997. Subsequently, the Jamaican Government formulated a proposal for the establishment of a National Codex Committee, the aims of which will be:

- To advise Government on the implications of various food standardization and food control issues related to CAC;
- To make recommendations for the acceptance and adoption of Codex Standards; and
- To study or consider technical CAC documents so as to be able to give reasons for the support or non-acceptance of Codex draft standards.

It has been proposed that the National Food Protection Committee, after appropriate restructuring and expansion of membership, undertake the functions of the National Codex Committee. In order to achieve an appropriate

balance between competing interests the Committee will be co-chaired by the Permanent Secretaries of the Ministry of Industry, Commerce and Technology and the Ministry of Health.

Jamaica has attended very few meetings of CAC, with the exception of the Regional Committee for Latin America and the Caribbean. However, efforts have been made to enhance participation and to submit comments on draft standards. Furthermore, it attended the meeting of the Committee on Veterinary Drugs in Food in 2000 and the meeting on General Principles in 1998. It also attended CAC meetings in 1997 and 1999, but not in 2001.

IPPC

Jamaica is a signatory to the 1979 IPPC. The contact point is the Plant Protection Division of the Ministry of Agriculture. By September 2001 Jamaica had not attended any meetings of the Interim Commission on Phytosanitary Measures. It has not ratified the new Convention, although it plans to do so.

OIE

Jamaica joined OIE in 1997, but has not attended any meetings of the International Committee. The contact point is the Director of Veterinary Services of the Ministry of Agriculture.

Participation in regional arrangements for standard-setting

Efforts have been made within the Caribbean to establish harmonized regional standards in order to facilitate trade. To a large extent these have been based on those of CAC and thus are largely harmonized with international standards. Until recently, the Caribbean Common Market Standards Council established standards. This relatively informal grouping of national standard-setting organizations in the region, in particular from Barbados, Guyana, Jamaica, and Trinidad and Tobago, met annually and was ruled by an executive drawn from its member organizations. However, it did not have a staff of its own and a relatively small number of standards were established.

By September 2001, the Caribbean Common Market Standards Council had established 45 standards, of which 27 relate to food products. However, adoption of these standards within CARICOM has been far from universal and many that were recommended as mandatory were implemented only as voluntary standards.

Recognizing that a more formal system of standard-setting was required, in 1996 the CARICOM Common Market Council agreed to establish the CARICOM Regional Organisation for Standards and Quality (CROSQ). Subsequently in 1998, the Council for Trade and Economic Development agreed that CROSQ be constituted as an inter-governmental agency of the Caribbean Community.

The rationale behind CROSQ is that the development and application of harmonized and internationally-recognized regional standards, technical regulations and conformity assessment procedures:

- Is essential for the efficient operation of the CARICOM Single Market and Economy and, in particular, the international competitiveness of goods and services produced or provided in the Caribbean Community.

- Would be cost-effective and enhance the international competitiveness of goods and services produced or provided in the CARICOM Single Market and Economy.
- Would facilitate the operations and improve the delivery of national standards bodies of Member States of the Caribbean Community.

Constraints on effective participation in international standard-setting organizations

Jamaica is aware of the need to enhance participation in CAC, OIE and IPPC, as well as the SPS Committee, but faces certain constraints that limit its ability to do so, in terms of both physically attending meetings and playing an active role in negotiations.

- Scarcity of financial resources is an acute problem. None of the ministries responsible for SPS matters has a budget for participation in international standard-setting organizations. Furthermore, there is little scope within annual budgets to reallocate funds to facilitate participation, for example if meetings are arranged at relatively short notice or rescheduled. Thus, even if financial provision were made to attend certain meetings, these would need to be scheduled well ahead to fit in with budgetary arrangements.
- Human resources are also a constraint. In many cases there are not enough personnel to permit an individual to attend meetings that, with travel time, may require a number of days away. Furthermore, government officials lack experience of decision-making processes in international standard-setting organizations and negotiation skills.
- Administrative responsibilities for SPS controls in Jamaica are highly fragmented and there is insufficient coordination and communication between the individual departments and agencies. This makes it difficult to establish national positions on draft standards and to identify priorities in terms of the future agendas of the international standard-setting organizations.
- Weaknesses in SPS capacity, for example laboratory testing facilities and surveillance activities, limit the availability of data to defend Jamaica's national interests in negotiations over draft standards.

Overall, there is a need at the highest levels of the Jamaican Government for greater commitment to participation in international standard-setting. Without this commitment, the necessary resources will not be made available in the long term and Jamaica will not be able to establish itself as an active and effective member of these organizations.

Specific technical assistance requirements

Jamaica is already in receipt of two major programmes of technical assistance that aim to enhance SPS capacity and build infrastructure that will facilitate more effective participation in international standard-setting organizations:

- The Agricultural Support Services Project; and
- The Technical Cooperation Project between the Ministry of Industry, Commerce and Technology and SWEDAC.

Furthermore, the Government of Jamaica is aware of the need for these two projects to be coordinated to avoid duplication and wastage of resources. If they proceed as intended, these projects will result in a significant increase in SPS capacity in Jamaica.

One of the major requirements in Jamaica is updating of legislation relating to food safety, animal health and plant pests and diseases. In certain areas, for example hygiene standards for fish and meat processing, new legislation has already been promulgated. However, there is an urgent need more generally to bring legislation in line with international standards and commitments under the Agreement on SPS. There is a considerable role for technical assistance to support such efforts.

In general, there is a need for training of personnel in various aspects of SPS controls as they relate to the Agreement on SPS, including risk analysis, assessment of equivalence, and international standard-setting processes. For example, JBS has identified the following training needs:

- International criteria for the development of codes, standards, guidelines and recommendations relating to food; and
- Development of food legislation and effective food control programmes including strengthening food inspection and analysis capabilities.

It is anticipated that the trained personnel would then promote greater awareness of these issues among officers working in related fields. Greater resources are also required to support these trained personnel. There is a pressing need for enhanced capacity to undertake risk assessments relating to food safety, animal health and, in particular, plant pests and diseases. This will involve the extension of surveillance efforts to generate baseline data and monitor the impact of control measures.

There is also a need for capital investment in enhanced laboratory capacity. Jamaica is not able to undertake the full range of tests potentially required in export markets. Examples include heavy metals, certain micro-organisms (for example *Escherichia coli* and listeria), pesticide residues and mycotoxins. Jamaica would like to enhance capacity in these areas to serve the needs not only of domestic exporters, but also within the region as a whole. This would necessitate the accreditation of laboratory facilities in Jamaica.

As highlighted in a number of places above, administrative structures and responsibilities for SPS matters are in need of reform and development. Specific examples include the coordination of SPS controls domestically and the development of institutions for relations with international standard-setting organizations and WTO in general and the SPS Committee in particular. Certain initiatives are being taken in this respect, for example the establishment of a National Codex Committee. The estimated capital costs of establishing the National Codex Committee are 1.8 million Jamaican dollars and recurrent costs 4.2 million Jamaican dollars per annum. A project proposal for submission to FAO has been prepared to cover at least some of the capital costs of establishing the Committee.

Overall assessment

This case study has provided a brief assessment of SPS capacity in Jamaica with particular emphasis on the impact of SPS measures on agricultural and food exports and Jamaica's role in the setting of international standards for food

safety, animal disease and plant and animal health. This assessment has been based on interviews with government personnel and industry representatives, and a review of existing literature. The key conclusions are:

- Agricultural and food products are major exports for Jamaica. Exports are dominated by traditional products, most of which are exported to the EU under preferential access arrangements, although non-traditional exports are becoming increasingly important.
- SPS controls are generally well developed, although there are significant capacity constraints that affect the ability of exporters to meet SPS requirements in export markets, in particular the United States and EU. Furthermore, the effectiveness of these constraints is hindered by the fragmented nature of responsibilities for SPS matters and the lack of coordination and communication between government departments and agencies.
- Major weaknesses in current SPS controls in Jamaica include lack of expertise and experience in, for example, risk analysis, assessment of equivalence and HACCP, lack of laboratory testing capacity, and shortages of human resources. Furthermore, general financing of government departments and agencies charged with SPS controls is often inadequate to meet the demands of both domestic controls and controls on imports and exports. However, two major technical assistance projects are underway that aim to strengthen SPS capacity in Jamaica. These attempt to address many of the weaknesses discussed previously.
- There is generally good awareness of SPS issues within the Jamaican Government, particularly at higher levels within the departments and agencies charged with controls on domestic production and imports and exports. However, the importance of SPS controls appears to be understood less well within the supply chain and at lower levels of Government. Hence, for example, Government has problems involving the industry in the development of new legislation and standards.
- Jamaica has faced a number of problems exporting agricultural and food products, particularly to the United States and EU. However, in some areas it has been successful in meeting SPS requirements and/or challenging the requirements faced by its exporters through bilateral negotiations. There is frustration, however, at the slow speed at which such negotiations typically progress.
- By September 2001 Jamaica had not been active in OIE and IPPC and had only very limited participation in CAC meetings. In part this reflects financial and human resource constraints and in part the lack of coherent administrative structures to manage Jamaica's relations with international standard-setting organizations. As a consequence, Jamaica has had little influence on the agenda of these organizations, although it does have particular needs in terms of international standard-setting.

Chapter 18

Kenya

Agricultural and food exports

Agriculture is a key sector of the Kenyan economy, accounting for approximately 25% of GDP and about 60% of foreign exchange earnings. About three-quarters of total agricultural production is produced by small-scale farmers and pastoralists.

Kenya's principal agricultural and food exports are tea, coffee and horticultural products (flowers, and fruit and vegetables, both fresh and processed). In recent years these commodities have accounted for over half of all exports. Among other products the more significant include fish and fish preparations, tobacco and tobacco manufactures, and animal and vegetable oils. About one-third of annual fish production, principally Nile perch from Lake Victoria, is exported to markets which include the EU, the United States, Israel, Japan, Australia and Malaysia. Production and exports of a number of commodities are, of course, subject to seasonal conditions such as the severe drought of 1999-2000 and the frost that affected tea production in 2000.

The value of exports of coffee declined from 1998 to 2000. Earnings from exports of tea increased over the same period, with very favourable price movement more than offsetting a steep decline in volume in 2000. Average prices received for horticultural products more than doubled from 1997 to 2000 and the trend for the value of exports of these products may now be set to continue to surpass returns from coffee exports.

Approximately a quarter of all Kenyan exports go to Uganda and the United Republic of Tanzania, another quarter to other countries within COMESA, and about one-third to the European Union. It would appear that the EU is a particularly important market for flowers, other horticultural products, tea and coffee, and fish. The United States is also an important and growing market for flowers.

Administrative arrangements and responsibilities for SPS measures

In Kenya responsibility for control of animal health rests with the Department of Veterinary Services within the Ministry of Agriculture and Rural Development. The relevant legislation includes the Animal Diseases Act, the Pesticide Control Act, and the Meat Control Act. The Department of Veterinary Services has divisions responsible for field veterinary services, laboratory services and veterinary public health. The Division of Veterinary Public Health is responsible for the quality and safety of livestock and livestock products including meat, dairy products, eggs and so forth. It provides meat inspection services in meatworks including Kenya's three operational export

abattoirs, employing over 50 veterinarians and 700 meat inspectors. It is the agency which provides export certification of livestock and livestock products. The Department of Fisheries, also within the Ministry of Agriculture and Rural Development, is responsible for fish health.

The Kenya Plant Health Inspectorate Service (KEPHIS), established under the State Corporations Act, is responsible for all matters concerning plant health, including quarantine of imported plants and plant products, phytosanitary certification of exports and export grading. It also has the mandate to implement national policy on the introduction and use of genetically modified species of plants, insects and micro-organisms. It has an analytical chemistry laboratory, which is available to perform services as required by other areas of Government, as well as a diagnostic laboratory for plant pest and disease identification. Relevant legislation includes the Agricultural Produce (Export) Act, the Plant Protection Act (under review in 2001), the Fertilizer and Animal Foodstuffs Act and the Pest Control Products Act. KEPHIS has a total staff of about 350.

Responsibility for food safety is shared between several agencies. Food standards (other than those within the responsibility of the Department of Veterinary Services and the Department of Fisheries within the Ministry of Agriculture and Rural Development) are adopted through a procedure managed by the Kenya Bureau of Standards (KEBS), and are implemented by the Ministry of Health under the provisions of the Public Health Act and the Food, Drugs and Chemical Substances Act. Public health officers are stationed at all recognized entry points to ensure that imported foods conform with national standards. The Department of Fisheries has some 25 fish inspectors to implement its regulatory responsibilities.

Discussions with the officers of these agencies indicated that they were familiar with each other and their various responsibilities and activities, and there was no obvious evidence of a lack of coordination except in respect of the SPS enquiry point issue discussed below.

Assessment of SPS infrastructure

General

Overall, Kenya appears to have good capacity to define appropriate SPS measures and to apply them. Some areas where strengthening is needed, possibly in conjunction with development assistance, are described below.

The relevant agencies appear to be generally aware of the importance of using international standards wherever possible, especially in those sectors involving imports and exports.

SPS measures affecting imports – food standards

CAC food standards are always considered when standards for application within Kenya (including for imported food) are being developed, according to KEBS. It is not clear what proportion of the extant standards are based on an international standard, guideline or recommendation, although it was said that most are. No evidence emerged of bilateral problems with a supplier country arising from Kenyan standards not conforming with a relevant international norm.

Ministry of Health officers stationed at entry ports are responsible for taking samples of imported foods and submitting them to laboratories for analysis as

appropriate. Microbiological analysis is carried out by the National Public Health Laboratory; the equivalent facility maintained by KEBS is not used because its services are provided for a fee.

In general, existing laboratory facilities appear in aggregate to be adequate to cope with present demands associated with the proper control of imported foods. KEBS is able to provide a comprehensive set of laboratory services for the analysis of foods, including microbiological analysis and analysis of chemical residues.

The major food commodities that Kenya imports (unmilled wheat, flour, rice, maize, sugar, fats and oils, together with processed foods) seem relatively unlikely to become the focus of trade dispute with respect to the applicable standards. However, the practice of requiring imported foods to comply with the standard of the exporting country if no Kenyan standard has been established is, while pragmatic, potentially not in conformity with obligations under the Agreement on SPS because the result of this policy might be to cause different standards to be required for comparable products from different supplier countries.

SPS measures affecting imports – animals, plants and their products

Where import requirements are not based on specific relevant international norms, the Agreement on SPS obliges WTO Members to base their measures on a risk assessment appropriate to the circumstances. Kenya, like almost all other countries, has very little capacity to carry out such risk analysis, which requires substantial empirical data and considerable professional expertise if it is to conform to the risk assessment methodologies promulgated by the relevant international organizations. It may be prudent to evaluate the likelihood that measures imposed by Kenya which impede imports for SPS reasons could be the subject of challenge by other WTO Members.

A particular problem for Kenya is the difficulty of enforcing restrictions on imports of animals, plants and their products across the land borders with neighbouring countries. While controls may be imposed at the major border crossings, it is impractical to control all potential points of entry that traders and travellers might use (even though Kenyan government agencies are working with their counterparts in neighbouring countries to coordinate controls); and in any case wild animals may cross the border of their own volition at any time. Consequently strict controls on the entry of animal and plant products, as imposed at entry points such as Nairobi airport or the port of Mombasa, may seem to trading partner countries to unfairly discriminate against their products when compared with the degree of control actually achieved elsewhere in the country on commodities that present equal or greater risk entering across land borders.

KEPHIS appears to administer a very well-developed system for control of phytosanitary risks. All plants and plant material entering the country must be accompanied by a copy of a permit issued by KEPHIS and an additional phytosanitary certificate or international equivalent. For protection of plant health, controls at the border are supported by a range of facilities including a post-entry plant quarantine facility which, *inter alia*, conducts an impressive tissue culture operation. This same facility is also apparently in need of additional expenditure on maintenance, for example to improve the glasshouses.

The plant pathology clinic provides diagnostic laboratory services on diseased plant parts and soil samples brought in by farmers and provides advice on disease management strategies. An entomology clinic provides similar services

in respect of plant pests. At appropriate intervals KEPHIS plant inspectors visit establishments where crops are being grown for export to ensure compliance with the phytosanitary requirements of importing countries.

In the time available and without visiting other operations in the field it was not possible to fully assess the adequacy of the Kenya quarantine services. Conversations with officers in Nairobi and other information provided indicated that essential quarantine infrastructure and operational programmes are in place and are working although under-resourcing appears to be a problem.

Export certification

Animal husbandry is an important sector within Kenyan agriculture. According to the Department of Veterinary Services, Kenya endeavours to apply all OIE norms, modified as appropriate for local circumstances, in its approach to animal health issues, including the control of imports of animals and animal products. Exports are constrained by the presence of some significant animal diseases (e.g. foot and mouth disease, Rift Valley fever, contagious bovine pleuropneumonia, and African swine fever). There are also deficiencies in the animal health infrastructure. While the five laboratories operated by the Department of Veterinary Services are able to diagnose animal diseases, there is no adequate capacity to test for residues in red meat, poultry and dairy products.

Animal health control and surveillance are necessary to underpin export certification. Each of the three divisions of the Department of Veterinary Services makes a contribution to animal pest and disease surveillance. The division responsible for field veterinary services has the primary responsibility for disease surveillance and control. Officers located in 67 districts in all 8 provinces routinely carry out passive surveillance. Information is gathered from farmers, private clinicians and slaughterhouses and passed to the Department of Veterinary Services on a regular basis. There is also surveillance specific to ticks and tick-borne diseases, tsetse fly and trypanosomiasis and control programmes for the vectors and the diseases they transmit. Veterinary Disease Investigation and Diagnosis mainly deals with active surveillance and diagnosis of diseases. Several projects involving the whole department are aimed at controlling the major animal diseases and pests, for example rinderpest, contagious bovine pleuropneumonia, tsetse and ticks.

For certification of plants and plant products Kenya appears to have well-developed arrangements which are generally accepted by the authorities of trading partners. There is a very effective system of phytosanitary export certification, based on pre-departure inspection of export consignments, which reflects the economic importance of Kenya's trade in cut flowers and fresh fruits and vegetables. KEPHIS's export and import control activities are supported by a well-equipped laboratory facility in Nairobi which also services the needs of other agencies. Expansion of the range of products and destinations may present problems, however, if it should prove difficult for KEPHIS to draw up an adequate pest list for a product for want of sufficient data from monitoring and surveillance. A particular concern for food exports derived from plants is the potential impact of EU pesticide residue requirements under which import tolerances for pesticide residues for as many as 450 chemical ingredients were to be set to zero (i.e. the level of detection) from July 2003. In light of this prospect the Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP) has been mandated by the Directorate General for Development of the European Commission to implement a Pesticide Initiative Programme as a matter of urgency. Preliminary actions included the establishment of an information centre in Brussels, development of databases on existing maximum

residue limits and pesticide usage, and reduction of the list of 450 to just 100 active ingredients. There may be significant demands on the services of analytical laboratories in Kenya as a consequence of the EU initiative.

Kenya exports about 80% of its harvest of freshwater fish and 60% of the catch of marine species. The major market has been the EU, with exports also going to the United States, Israel, Hong Kong (China) and other countries. Not long before September 2001 (when this case study was done), problems involving chemicals (attributed to pesticide run-off into host waters and to use of poisons to catch fish) and the presence of the organism which causes cholera had made it necessary to establish new markets. The Department of Fisheries has become the competent authority for export certification, employing approximately 20 fish inspectors (for whom FAO provided training). Exports are constrained, according to officials of the Department of Fisheries, by limited storage facilities for fish and fish products at many places where fish are harvested, by the lack of clean water supplies and other sanitary facilities at landing places, and by the need for better distribution of cheap ice. There are laboratories at Mombasa and Kisumu (and another proposed for Nairobi) which are necessary for the detection and diagnosis of fish diseases. However, they are inadequately equipped and staff needs training; upgrading will be necessary in order to make accreditation possible. The Department of Fisheries' contacts with OIE are apparently very limited.

Administrative arrangements for the Agreement on SPS

The Ministry of Trade and Industry is devoting substantial resources to Kenya's interest in WTO matters. It also convenes each month the National Committee on WTO which includes in its membership relevant government agencies such as the Ministry of Agriculture and Rural Development and private sector bodies such as the National Chamber of Commerce and Industry. The National Committee on WTO has subcommittees which deal with SPS and TBT issues.

The most obvious, if minor, problem in Kenya's arrangements for implementing its obligations under the Agreement on SPS is that there is not one enquiry point as the Agreement requires but three: the Director of Medical Services in the Ministry of Health (for human health matters), the Director of Agriculture in the Ministry of Agriculture and Rural Development (for plant health matters), and the Director of Veterinary Services in the Ministry of Agriculture and Rural Development (for animal health matters). Kenya is by no means alone among WTO Members in this respect, but the situation could easily be remedied.

Kenya's SPS national notification authority is the Department of External Trade at the Ministry of Trade and Industry.

The main standing mechanism for interagency and intra-agency coordination is an SPS subcommittee on which the key stakeholders in both the public and private sectors are represented and which is convened regularly. The members of the subcommittee are:

- The Ministry of Trade and Industry;
- The Ministry of Health;
- The Horticultural Crop Development Authority;
- KEPHIS;
- The Pest Control Product Board; and
- The Fresh Produce Exporters Association of Kenya.

Notifications by other WTO Members are circulated by the Ministry of Trade and Industry to interested parties in Kenya, who may submit any comments direct to the WTO with a copy provided to the Ministry. A greater degree of coordination may need to be brought to this procedure if the number of notifications relevant to Kenya's trade interests increases in future.

In respect of the transparency provisions of the Agreement on SPS Kenya appears to have achieved a high level of compliance with its obligations. Notification and enquiry points are well established and functioning effectively. By mid-2002 two notifications had been made: one in 1999 dealing with some 42 harmonized East African standards including a proportion relevant to SPS obligations, and the other in April 2001 concerning restrictions on the import of day-old chicks from Mauritius because of the alleged detection of avian encephalomyelitis in two shipments.

Kenya was represented at a meeting of the SPS Committee in 2001 by an official from Nairobi, who joined in expressions of concern about an EU measure potentially affecting imports of flowers from countries such as Kenya; and on some previous occasions it was represented by staff from its Permanent Mission in Geneva. However, in general, Kenya is not represented at SPS Committee meetings. Attendance from the capital requires a substantial commitment of funds and financial resources, which are a limiting factor on greater direct involvement.

Kenya has not yet had recourse to informal WTO methods for addressing bilateral SPS disagreements, other than the avenue of expressing concern in a statement in the Committee, nor has it used the formal procedures available under the Dispute Settlement Understanding. However, in at least one instance, Kenya has had to respond to concerns of another WTO Member which has felt that its rights had been infringed (see chapter 20, Mauritius).

Awareness and understanding of SPS issues

The new National Committee on WTO is said to have much improved information flows to interested parties, although concerns are expressed by both private and public sector representatives that the level of knowledge and understanding in the business and farming communities is still very limited.

Within the Ministry of Agriculture and Rural Development there is reasonable understanding of the Agreement on SPS and related issues among the key officers. The Managing Director of KEPHIS stated that there was a good understanding within the agency of how the Agreement on SPS operates following the delivery of a seminar on the topic by a member of the WTO Secretariat in August 2001. In general, however, the level of knowledge of the Agreement on SPS among public officials outside of the Ministry of Trade and Industry could be greatly improved. Private sector representatives also identified a need to disseminate information about SPS issues to primary producers.

Overall there seemed to be even more limited understanding of the role and work of the international standard-setting bodies, particularly CAC and IPPC activities, except among those few officials with direct responsibilities in the area. It can be presumed that one reason for this situation is that this work is only rarely directly relevant to the day-to-day concerns of officers in the responsible agencies, and even less so to workers in the private sector. There was widespread agreement that it would be extremely helpful if some training could be provided to improve understanding across the board.

Problems experienced due to SPS measures in export markets

Examples of SPS impediments to Kenyan exports include:

- Occasional rejection of export consignments of horticultural products because of the detection of quarantine pests;
- A requirement by Australia for glyphosate devitalization of flower shipments;
- Difficulty in accessing the South African market for horticultural products because of requirements such as provision by Kenyan authorities of three years' data on pests potentially present;
- A series of problems encountered in maintaining exports of fish from Lake Victoria;
- Difficulty in exporting chilled or frozen beef to the United States because of foot and mouth disease;
- Problems in getting ostrich products into the United States market; and
- EU restrictions on pesticide residues.

Without detailed investigation it is difficult to comment on each of these situations. It may be said that in some instances, such as rejections of shipments because of detection by the importing country of quarantine pests, it is not uncommon for an SPS barrier of this kind to be encountered in the course of trade and it may well be justifiable. With respect to the issue of EU requirements for meat and fish processing plants exporting to Europe, there are certain aspects in which the relevant EU standards are stricter than the international norms; the problem does not lie with the CAC codes.

It appears unlikely that deviation from a relevant international standard lies at the heart of any of the matters mentioned.

Needs assessment for international standards

No concerns were expressed by any party in Kenya about perceived inadequacies in the existing suite of international standards, guidelines and recommendations. Most Kenyan food standards are adopted from CAC, or adapted by addition of a microbiological contaminant limit. According to the Department of Veterinary Services, the measures for which it has responsibility are based on OIE norms. (An OIE standard such as that for disease-free areas is regarded as appropriate even though Kenya experiences difficulty in establishing areas that conform to the standard in order to be able to export bone-in beef to the United States.) KEPHIS follows the international standards for phytosanitary measures made under the aegis of IPPC when it is formulating measures for the protection of plant health.

Level of participation in international standard-setting organizations

CAC

There is a National Codex Committee to coordinate Kenya's interests in CAC matters. Its membership includes all interested agencies, such as the Ministry of Agriculture and Rural Development and the Ministry of Health. The secretariat

for the committee is provided by KEBS. The chair of the National Codex Committee is an officer of the Department of Veterinary Services within the Ministry of Agriculture and Rural Development.

Kenyan representatives participate actively in the biennial meeting of CAC and in meetings of the Codex Regional Coordinating Committee for Africa. However, there are a number of CAC technical committees in whose meetings Kenya cannot be represented because of funding constraints even though the subject matter (e.g. pesticide residues, fresh fruit and vegetables) is of direct interest to Kenyan industry and consumers. As for most other countries, it is difficult to generate national input to Codex committees if no Kenyan representatives are designated to attend the meetings.

The officer in the Department of Veterinary Services who chairs the National Codex Committee advised that funding was likely to be available for his attendance at meetings on food hygiene, residues of veterinary drugs in foods and meat hygiene. Officers of the Ministry of Health said that they had a particular interest in the proceedings of CAC in relation to milk and milk products, food additives and contaminants and food hygiene.

IPPC

The Managing Director of KEPHIS advised that Kenya was able to participate actively in IPPC work through attending meetings of the Interim Commission on Phytosanitary Measures and the Standards Committee and noted that support was available to assist countries like Kenya to be involved in activities such as the development of an international standard for phytosanitary measures on living modified organisms.

OIE

The Director of Veterinary Services attends all relevant OIE meetings and coordinates all OIE-related activities within Kenya. He and relevant officers (to the extent that limited funds allow) attend the two-yearly meeting of the OIE Regional Commission.

The Director of Veterinary Services convenes ad hoc meetings with stakeholders and the relevant agencies to discuss OIE issues, but there is no formal coordinating committee. All OIE documents are circulated to heads of the divisions of the Department of Veterinary Services, provincial heads, district heads and the university. OIE issues are also raised during regular meetings with farmer and breeder associations, the Camel Forum, the Agricultural Society of Kenya, and so on. KEPHIS handles all issues relating to IPPC. Access for relevant officers to the websites of the international standard-setting organizations, and to the WTO site is available but needs improvement.

Participation in regional arrangements for standard-setting

Officers of the Ministry of Health expressed the opinion that harmonization of the food standards of the East African region (Kenya, Uganda and the United Republic of Tanzania) needed to be progressed. There is considerable economic as well as public health rationale for this, since by far the majority of food exported from Kenya goes to either of these two neighbouring countries. The countries in the East African region have already notified a number of regional standards to other WTO Members under the Agreement on SPS. At

the same time, however, there is another strand of opinion in the African CAC region that it is preferable to use Codex international standards, wherever available, rather than to establish regional standards. This matter is under continuing discussion in the Codex Regional Coordinating Committee for Africa.

The OIE Regional Commission is regarded as particularly important because of its role in harmonizing disease surveillance and control strategies within the region and relevant policies on animal health issues.

Constraints on effective participation in international standard-setting organizations

The constraints on direct participation in the international standard-setting bodies are obvious ones. Although assistance with travel costs is provided for attendance at the OIE's annual meeting of the International Committee, no such assistance is available as a matter of course for attendance at CAC and the Interim Commission on Phytosanitary Measures and related meetings. The effect of this budget constraint is reinforced by the scarcity of professionally qualified personnel who are also familiar with the procedures of the organizations and who would therefore be able to make a worthwhile contribution to the work and influence outcomes in Kenya's interest. In any case, the perception of relevant agencies, and the private sector (insofar as it is aware of international standard-setting), is that in general the established international norms are not a significant impediment to the achievement of Kenya's goals.

Specific technical assistance requirements

Training requirements

Several of the agencies consulted in Kenya expressed a need for training of staff in relation to international standards and the Agreement on SPS, and in related areas.

- Within the Ministry of Agriculture and Rural Development it was suggested that training is needed generally for government officers in agriculture-related agencies on the Agreement on SPS and specifically for some officers in negotiation skills so that Kenya can participate more effectively in WTO negotiations.
- The Department of Fisheries sees training of laboratory technicians as its highest priority, and also believes that its fish inspection staff needs training in SPS issues.
- The Department of Veterinary Services identified a range of needs for training of up to 300 workers including training of laboratory and other workers to support an effective national residue monitoring programme and training of other staff in disease surveillance (e.g. for bovine spongiform encephalitis – BSE) and control.
- KEPHIS has identified a need for training of technical and scientific personnel in relation to pest risk assessment and quarantine procedures.

- The Ministry of Health identified a number of training needs in the areas of epidemiological disease surveillance, food science and inspection, food safety control procedures, etc.
- The Department of External Trade in the Ministry of Trade and Industry, which serves as the secretariat for all WTO matters and supports the SPS and TBT subcommittees, has identified a need to train officers dealing with SPS matters in all aspects of the Agreement.

'Soft' infrastructure development

Prospects for growth and diversification of Kenya's agricultural exports depend on access to foreign markets which will often be possible only if specific phytosanitary requirements are met, such as the pest list for agricultural exports.

Kenya has some capacity to compile pest lists, but KEPHIS is conscious that it does not have enough expertise in this field. Analysis suggests that technical assistance in this area is justifiable, but that it ought to be provided on the basis of a carefully considered assessment of Kenya's real needs and with emphasis on specific actual and potential export products. When assistance is then provided it could be done in such a way that it not only produces the requisite pest list(s) but also simultaneously incorporates a training component so as to build up the capacity of the Kenyan authorities. A technical assistance project in this field might also include a component for auditing of progress at a suitable interval after the primary training has been provided. Furthermore, in common with other WTO Members, Kenya has not prepared pest risk analyses which it could present in response to an inquiry from another Member to justify the import restrictions on plants and plant materials.

The preferred strategy may be to plan to build up pest risk analysis capacity progressively over time as part of a wider programme of capacity building in quarantine functions within the Ministry of Agriculture and Rural Development.

Other needs identified include:

- Capacity building in import/export inspection and certification procedures;
- Programmes for increasing public awareness and understanding of the meaning (and the benefits) of the Agreement on SPS;
- An analysis of the risk that BSE may be present in Kenya;
- Assistance to support participation in meetings of the international standard-setting organizations and of the WTO SPS Committee;
- Development of the competent authority function in the Department of Fisheries, *inter alia*, by revision of legislation, establishment of a computer database, study tours to counterpart agencies in other countries, etc.;
- Design and implementation of appropriate monitoring plans for heavy metals, pesticide residues, microbiological and chemical contamination in fishery products;
- Design and implementation of a surveillance programme of nominated contaminants in selected foodstuffs, together with an appropriate data collection and storage system;
- Consultancy support for these and other activities.

'Hard' infrastructure development

It is apparent that Kenya has a number of laboratories, which are variously equipped and each of which has its own workload. A number of agencies or sub-units identified have specific needs for additional or replacement equipment and for consumables for laboratories. For example, the Ministry of Health wishes to strengthen reference food laboratory services by acquiring modern equipment and supplies of reagents.

In addition the Department of Veterinary Services is seeking donor support for the establishment of a National Veterinary Assay Centre at a cost of around US$ 10 million to carry out quality control of animals, animal production inputs (such as veterinary pharmaceuticals, pesticides and animal feeds) and animal products. This centre would, among other things, be able to verify that Kenyan animal product exports conform to the requirements of importing countries. Funding is also sought for the accreditation of the KEPHIS laboratories.

Donor countries and multilateral agencies have contributed substantial resources over recent years to Kenya's infrastructure of laboratories and trained laboratory staff. Visits to a number of these facilities in the vicinity of Nairobi showed that their managers face many difficulties, including security against theft, maintenance of equipment, availability of consumables, and maintaining an adequate flow of work to ensure that the laboratories are used cost-effectively.

Overall assessment

Because it is not possible during a short mission to conduct a thorough evaluation of the situation, conclusions drawn are necessarily impressionistic. It seems safe to say, however, that the importance of the agricultural sector to the Kenyan economy and especially to export earnings is such that the control of external pest and disease threats by appropriate SPS measures is vital, as also is the need to take full advantage of Kenya's rights under the Agreement on SPS in order to maximize export market access. Like other countries, Kenya has had to make choices about how best to allocate limited resources to the many potential uses in the broad field of sanitary and phytosanitary control. These choices include decisions on the extent of involvement in the activities of WTO and the international organizations which set sanitary and phytosanitary standards.

Recent initiatives within the Kenyan administration are bringing a greater degree of coordination to Kenya's engagement with WTO SPS-related activities. With these changes, and parallel effort to involve the private sector more closely in prioritization of market access initiatives, it will be possible for Kenya to extract greater advantage from the Agreement on SPS and from participation in the work of the international standard-setting organizations. Much more could usefully be done, given additional resources from internal sources and in the form of technical assistance, provided that care is taken to achieve the best possible internal coordination of infrastructure development and maintenance and to ensure that duplication is minimized.

Chapter 19

Malaysia

Agricultural and food exports

Malaysia is a trade-oriented economy that has experienced significant growth in both exports and imports. Through the 1990s there were significant changes in the composition of exports, which increased threefold. The contribution of manufactured goods increased while that of agricultural commodities and mining declined. In contrast, the composition of imports changed little during the 1990s.

Malaysia's main export markets are the United States, Singapore, Japan and the European Union. A total of 26.5% of exports were within ASEAN. The major sources of imports were Japan, the United States and Singapore. Collectively, the EU accounted for 11.8% of imports. A total of 24.1% of imports were from within ASEAN.

Agricultural and food products account for a relatively small proportion of imports and exports in Malaysia. Malaysia's major agricultural and food exports are palm oil, palm oil products and timber. Processed food products are small in the context of total exports. However, certain processed food sectors have achieved significant growth in exports and demonstrate real growth potential for the future. Major agricultural and food imports include cocoa and sugar-related products, dairy products, and edible products and preparations. Many of these products are used as inputs to the domestic food processing sector in Malaysia.

Administrative arrangements and responsibilities for SPS measures

The Ministry of Agriculture has the responsibility of coordinating all WTO SPS issues. Through its various agencies, it has the responsibility for agricultural production and trade in agricultural products. The approach to food safety is from-farm-to-table and is undertaken in an integrated manner. The Ministry of Agriculture is responsible for animal and plant health and safety, while the Ministry of Health is responsible for processed food.

The Ministry of Agriculture has responsibility for the aspects of food safety associated with agricultural production. Responsibility for the control of animal diseases lies with the Department of Veterinary Services of the Ministry of Agriculture. Quarantine stations are operated at all official points of entry. In particular, the Department of Veterinary Services is responsible for licensing and inspection of slaughterhouses. Day-to-day inspection is undertaken by regional divisions of the Ministry of Agriculture.

Responsibility for controls on live fish, both from marine fisheries and aquaculture, lies with the Fisheries Division of the Ministry of Agriculture. In the case of exports of fish and fish products to the EU, however, the Ministry of Health is the competent authority.

The Food Quality Control Division of the Ministry of Health has seven sections, each of which has clearly defined responsibilities:

- Enforcement Section: Policy and strategy on enforcement of food safety regulations;
- Legislation Section: Promulgation of new and revised legislation;
- Industry Section: Development of industry codes of practice and HACCP implementation (especially in SMEs);
- Analytical Section: Laboratory services;
- IT Section: Food Quality Control Division homepage, food database;
- Codex and International Affairs Section: Relations with CAC, SPS Committee, etc.;
- Research and Monitoring Section: Collaborative research and risk analysis.

In the Ministry of Health, new or revised legislation is reviewed and approved by a regulatory committee. This interagency committee includes representatives of government departments, industry and consumers. Proposed new legislation is circulated for comments and posted on the web page of the Food Quality Control Division on the Ministry of Health website.

Enforcement of food safety regulations under the Food Act 1983 is the responsibility of the various Health Departments at the state level and also the various districts. However, overall policy on the food safety programme is undertaken by the Food Quality Control Division of the Ministry of Health.

In the case of imports, control is undertaken at 34 points of entry. Control at these points is the responsibility of the respective state. Each point of entry is monitored by authorized officers under the Food Act 1983.

The Agriculture Department of the Ministry of Agriculture is responsible for surveillance and controls on plant pests and diseases. Plant quarantine inspectors are stationed at official points of entry.

In Malaysia, regulation of pesticides is the responsibility of the Pesticides Board, which is within the purview of the Ministry of Agriculture. The board regulates the approval and use of pesticides, and registration of distributors and handlers. It is also responsible for making recommendations to the Regulatory Committee, under the Ministry of Health, on maximum residue levels for pesticides in foodstuffs. Most maximum residue levels in Malaysia are based on those laid down by CAC. A similar board is responsible for control of veterinary drugs and makes recommendations to the Regulatory Committee on maximum residue levels in foodstuffs.

All controls relating to palm oil are the responsibility of the Ministry of Primary Industries.

Assessment of SPS infrastructure

Overall, SPS capacity is well developed in Malaysia compared, for example, to other countries at a similar level of economic development. Government officials are well informed about the importance of SPS controls, both domestically and relating to exports and imports, and the improvements

required to enhance capacity. Recognizing the fact that the integrated approach is undertaken for food safety, coordination of SPS control needs to be strengthened. The Government has acknowledged this problem and one of the objectives of establishing the National Food Safety and Nutrition Advisory Council (chaired by the Minister of Health) is to optimize available resources and expertise, and minimize duplication of efforts.

Malaysia has a relatively well-developed laboratory infrastructure that can undertake most of the analyses required for food safety controls relating to domestic production (whether for domestic consumption or export) and import, including microbiology, additives, pesticide residues, veterinary drug residues and chemical contaminants. The Ministry of Health has laboratories that each specialize in particular types of analysis and can perform most of the required tests. These laboratories work closely with other agencies including the Ministry of Agriculture and its Department of Chemistry, the Department of Standards Malaysia, and universities. Malaysia was only the second country in Asia to undertake tests for dioxins following the contamination of foodstuffs in Belgium.

Tests for animal diseases are undertaken at regional laboratories and a central laboratory. The regional laboratories are able to perform tests for common diseases, but tests for exotic diseases have to be undertaken at the central laboratory. However, there is a need for enhanced capacity, including both skills and laboratory infrastructure, to undertake risk assessments.

Laboratory capacity is less well developed in the case of plant pests and diseases. At the current time tests can be undertaken for most, but not all, pests and diseases of relevance to Malaysia. Furthermore, capacity is not sufficient to undertake pest risk assessments both domestically and on imports. Consequently, most assessments to date have been based on a review of the literature alone. Likewise, current controls, both domestically and on imports, are considered inadequate.

The Malaysian Government is aware of the need to strengthen capacity in the area of risk analysis. A national committee has been established to coordinate activities, in particular the collection of data by various agencies and research teams. The key weakness is a lack of baseline data. Furthermore, data that have been collected tend to be fragmented and to lack comparability.

One area of particular concern to the Malaysian Government is the efficacy of controls on imports. Controls are based on a procedure of 'hold', 'test' and 'release' on blacklisted items. A computerized system is being introduced to link information from Customs to the Ministry of Health. The system was due to be launched in August 2003. Automated examination guidance is being introduced to assist authorized officers at entry points to determine necessary action.

The Ministry of Health has acknowledged the need for hygiene standards to be enhanced in the Malaysian food processing sector. The Ministry of Health operates a voluntary HACCP certification programme. This programme was introduced in 1996 in response to the EU requirements for HACCP in fish processing plants. By 2002, 62 food processing plants were certified under this programme. However, there are concerns about the general level of awareness, understanding and motivation to implement HACCP, particular among SMEs. In response to these concerns, guidelines on good hygiene practices for small and medium-scale food industries were developed in 2002. New food hygiene regulations are being promulgated that will require the adoption of a quality assurance system based on Codex. In the early stages the key priority will be the implementation of such systems in export-oriented sectors.

Improvements can also be made to hygiene standards and controls on pesticide use in agriculture. A total of 3,373 products produced by 562 companies were certified as halal in Malaysia by September 2001. This is a major requirement for exports of food products to Muslim countries.

APEC undertook a review of the SPS infrastructure in member countries within the context of the Agreement on SPS. In the case of Malaysia, this review highlighted the following priorities:

- Understanding of the Agreement on SPS;
- Review of the food safety infrastructure;
- Strengthening of laboratory infrastructure;
- Capabilities in risk analysis;
- Capabilities in HACCP;
- Awareness and understanding obligations under the Agreement on SPS; and
- Pest risk assessment and phytosanitary measures.

It was recognized, however, that SPS issues had been given a high priority for food safety, not only in the case of products of export interest to Malaysia, but also for the protection of the health and safety of domestic consumers.

Administrative arrangements for the agreement on SPS

In Malaysia, overall responsibility for WTO matters lies with the Ministry of International Trade and Industry. There is a Mission in Geneva with four personnel, including the ambassador. The Geneva Mission handles meetings of the SPS Committee along with those of all other WTO Agreements. However, representatives from the capital attend if it is deemed necessary.

Malaysia has established enquiry and notification points as required by the Agreement on SPS. The Ministry of Agriculture or the Ministry of Health may prepare notifications which are then sent to the WTO Mission in Geneva via the national notification authority in the Department of Veterinary Services. Coordination problems occasionally emerge because of time constraints.

There are three national enquiry points:

- Department of Agriculture, Ministry of Agriculture (for plant products);
- Food Quality Control Division, Ministry of Health (for food safety); and
- Department of Veterinary Services, Ministry of Agriculture (for animal and animal products).

Both the Ministry of Health and the Ministry of Agriculture receive notifications from WTO directly by e-mail. Some notifications are also sent directly to these agencies by notifying countries. In the Ministry of Health, personnel are assigned to the task of reviewing the notifications. Each month all notifications are printed out and distributed for comments. In the Ministry of Agriculture, a less structured system seems to operate, although notifications are distributed for comments and industry is consulted if it is deemed necessary. However, distribution of notifications to the private sector in a more routine manner should be put in place.

There exists a main committee that looks into multilateral trade issues as a whole. In addition, a national SPS Committee has been established that meets to discuss current issues to be considered at SPS Committee meetings in Geneva. This includes officials from the Ministry of International Trade and

Industry, the Ministry of Health, the Ministry of Agriculture and the Ministry of Primary Industries. The National Codex Committee structure is utilized to deal with particular technical issues. National positions and priorities are communicated to Geneva, if necessary.

By September 2002, Malaysia had notified 11 measures under the Agreement on SPS. Of these, six were emergency measures.

There is no central agency responsible for handling and sorting of notifications in Malaysia – this is the responsibility of the respective ministries. As a consequence there seems to be some repetition of tasks and inequity in the manner in which different types of measures are handled. The Codex and International Affairs Section of the Food Quality Control Division, Department of Public Health, Ministry of Health, handles notifications relating to food safety. Officials clearly have a good understanding of the Agreement on SPS and the related procedures. Furthermore, the Codex and International Affairs Section has clearly defined procedures for the handling of notifications from other Members and for the notification of new measures relating to food safety in Malaysia. Various departments and divisions of the Ministry of Agriculture are responsible for handling notifications related to animal health and plant pests and diseases. Officials are aware of the Agreement on SPS but procedures for handling notifications from other Members and for the notification of new measures in Malaysia are less well defined, perhaps because of resource constraints.

It appears that current arrangements and channels of communication between industry (via the Federation of Malaysian Manufacturers) and the Malaysian Government work well. However, there is room for improvement in coordination between the Government and the private sector to ensure better follow-up of issues.

As part of the 'Strategy on Capacity Building in APEC Related to Implementation of WTO Agreements' an evaluation was undertaken of Malaysia's infrastructure relating to SPS measures in the context of the Agreement on SPS. The availability of resources to pursue interests in WTO, availability of resources in the capital and availability of resources in Geneva were all considered adequate. However, the remaining workload required to meet WTO obligations was considered to be heavy.

Awareness and understanding of SPS issues

In general, officials in relevant ministries of the Malaysian Government are well informed about SPS issues and the role of the Agreement on SPS. This includes the Multilateral Trade Relations Department of the Ministry of International Trade and Industry, Codex and International Affairs Section of the Food Quality Control Division, Department of Public Health of the Ministry of Health, and the relevant divisions and departments of the Ministry of Agriculture. There are concerns, however, that government personnel at lower levels are less well informed about the nature and relevance of SPS issues to the agricultural and food sectors in Malaysia.

Government officials have a good working relationship with the agricultural and food sectors and there are established mechanisms through which the concerns of the industry are raised and the industry consulted on proposed new legislation. Furthermore, businesses within the food processing sector are well organized through the Federation of Malaysian Manufacturers. For example,

the Ministry of International Trade and Industry organizes an annual dialogue with industry that is attended by the Federation of Malaysian Manufacturers. The Minister chairs this three-day consultation.

The Malaysian Food Manufacturers Group of the Federation of Malaysian Manufacturers represents the interests of food manufacturers in Malaysia. The Malaysian Food Manufacturers Group holds regular meetings (every one or two months) and special meetings as deemed necessary. At these meetings, problems and issues raised by members are considered and joint positions developed, which are then presented to the Government. The Malaysian Food Manufacturers Group is also a member of the regulatory committee under the Ministry of Health, and so has a direct input into the promulgation of new legislation relating to food safety.

Problems experienced due to SPS measures in export markets

The Ministry of International Trade and Industry publishes an annual assessment of trade practices affecting Malaysia's exports which identifies a number of cases where SPS measures have impeded exports of agricultural and food products. Furthermore, discussions with officials from the Ministry of Health and Ministry of Agriculture and from the Federation of Malaysian Manufacturers served to highlight the key concerns of agricultural and food product exporters in Malaysia. Each of these is discussed in turn below.

Through the SPS Committee, the Malaysian Government has raised or supported a number of concerns about proposed new or revised SPS measures on:

- Proposed new limits on aflatoxins in nuts and milk within the EU (March 1998);
- Import prohibition imposed by Brazil on coconut palms and related products (June 1998);
- Proposed new tolerance levels for benzoic acid in sauces in Australia (September 1998);
- Australia's restrictions on imports of tropical fresh fruit (June 2000);
- Australia's import restrictions on durian fruit (June 2002).

These interventions indicate that Malaysia is able and willing to make use of the institutions of the Agreement on SPS to represent its interests.

In addition, Malaysian exporters of agricultural and food products have identified a number of problems faced because of SPS measures. For example:

- Hygiene requirements for fish and fish products in the EU;
- Hygiene requirements for poultry in the EU;
- Pesticide residues in fresh fruit and vegetables in the EU;
- Hygiene requirements for fats and oils in the EU;
- Phytosanitary controls for cut flowers in Australia;
- Phytosanitary controls for fresh fruit in the United States;
- Regulation of processed food products in Japan;
- Hygiene requirements for poultry exports to Australia;
- Phytosanitary controls on fresh fruit and vegetables and cut flowers in Japan; and
- Phytosanitary controls on fresh fruit in the Republic of Korea.

Needs assessment for international standards

Malaysia makes great use of international standards when promulgating domestic legislation. Furthermore, international standards are considered a vital element of control on agricultural and food imports. This is particularly so in the case of food safety regulations, which are predominantly based on Codex standards. Examples include maximum residue levels for pesticide residues in foodstuffs, limits on veterinary drug residues in food and hygiene standards for food processing. Indeed, the Malaysian Government often acts quickly to implement Codex standards domestically.

One concern in Malaysia is the lack of international standards for tropical products that, while minor in terms of world trade, are important in terms of domestic production and exports. A key example is the lack of maximum residue levels for pesticide residues in many tropical fruits. A number of importing countries have established maximum residue levels for such products at the limit of detection, which can be very difficult and costly to achieve.

Level of participation in international standard-setting organizations

Malaysia has actively participated in all international standard-setting organizations related to SPS measures. Indeed, its level of participation generally exceeds that of countries at a comparable level of economic development.

CAC

Malaysia has been a Member of CAC since 1971. In 1996 the Food Quality Control Division, Department of Public Health, Ministry of Health, took over this responsibility from the Standards and Industrial Research Institute of Malaysia. Within the Food Quality Control Division, the Codex and International Affairs Section coordinates relations with CAC. Malaysia operates a National Codex Committee that aims to develop a national position on Codex matters of interest to the country. The Deputy Director-General of Health (Public Health) chairs the Committee. Members include government ministries, research institutes, commodity boards, industry organizations, consumer groups and university researchers.

The National Codex Committee has active participation by industry representatives. The Malaysian Food Manufacturers Group participates in meetings of the National Codex Committee and the National Codex Subcommittees on:

- Food Additives and Contaminants;
- Food Hygiene;
- Food Labelling;
- Import/Export Inspection and Certification;
- Nutrition and Foods for Special Dietary Uses;
- Milk and Milk Products;
- Fresh Fruit and Vegetables;
- Processed Fruit and Vegetables;

- Cocoa Products and Chocolate;
- Natural Mineral Waters;
- Fish and Fishery Products; and
- Fats and Oils.

However, it has ceased participation in the Subcommittees on Pesticide Residues, General Principles, Analysis and Sampling, and Residues of Veterinary Drugs in Food. The decision to participate in the activities of the National Codex Committee is based on the perceived needs of industry and priorities, as well as capacity in terms of time and expertise. The costs of participation are borne by food businesses themselves.

Malaysia is an active participant in CAC, including meetings of the Codex Alimentarius and General Subject and Commodity Committees. Over the period 1990 to August 2001, Malaysia attended three out of four of the main Codex Committee meetings. Furthermore, Malaysia has played an active role in the development of a number of Codex standards that are considered of national interest. For example:

- Malaysia produced the first draft of the Codex General Guideline on Use of Term 'Halal' and was actively involved in the development of the final text.
- Malaysia has been active in the development of a Recommended International Code of Hygienic Practice for Storage and Transport of Edible Oils and Fats in Bulk. Malaysia has large exports of palm oil and has experienced problems with hygiene requirements for the transport of oils and fats to the EU.
- Malaysia is a major exporter of filled milk – milk substitutes based on vegetable fats – produced from palm oil. Malaysia started to attend meetings of the Codex Committee on Milk and Milk Products in 2000 to participate in the development of international standards for such products. These include:
  - Sweetened condensed filled milk with vegetable fat/blend of sweetened condensed milk with vegetable fat;
  - Evaporated skimmed milk with vegetable fat/blend of evaporated skimmed milk with vegetable fat;
  - Skimmed milk powder with vegetable fat/blend of skimmed milk powder with vegetable fat.

The drafting group, chaired by Malaysia, has expanded to include France, Germany, India, Italy, Mexico and the EC. Malaysia already had standards for these products, which are produced by its industry, and would like to ensure that international standards have minimal impact on the domestic industry.

Malaysia has also contributed to the development of Codex standards for palm oil and palm stearin and carambola, the Draft Code of Practice for Street-Vended Foods, and draft standards for dried anchovies, fish crackers and aqueous coconut.

IPPC

Malaysia is a signatory to the 1979 International Plant Protection Convention and is in the process of ratifying the new Convention. The contact point is the Director-General of the Agriculture Department, Ministry of Agriculture. Draft international phytosanitary standards are assessed by a working committee. Relevant agencies are consulted as deemed appropriate.

Malaysia has attended all meetings of the Interim Commission on Phytosanitary Measures to date. It is eager to enhance its input into the drafting of standards on plant pests and diseases. For example, it is trying to play an active role in the drafting committee on timber products to ensure the needs of tropical timber producers are taken into account. Until now, this committee has been dominated by developed countries and consequently the draft standard has been largely based on temperate timber.

OIE

Malaysia joined OIE in 1970. The contact point is the Director-General of the Department of Veterinary Services, Ministry of Agriculture. Malaysia has attended every meeting of the International Committee of OIE since it joined.

Participation in regional arrangements for standard-setting

Malaysia is an active member of the Codex Regional Coordinating Committee for Asia. Indeed, at the Codex Alimentarius Commission in 2001, Malaysia was appointed Regional Coordinator for Asia for 2001-2003 and hosted the 13th Session of the Codex Regional Coordinating Committee for Asia in September 2002 in Kuala Lumpur.

Constraints to effective participation in international standard-setting organizations

Although Malaysia has demonstrated its ability to play an active role in the development of international standards, it does face resource constraints that necessitate priority setting. Key issues in the setting of priorities include national interests and availability of expertise. For example, Malaysia has not participated in the Codex Committee on Veterinary Drugs in Food since 1995 because of lack of expertise on setting maximum residue levels and assessing the value of different levels in terms of risk to human health. There is also a lack of baseline data to assess risks in Malaysia.

Despite its high level of participation, it is recognized that a number of constraints limit Malaysia's effective participation in international standard-setting:

- Travel costs can prohibit participation in meetings of international standard-setting organizations. A key concern is the cost of unscheduled meetings that could not be anticipated or built into annual budgets.
- Staff turnover is a major problem for both the Ministry of Health and the Ministry of Agriculture. Effective participation in the work of international standard-setting organizations requires that government personnel be knowledgeable and experienced in the procedures and protocol of these organizations. It can take a considerable period of time for new personnel to develop this knowledge and experience.
- There is a lack of expertise in certain key areas, including veterinary drug residues, analytical and sampling methods, etc. Perhaps this expertise is not available in Malaysia, or the individuals with this expertise are not attracted into the government service.

Commitment and prioritization is also important. The Ministry of Health clearly puts a high priority on participation in CAC and makes available the necessary resources, while other agencies may have other priorities.

Specific technical assistance requirements

Although Malaysia has a relatively well-developed system of SPS controls, is able to handle relations with WTO relating to SPS matters, and participates in international standard-setting organizations, it does have some technical assistance requirements. Key issues include:

- Administrative structures and procedures for handling notifications of SPS measures, both incoming from other WTO Members and notifications of new measures in Malaysia, need to be streamlined and improved. In this respect, Malaysia could benefit from the experiences of other WTO Members at a similar or higher level of economic development.
- There is general weakness in capacity to undertake risk assessment relating to food safety, animal health and plant pests and diseases. This has created considerable problems for exporters of fresh fruit and vegetables and cut flowers to a number of countries.
- Related to the above, laboratory facilities in Malaysia need to be further developed, particularly for animal diseases and plant pests and diseases.

Overall assessment

This case study, based on a review of existing studies and interviews with a number of key personnel within the Malaysian Government and industry organizations, has provided an assessment of SPS capacity in Malaysia, with particular emphasis on relations with WTO and participation in international standard-setting organizations. The key conclusions of this assessment are:

- While manufactured goods dominate Malaysia's foreign trade, in particular electrical components and appliances, agricultural and food products remain important. Primary products, in particular palm oil and timber, are the major agricultural and food exports, although there has been significant growth in exports of processed and more value-added food products, for example processed fish and processed fruit.
- Exporters of agricultural and food products in Malaysia face a number of problems gaining access to developed country markets as a direct result of SPS measures. While many of these measures may be justifiable scientifically, the associated costs of compliance can be prohibitive. Furthermore, capacity constraints in Malaysia can make compliance more costly, or indeed impossible. The lack of capacity to undertake plant risk assessments is a good example in this respect.
- SPS capacity in Malaysia is generally well developed. Whilst there are weaknesses in certain areas, for example laboratory capacity, capacity is generally as good as, or better than, countries at an equivalent level of economic development.
- There is generally a good level of awareness and understanding of SPS measures and trade and the Agreement on SPS among government officials in Malaysia, particularly within the Ministry of Health. Food industry representatives seem to be similarly well informed.

- Malaysia has demonstrated its ability to defend its economic interests through bilateral negotiations with trading partners and the SPS Committee. However, its participation in the SPS Committee is clearly limited by resource constraints. Furthermore, better administrative structures and procedures are required to handle SPS notifications.
- Malaysia has played an active role in international standard-setting, in particular within CAC. It is also beginning to play a more active role in other areas, for example the setting of standards on plant pests and diseases through IPPC. In this respect it is an example to other developing countries at an equivalent or lower level of economic development.

Despite this, Malaysia does have technical assistance needs, both relating to administrative structures and procedures for SPS matters and capacity to undertake risk assessment.

Chapter 20

Mauritius

Agricultural and food exports

By far the most important agricultural product and export in Mauritius is sugar, for which there remains preferential access into the EU market for the time being.[11] Protection of sugar cane against pests and diseases is therefore the principal objective of Mauritius's biosecurity system. In recognition of the heavy dependence of the Mauritian economy on sugar and the prospect that this product will face intensifying international competition there is interest at the national level in diversification of agriculture.

Horticulture is one important area of interest. There is already a successful floricultural export trade built around the growing of anthuriums, mainly for the European, Japanese and Australian markets, although there are some fears that established markets may be subject to increased competition especially if plant variety rights prove difficult to defend. Significant increases in production of fruits, vegetables and other horticultural products will require, among other things, the ability to manage the many potentially harmful pests, diseases and vectors without recourse to heavy use of pesticides. Specialty crops such as vanilla beans may offer one way forward, but experience over recent years has been that it is extremely difficult to establish an export market niche for new products grown in Mauritius.

Other significant exports from the primary sector include canned tuna and live animals, principally monkeys for laboratory use.

Another area of interest is in increasing Mauritius's role as a site for scientific and technological development in agriculture – for example through establishment of a facility for multiplying elite plant genetic material for use in Mauritius and elsewhere in the region.

Although Mauritius is a net food-importing country, it has been able to achieve self-sufficiency in sectors such as fresh vegetables, poultry meat and eggs.

Administrative arrangements and responsibilities for SPS measures

Responsibility for animal and plant biosecurity in Mauritius rests with the Ministry of Agriculture's Division of Plant Pathology and Quarantine and Division of Veterinary Services. Support is provided as necessary by the Division of Entomology. Import of fish and fish products is controlled, from the perspective of protection of animal health at least, by the Ministry of Fisheries under the Fisheries and Marine Resources Act 1998.

11 A small proportion of exports (12,000 tons) goes to the United States under Tariff Rate Quota Arrangements.

The Division of Plant Pathology and Quarantine, which has 53 staff, carries out its responsibilities under the Plants Act 1976. A new Plants Bill has been drafted with the aims of providing for those matters arising from the establishment of WTO and the Agreement on SPS, conferring on officers powers to investigate and make determinations, dealing with organic farming and plant variety rights, and so forth. A proposal for review and redevelopment of the legislation governing seed quality control, marketing, export and import and the related institutional framework was being prepared.

The Division of Veterinary Services carries out its responsibilities under the Animal Disease Act 1925; a Bill to comprehensively amend this Act has been under development for the past 10 years. Export certification for animals and animal products is provided by the Principal Veterinary Officer under the authority of the Supplies Act 1997. The Division has about 21 officers.

Food safety is the responsibility of the Preventive Branch of the Ministry of Health and Quality of Life. The Ministry administers the Food Act 1999 and related regulations. Food imports are subject to inspection by officers of the Ministry of Health, and also by officers of the Ministry of Agriculture where animal and plant pest and disease issues may arise. Meat and fish imports are generally accompanied by suitable certification, which is examined by officers of the Division of Veterinary Services.

The main standing mechanism for interagency and intra-agency coordination is an SPS committee which is convened regularly. The membership of this committee includes relevant areas of the Ministry of Agriculture, the Ministry of Fisheries, the Ministry of Health, and private sector representative bodies.

Assessment of SPS infrastructure

General

Where import requirements are not based on specific relevant international norms, the Agreement on SPS obliges WTO Members to base their measures on a risk assessment appropriate to the circumstances. Mauritius, like almost all other countries, has very little capacity to carry out such risk analysis, which requires substantial empirical data and considerable professional expertise if it is to conform to the risk assessment methodologies promulgated by the relevant international organizations. It may be prudent to evaluate the likelihood that measures imposed by Mauritius which impede imports for SPS reasons could be the subject of challenge by other WTO Members.

In general, existing laboratory facilities appear to be adequate to cope with present demands associated with the proper control of imported foods and other animal and plant products.

SPS measures affecting imports – food standards

Mauritius's food standards are based on relevant Codex norms wherever possible. The law provides that no new food product may be placed on the market without prior approval; permits are issued once it has been established that the product will conform with the relevant standards. Some hundreds of new products are evaluated in this way each year, placing a substantial workload on the laboratories of the Ministry of Health. There may be room for doubt as to whether the product approval system adequately addresses risks that can be associated with a branded product such as a low-acid canned food which may be safe when sourced from one factory but hazardous when sourced from another factory and yet sold under the same brand.

SPS measures affecting imports – animals, plants and their products

Animal husbandry is a relatively small sector within Mauritian agriculture. Some animal diseases which are listed by OIE as significant (e.g. tuberculosis and brucellosis in cattle; infectious bursal disease and Marek's disease in poultry) are present in Mauritius, but at fairly low incidence. Mauritius's poultry production substantially meets national needs, but large quantities of other meats as well as live animals, skins and hides, and dairy products are imported. According to the Division of Veterinary Services, Mauritius abides by all OIE norms and relevant Codex standards in its approach to animal health issues, *inter alia*, in the control of imports of animals and animal products, although specific standards are not published.

Fish health is protected by a requirement that fish and fishery products may be imported only under a permit system. OIE standards are applied.

For protection of plant health, controls at the border are supported by a range of facilities including post-entry plant quarantine glasshouses. Imported seed is subjected to health testing by germination under quarantine control.

In certain instances, particularly in relation to plant health, measures may not be based on international standards because such standards do not exist: it is not possible to specify in an international standard precisely what controls may be appropriate on bilateral trade in any particular plant or plant product because these controls should depend on the relative pest and disease profiles of the two countries involved. In such circumstances the Agreement on SPS requires measures imposed by the importing country to be based on a risk assessment appropriate to the circumstances, taking into account risk assessment techniques developed by the relevant international organizations. In common with other WTO Members, Mauritius has not prepared detailed and comprehensive risk assessments to support its measures (there are few such assessments even in developed countries).

Visits to the port and airport showed that Mauritius has a very well-developed system of measures applied at the border for preventing the entry of exotic pests and diseases, and the general impression was that resourcing is adequate. As in all countries, incursions of exotic pests and diseases occur occasionally. An infestation of Oriental fruit fly (*Bactrocera dorsalis*), presumably occasioned by a quarantine failure of some kind, was detected in 1996 and subsequently eradicated. *Bactrocera zonata* (peach fruit fly), first detected in 1987, is established and is a serious pest of fruits on the island. Another fruit fly, *Carpomya vesuviana* (costa), also established, was initially detected in 1986. More recently two species of whitefly have become established in Mauritius.

All incoming ships are met and inspected for quarantine pests, and other cargo is also examined. Almost 100,000 containers a year enter Mauritius; among these, all that contain animal or plant products are inspected. There are special protocols aimed at reducing the risk of introduction of sugar cane white grub (*Hoplochelus marginalis*) to extremely low levels. For example, during the relevant season (November to January), a ship coming from the island of Reunion is not permitted to enter port unless it left Reunion during daylight hours when moths could not be attracted to the ship's lights. If necessary the decks of such ships receive a surface insecticidal spray before unloading, or the ships are turned away. Yachts are required to first-port and clear immigration requirements at Port Louis. During the flight season for the moth of the sugar cane white grub, all yachts coming from the island of Reunion are subjected to quarantine inspection.

There are adequate facilities for post-arrival fumigation of consignments at the port using phosphine gas or methyl bromide; provision of an incinerator to destroy quarantine risk material would be advantageous. Inspectors located at the port perform animal health as well as plant health inspection functions.

Quarantine procedures carried out at the airport have been documented in an ISO 9002 quality system. Some 865,000 incoming passengers are processed each year. Cargo holds of incoming aircraft are sprayed on arrival; surface spraying of holds has been proposed. An X-ray facility is available to detect potentially quarantinable materials in incoming baggage on an exceptional basis; acquisition of a dedicated machine is under consideration. The use of quarantine detector dogs could be beneficial when resources permit. The airport is equipped with a new incinerator for quarantine waste including aircraft wastes and seizures from passengers.

There is light trapping to detect exotic insect pests in the vicinity of the airport, but this is not well coordinated. No trapping takes place in the vicinity of the seaport.

Export certification

Apart from laboratory monkeys, day-old chicks and venison, Mauritius does not export significant volumes of animals or animal products. Export of small quantities of venison and value-added poultry products to Reunion would be possible but for the lack of a registered export processing plant meeting the EU requirements applied by Reunion.

For certification of plants and plant products Mauritius appears to have well-developed arrangements which are generally accepted by the authorities of trading partners. Expanding the range of products and destinations may present problems, however, especially if it should prove difficult for the Division of Plant Pathology and Quarantine to draw up an adequate pest list for a product for want of sufficient data from monitoring and surveillance.

A particular concern for food exports derived from plants is the potential impact of EU pesticide residue requirements under which import tolerances for pesticide residues for as many as 450 chemical active ingredients would be set to zero (i.e. the level of detection) from July 2003. In light of this prospect the Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP)[12] has been mandated by the Directorate General for Development of the European Commission to implement a Pesticide Initiative Programme as a matter of urgency. Actions undertaken include the establishment of an information centre in Brussels, development of databases on existing maximum residue limits and pesticide usage, and reduction of the list of 450 to just 100 active ingredients. It is thought that as a consequence of the EU initiative there will be significant demands on the services of analytical laboratories in Mauritius, which should be capable of testing all relevant residues. In this context the Division of Plant Pathology and Quarantine has advised that a project proposal has been submitted to COLEACP by the private sector for the upgrading of laboratory capacity.

Fishery product exports are mainly canned tuna and smoked marlin. These do not cause significant problems in the provision of appropriate certification (except for certification of canned tuna to South Africa). Export of fish requires a permit under the Fisheries and Marine Resources Act 1998.

12 COLEACP – the Europe-Africa-Caribbean-Pacific Liaison Committee – is an inter-professional association of exporters, importers and other stakeholders in the EU-ACP horticultural trade, which is financed by the European Union under the Lomé Convention.

Administrative arrangements for the Agreement on SPS

The main standing mechanism for interagency and intra-agency coordination is an SPS committee on which the key stakeholders in both the public and private sectors are represented and which is convened regularly. During consultations some members of the administration and the private sector (e.g. the Chamber of Commerce and Industry) reported that notifications by other WTO Members are promptly circulated by the SPS enquiry point located within the Division of Plant Pathology and Quarantine, and that there was a good flow of information from this source. Mauritian positions on issues arising are coordinated in the Division of Plant Pathology and Quarantine and forwarded to WTO as appropriate.

Notifications of measures introduced by Mauritius are the responsibility of the Ministry of Foreign Affairs which transmits to WTO notifications coordinated in the Division of Plant Pathology and Quarantine. By September 2002 Mauritius had made nine notifications, of which five were emergency measures.

In respect of the transparency provisions of the Agreement on SPS Mauritius appears to have achieved a high level of compliance with its obligations. Notification and enquiry points are well established and functioning effectively.

The SPS enquiry point is located within the Division of Plant Pathology and Quarantine in the Ministry of Agriculture. The head of the Division attends SPS Committee meetings in Geneva as representative of Mauritius at least once each year; otherwise Mauritius is represented by its Permanent Mission in Geneva. Attendance from the capital requires a substantial commitment of funds, and this is a limiting factor on greater direct involvement. (Many other comparable countries achieve significantly less engagement with the work of the SPS Committee.)

For the dissemination of information and the coordination of all WTO-related activities there is an extensive committee structure set up under the aegis of the Ministry of Industry and International Trade. One element of this is a Subcommittee on Agriculture whose membership includes those agencies with an interest in SPS matters.

Mauritius has not yet had recourse to informal WTO/SPS methods for addressing bilateral SPS disagreements, nor to the formal procedures available under the Dispute Settlement Understanding. However Mauritian authorities are aware of the country's rights under the Agreement on SPS, and have actively considered exercising those rights at least in the example described in box 2.

Box 2

Problem for export of day-old chicks from Mauritius to Kenya

Kenya imposed a ban on the import of day-old chicks from Mauritius, ostensibly because of its concern about the disease avian encephalomyelitis. According to Mauritian documentation, no risk assessment had been carried out, no testing had been conducted, and no notification of the measure had been made to WTO by Kenya. Mauritian authorities, in consultation with the Permanent Mission in Geneva, therefore contemplated various options for obtaining redress including raising the matter as one of current trade interest when the SPS Committee next met. At the same time advice was sought from the secretariat of OIE as to the status of avian encephalomyelitis. In the event the matter was settled privately between the two countries by Kenya withdrawing its ban.

Awareness and understanding of SPS issues

Within the Ministry of Agriculture there is very good understanding of the Agreement on SPS and related issues in the Division of Plant Pathology and Quarantine. The representative of the Division of Veterinary Services in the Ministry of Agriculture commented that there was very little knowledge of the Agreement on SPS in that area. There is apparently some knowledge of the Agreement in the Ministry of Fisheries. In the Department of Health key officers are aware of the Agreement and its provisions, but knowledge is probably not widespread.

In general the level of understanding in the private sector is reported to be low, especially among farmers and other producers. Some private sector representative bodies such as the Chamber of Commerce and Industry and the Chamber of Agriculture seemed to be reasonably well informed as are some commodity (sugar, pineapple) representatives.

Overall there seemed to be even more limited understanding of the role and work of the international standard-setting bodies, particularly Codex and IPPC. It can be presumed that one reason for this situation is that this work is only rarely directly relevant to the day-to-day concerns of officers in the responsible agencies, and even less so to workers in the private sector. Even in the Department of Health, perhaps the agency which is most directly engaged in using international norms, knowledge of Codex structures and processes is limited.

Anecdotally it was suggested that the level of knowledge in the community at large about WTO, the Agreement on SPS and the international standard-setting bodies is extremely limited. There was widespread support for the proposal that it would be extremely helpful if some training could be provided to improve understanding across the board.

Problems experienced due to SPS measures in export markets

Some SPS impediments to Mauritian exports were reported:

- The lack of abattoirs that meet EU standards, thus preventing export of albeit small quantities of venison and chicken products to Reunion. Reunion applies French (and therefore in this respect at least, EU) law.
- The lack of a fish processing plant eligible to export smoked marlin to the EU.
- An unnecessary requirement for fumigation of flowers exported to Japan. Supposedly this is more likely to occur if flowers are being exported at times when domestic supplies in Japan are plentiful.
- Occasional rejection of export consignments of horticultural products because of the detection of quarantine pests.
- Restrictions on entry of day-old chicks into Kenya (see box 2).
- The impending EU restrictions on pesticide residues.
- A continuing ban on export of chillies to Reunion on account of *Bactrocera dorsalis*, even though this pest has been eradicated.
- Conformity assessment procedures for import of canned tuna by South Africa (see box 3).

Box 3

Problem for export of canned tuna to South Africa

Following buyers-sellers meeting on fish and fish products held in Cape Town, compliance with the food safety requirements of SABS was identified as a major non-tariff barrier to the development of exports of canned tuna from Mauritius to South Africa.

Consequently the International Trade Centre (ITC) organized a mission in February 2002 to inspect the local company to see if it could meet SABS food safety standards and to assist in negotiating a technical agreement between SABS and the corresponding regulatory authority in Mauritius. The outcome is detailed below.

In the short term:

The canned tuna would be accepted in South Africa subject to the condition that each consignment be inspected.

In the medium term:

The Department of Veterinary Services would have to be accredited as an inspection body and the food laboratory of MSB would have to be accredited as a testing laboratory.

Without detailed investigation it is difficult to comment on each of these situations. It may be said that in some instances, such as rejections of shipments because of detection by the importing country of quarantine pests, it is not uncommon for an SPS barrier of this kind to be encountered in the course of trade and it may well be justifiable. With respect to the issue of EU requirements for meat and fish processing plants exporting to Europe, there are certain aspects in which the relevant EU standards are stricter than the international norms. However it is not known whether it is in these particular aspects that some Mauritian plants have failed to reach eligibility.

As to the fumigation requirements for flowers consigned to Japan, and also for the barrier preventing entry of chillies into Reunion, the merits of each situation could be established only by an empirical investigation; but a priori it appears unlikely that deviation from a relevant international standard lies at the heart of either issue.

Needs assessment for international standards

In general, responsible agencies in Mauritius are satisfied with the existing suite of international standards, guidelines and recommendations. The Department of Health is happy to use Codex norms as the basis of Mauritius's food standards. According to the Division of Veterinary Services, the measures for which it has responsibility are all based on OIE norms. The Division of Plant Pathology and Quarantine follows the international standards for phytosanitary measures made under the aegis of IPPC when it is formulating measures for the protection of plant health. However, as noted previously, a particular concern for food exports derived from plants is the potential impact of impending EU requirements for elimination of tolerances for pesticide residues for as many as 100 chemicals. The EU initiative reflects a judgement that the existing tolerances are not established on the basis of adequate technical data. This problem could be overcome if appropriate maximum residue limits were set within the Codex system.

There were some comments concerning what are perceived as the EU's strict requirements for abattoirs and processing plants sourcing meat and fish to the EU, but these latter requirements are not to be confused with the more moderate international norms in this field.

Level of participation in international standard-setting organizations

The two main determinants of the extent of participation, or the lack of it, are the perceived relevance to Mauritius of the activities of the international standard-setting bodies and the availability of resources to support travel, the development of useful contributions on issues which are often technically complex, and so forth.

Thus, for example, the limited capacity of the Division of Plant Pathology and Quarantine to service international activities is, as a matter of priority, devoted to participation in the SPS Committee rather than to IPPC-related matters. In general, access for relevant officers to the websites of the international standard-setting organizations, and to the WTO website, is good.

CAC

The Codex contact point for Mauritius is the Chief Agricultural Officer within the Ministry of Agriculture. There is a National Codex Committee to play the coordinating role between the various interested parties (for example, the Principal Veterinary Officer is a member, as are officers of the Ministry of Health). The National Codex Committee has subcommittees appointed to deal with subject areas of special interest such as meat and fish, and fruit and vegetables. The first of these subcommittees prepared national codes of practice on artisanal fishing, fish and fishery products, meat and fish shops, and poultry slaughter. However, given the very limited engagement of Mauritius with Codex activities, these latter subcommittees are apparently no longer being used, and the National Codex Committee has only a limited role.

There is no direct participation in any of the bodies that formulate standards, guidelines and recommendations for food within the Codex structure. Officers of the Department of Health said that they did, however, receive documents circulated by the Codex secretariat to member Governments for comment and that comments were submitted where necessary through the Codex contact point. There is no participation by Mauritius in the Codex Regional Coordinating Committee for Africa.

IPPC

Because of limited capacity for international activities, the Division of Plant Pathology and Quarantine participates in the SPS Committee rather than at IPPC meetings. Although there is no participation in the meetings of the Interim Commission on Phytosanitary Measures, relevant matters arising are discussed with South Africa's representative on that body.

OIE

The Principal Veterinary Officer participates fully in the annual meeting of the International Committee of OIE and in other meetings as appropriate. Mauritius also participates actively in the OIE Regional Commission for Africa. There is no committee for national coordination on OIE matters; this responsibility is handled by the Principal Veterinary Officer.

Participation in regional arrangements for standard-setting

An important initiative is the Regional Crop Protection Program covering Mauritius, the Comoros, Madagascar, Reunion and the Seychelles (countries of the Indian Ocean Commission). These countries have a number of phytosanitary problems in common and accordingly regional solutions are being sought. Among the key problems identified for attention are:

- Difficulties in implementing phytosanitary regulations, for example in regard to the use of pesticides,
  - to be addressed by development of environment-friendly crop protection techniques, training of operators, etc.;
- Difficulties in identifying plant pests,
  - to be addressed by sharing of national pest lists, development of regional competencies in crop pests and diseases, etc.;
- National variations in phytosanitary legislation,
  - to be addressed by the harmonization of national phytosanitary standards and regulations at the regional level.

A regional programme of applied research into fruit flies has provided a successful model.

SADC and COMESA provide venues for joint consideration of SPS issues and for finding solutions to problems on a regional basis where appropriate. However, in general, Mauritius is not actively in favour of the development of regional SPS standards as an alternative to the global standards of OIE, IPPC and Codex.

Constraints on effective participation in international standard-setting organizations

The constraints on direct participation in the international standard-setting bodies are obvious ones. The cost of attending the annual meeting of the OIE's International Committee is met by the Government of Mauritius. No assistance is available as a matter of course for attendance at CAC, the Interim Commission on Phytosanitary Measures and related meetings. The effect of this budget constraint is reinforced by the scarcity of professionally qualified personnel who are also familiar with the procedures of the organizations and who would therefore be able to make a worthwhile contribution to the work and influence outcomes in Mauritius's interest. In any case, the perception of relevant agencies, and the private sector (insofar as it is aware of international standard-setting), is that in general the established international norms are not a significant impediment to the achievement of Mauritius's goals.

Specific technical assistance requirements

Training requirements

Several of the agencies consulted in Mauritius expressed a need for training of staff in relation to international standards and the Agreement on SPS.

- The Division of Veterinary Services has proposed that its staff need training in practices and techniques for certifying animal and fishery products for wholesomeness, as one element of a general upgrading of the systems for control of establishments in this area.
- The Division of Plant Pathology and Quarantine has identified a need for training of technical and scientific personnel (microbiologists, epidemiologists, taxonomists and so forth) in relation to pest risk assessment and quarantine procedures.
- The Agricultural Research and Extension Unit has proposed the strengthening of its Extension and Training Division through training in the fields of international standards, marketing requirements and production technology.
- The Ministry of Fisheries has a requirement for training of a number of officers in systems for quarantine clearance and in the application of HACCP principles and techniques.
- The Ministry of Health has proposed that some of its officers spend periods of time attached to counterpart agencies in developed countries to observe inspection of foodstuffs at the international border and inspection of food establishments.

It was suggested that a combination of in-country seminars (e.g. as provided by the WTO Secretariat) and training overseas could be used.

'Soft' infrastructure development

Prospects for growth and diversification of Mauritius's agricultural exports lie mainly with plants and plant products. For raw and semi-processed products, access to foreign markets will often be possible only if specific phytosanitary requirements are met, for instance risk assessment by the importing country after the exporting country submits a list of pests and diseases which may be associated with the product.

Compilation of such lists requires expertise in entomology, plant pathology and related disciplines as well as in surveying and monitoring. Some identification work may have to be performed in specialist laboratories of developed countries. Mauritius has some limited capacity to compile pest lists, but it does not have particular expertise in the field.

The development of pest lists for Mauritian plant products needs to be done in a targeted way. It would be wasteful to prepare lists with the object of obtaining entry to markets for products which for one reason or another cannot be profitably exported. It is difficult to predict confidently where a particular product will find an export market. Nonetheless development of a pest list and its submission to potential importing countries needs to be done in time to permit access conditions to be established so that trade can flow when exportable production comes on stream. Given the relatively small size of Mauritius's domestic market, the path to exporting to the more lucrative markets of developed countries may, for some products at least, involve exporting to regional markets first.

Similar considerations apply to situations where it is necessary to establish the efficacy of treatments (fumigation, chilling, vapour heat treatment and so forth) in order to comply with import conditions.

This analysis suggests that technical assistance in this field is justifiable, but that it ought to be provided on the basis of a carefully considered assessment of Mauritius's real needs and with the emphasis on specific actual and potential

export products. When assistance is then provided (for example through successive visits by consultant experts over a period of time), it could be done in such a way that it not only produces the requisite pest list(s) but also simultaneously incorporates a training component so as to build up the capacity of the Mauritian authorities. A technical assistance project in this field might also include a component for auditing of progress at a suitable interval after the primary training has been provided.

Mauritius has not prepared pest risk analyses which it could present to justify import restrictions on plants and plant materials. In the longer term it will need the capacity to conduct pest risk analyses progressively over time as part of a wider programme of capacity building in quarantine functions within the Ministry of Agriculture.

A different kind of 'soft' infrastructure development was put forward for consideration by the Agricultural Research and Extension Unit, which has proposed a campaign to sensitize producers on the issues surrounding international standards using a video developed for the purpose as well as printed information and a series of workshops.

'Hard' infrastructure development

From the various consultations held with government organizations in Mauritius it is apparent that there is a number of laboratories which are variously equipped and which have their own workloads. A number of agencies or sub-units identified have specific needs for additional or replacement equipment for laboratories.

It was also advised that the Ministry of Agriculture has been funded to establish a new food laboratory, and the Ministry of Health provided information on the equipment and personnel needs for a proposed modern food microbiology laboratory.

Clearly it is also a matter of priority that MAURITAS, the official accreditation body, should become operational as soon as possible so that laboratory results obtained in Mauritius can have international recognition.

Overall assessment

During such a short mission it was not possible to conduct a fully informed and thorough evaluation of the situation, and any conclusions drawn are necessarily impressionistic. However, in conjunction with similar studies of other countries, this examination of Mauritius can make a useful contribution to identifying issues which need to be addressed by multilateral organizations and donor countries.

Like other countries Mauritius has had to make choices about how best to allocate limited resources to the many potential uses in the broad field of sanitary and phytosanitary control. These choices include decisions on the extent of involvement in the activities of WTO and the international organizations that set sanitary and phytosanitary standards. Against the background of current trade patterns and Mauritius's rights and obligations under the Agreement on SPS, the broad picture appears to be that Mauritius has given appropriate priority to engagement with other WTO Members through the SPS Committee and has been sensibly selective in its involvement with CAC, OIE and IPPC. Nevertheless it is apparent that much more could usefully be done, given additional resources and provided that care is taken to achieve the best possible internal coordination of infrastructure development and maintenance and that duplication is minimized.

Chapter 21

Namibia

Agricultural and food exports

As for many small developing countries, the products Namibia is able to export are primary products such as minerals, or agricultural or fish products. Namibia's agricultural and livestock, meat and fish products dominate food exports.

Namibia's national accounts indicate that in 1998 agricultural and fisheries exports, both primary and processed, contributed some 36.5% of total export earnings (compared to ores, minerals and electricity at 36%, and other manufacturing at 7.2%). This compares with the contribution of agricultural and fisheries exports in the early 1990s of about 25%. Growth has mainly been due to the fisheries and fish processing sector. Environmental factors such as drought and available marine resources influence exports on a year-to-year basis.

Table grapes are now being produced in the south close to the South African border and there are small-scale agricultural activities in the north close to the border with Angola. Major export markets include:

- South Africa for live cattle (mostly weaners), live sheep, live goats and bone in, de-boned or canned meat;
- The EU for de-boned frozen beef;
- Spain for hake;
- Japan for crabs and lobster;
- West African countries for horse mackerel;
- South Africa for canned pilchards;
- South Africa and the EU for grapes; and
- South Africa and to a small extent other SADC countries for pharmaceutical plants, oranges, mangoes, melons, prickly pear and decorative plants.

Namibia's fish and fish product exports have grown strongly since independence. They now represent around 10% of GDP compared to 4% in 1990.

Administrative arrangements and responsibilities for SPS measures

The Directorate of Veterinary Services of the Ministry of Agriculture, Water and Rural Development is responsible for SPS matters relating to livestock and their products. The Directorate of Veterinary Services aims to maintain and promote optimal animal health, production and reproduction in order to

ensure that Namibian livestock and livestock products enjoy secure access to local and foreign markets. The directorate is responsible for animal disease surveillance, disease control and prevention and animal health-related extension as well as veterinary public health.

The Ministry of Fisheries and Marine Resources is responsible for the optimum utilization of Namibia's marine and freshwater fishery resources. The Ministry of Trade and Industry (through its Directorate of Internal Trade) is designated as the competent authority for handling fish and fish products, and is responsible for SPS issues relating to these products. The Ministry of Trade and Industry has contracted SABS to act as the inspection and certification body. The costs of SABS are recovered from the industry via a per-kilo levy plus documentation charges. Namibia uses the South African Standards Act of 1962, which regulates fish and fish products. The Ministry of Trade and Industry has prepared draft legislation on handling and processing of fish and fish products with a view to enacting new Namibian legislation.

The Ministry of Trade and Industry has no scientific capacity to support SPS matters relating to fish and fish products. It does not participate in the meetings of OIE, nor can SABS be expected to act totally on Namibia's behalf in this respect. For animal health matters in general, the Directorate of Veterinary Services of the Ministry of Agriculture, Water and Rural Development is Namibia's delegate to OIE. The arrangements with SABS provide a viable means of ensuring that appropriate certification can be provided so that Namibia can, for example, access the EU market. However, these arrangements are not ideal and have a degree of fragility associated with them. Consideration was being given to Namibia's assuming total responsibility for fish export certification. However, implicit in this will be the need to employ qualified staff and to be able to access appropriate laboratory facilities.

The Directorate of Extension and Engineering Services of the Ministry of Agriculture, Water and Rural Development is the responsible authority for phytosanitary matters. Two scientists and 25 agricultural extension technicians designated as plant protection officials represent the resources available.

The responsible authority for food safety is now the Ministry of Agriculture, Water and Rural Development. Previously it was the Food Hygiene and Quality Control Unit of the Sub-division of Environmental Health, in the Directorate of Primary Health Care. However, no changes have been made to the Ministry of Agriculture, Water and Rural Development to reflect this increased responsibility.

Assessment of SPS infrastructure

Namibia has a very limited capacity in relation to phytosanitary matters and food safety in terms of compliance with the Agreement on SPS. Its veterinary capacity is small but able to maintain appropriate levels of control over animal health matters as they relate to meat. Very limited expertise and laboratory capacity exists in relation to fish and fish products, and SABS is relied upon for technical advice and expertise. Many foods are imported into Namibia including fruit, vegetables and meat, the majority being sourced from South Africa. With respect to animal and animal products (including fish products), while a formal risk assessment process does not exist controls are nevertheless imposed on meat in particular with a view to maintaining Namibia's animal health status and hence its access to the EU and other markets. The measures imposed on meat imports do not appear to be contrary to the principles of the Agreement on SPS.

Import inspection and quarantine activities are undertaken by customs officers, who have been provided with some training. There is recognition within the Ministry of Agriculture, Water and Rural Development that the use of customs officers is not ideal, but resource constraints prevent the development of a dedicated quarantine and import inspection service.

Much of Namibia's legislation is not in compliance with the Agreement on SPS in that it is not based on the principle of risk analysis. Efforts are being made to develop and introduce contemporary legislation; however, these efforts are hampered by a critical lack of resources.

Export and import certification systems

Veterinary certification based on inspection by Namibia is provided for all meat and live animal exports. Meat and live animal imports are subject to scrutiny by Namibian veterinary authorities.

Fish export inspection and certification activities are carried out under contract by SABS on behalf of the Ministry of Trade and Industry. Under this scheme SABS is responsible for inspection and testing of chilled and processed fish. Companies are informed at least two weeks in advance before the inspections are done. Fish undergoes microbiological tests and is checked for the presence of heavy metals, according to the requirements in the importing countries. If the requirements are met, SABS issues a certificate of compliance which is submitted to the Ministry of Trade and Industry with a recommendation whether the company should be allowed to export or not. Upon receipt of a positive recommendation from SABS, the Ministry of Trade and Industry issues a permit to the company to export the product. Companies are regularly inspected by SABS; at least once a year a complete evaluation of the plants is done. Four officers are located at Walvis Bay and these inspectors undertake travelling inspection of registered fish and boat establishments.

Consideration is being given to Namibia assuming responsibility for export fish inspection and certification activities. This would be done through the future Namibian Standards Institute, which will take over from the current Namibian Standards Information and Quality Office. The Namibian Government hopes to establish its own capacity to handle conformity assessment of exports. At the same time SABS has been discussing the possibility of re-establishing the Walvis Bay Laboratory as a local entity.

Laboratory testing facilities

Veterinary laboratory facilities are available to support Namibia's meat and livestock certification activities. Laboratory facilities are not available to support phytosanitary certification.

In relation to fish exports some simple laboratory capacity (e.g. water testing and organoleptic testing) is available at Walvis Bay; however, all complex tests (histamines and heavy metals) are undertaken by SABS in Cape Town and samples must be sent by air for this purpose. The fish industries visited indicated that sometimes the testing of fish in South Africa caused delays in the receipt of results, thus affecting their business. If an enterprise in Namibia has to get services from South Africa, its potential to compete in the market there may be affected by the increased costs associated with imported services. The industries therefore felt that it would be better if chemical tests were done locally by SABS or by some other agency.

Surveillance activities

Regular surveillance is undertaken to support Namibia's meat and live animal export industries. The animal health status of Namibia has been documented since 1919.

Surveillance of wild caught fish, other than resource management, histamine and heavy metal residue analysis, and bacteriology, is not undertaken.

The Ministry of Agriculture, Water and Rural Development has no direct departmental capacity to undertake surveillance activities although a pest monitoring system was proposed in 1998. Namibia has one entomologist and no qualified plant pathology, virology, nematology or bacteriology staff. The National Botanic Research Institute has records of weed incursions dating from 1960. Efforts have been made to introduce fruit fly trapping in certain areas via industry. However, the results have been variable.

Risk analysis

A degree of veterinary capacity exists to undertake risk analysis and, as far as possible, OIE guidelines are followed. However, virtually no capacity exists to undertake structured phytosanitary risk analysis or food risk analysis. New food legislation has been under development for some time.

Controls on agricultural chemicals and drugs

Minimal control is exercised over agricultural chemicals and drugs. A private sector organization exercises some controls at Walvis Bay.

Control and eradication of pests and diseases

Namibia has the veterinary capacity to control some pests and diseases. For example, it has active foot and mouth disease (FMD) controls. Namibia has access to the EU market and maintains stock movement controls, dual fences for a distance of over 1,000 kilometres, and vaccination north of the stock fence in order to maintain the (vaccination free) FMD free status of the country. Very limited capacity exists to control pests and diseases.

Administrative arrangements for the Agreement on SPS

The national notification authority is the Ministry of Trade and Industry. However, the Ministry of Agriculture, Water and Rural Development has established direct enquiry point links in order to facilitate timely consideration of relevant issues. Resource constraints in both the Ministry of Trade and Industry and the Ministry of Agriculture, Water and Rural Development have limited effective communication and coordination between these two agencies. Regular (monthly) stakeholder meetings are held by the Ministry of Agriculture, Water and Rural Development. Because of Namibia's limited agricultural production, key issues are easily identifiable. Regular reporting via OIE is maintained. There had been no SPS notifications at the time of the review. Concerning phytosanitary and food matters, resource constraints are believed to have precluded any notifications being made.

National enquiry points have been established as follows:

- For general issues: Directorate of Planning, Ministry of Agriculture, Water and Rural Development;

- For phytosanitary and Codex issues: Directorate of Extension and Engineering, the Ministry of Agriculture, Water and Rural Development;
- For animal health issues: Chief Veterinary Officer, the Ministry of Agriculture, Water and Rural Development.

Effective participation is extremely difficult because of both human and financial resource constraints. A national SPS Committee is operational within the Ministry of Agriculture, Water and Rural Development. Resource availability within the Ministry is then the issue.

Namibian plant and animal authorities recognize the potential benefits from participation in, for example, the standards development functions related to the Agreement on SPS. However, human and financial constraints effectively preclude substantive participation. Even before the United Kingdom FMD outbreak, Namibia was unable to mount an effective campaign to secure entry to the EU market for bone-in meat sourced from its OIE-recognized FMD-free area. Preparing the necessary material to support an application for access to the United States market for meat is likely to take many years unless external technical assistance is provided.

Namibia's ability to prepare and present material to support an application to the United States market for its grapes is severely limited even though the grapes are literally grown alongside South African grapes which are able to access the United States market. Transportation channels are understood to be identical to those of South African grapes.

Awareness and understanding of SPS issues

Awareness is good among the very limited number of officers of the Ministry of Agriculture, Water and Rural Development with responsibilities in this area. A basic understanding of the principles of the Agreement on SPS exists within the Ministry of Trade and Industry as it has policy responsibility for fish exports.

The Meat Board, Meatco and the Agronomic Board of Namibia appear to have a very good awareness and understanding of the Agreement on SPS.

There is no formal organization representing the fish export industry although an informal 'Hake Association' exists. Based on discussions with two fish export companies, understanding and awareness appears very limited, with few people having ever read (or being aware of) the Agreement on SPS.

There is no formal association representing specific plant industries. It would be reasonable to assume that, with the exception of the Agronomic Board of Namibia, knowledge in this area is very limited.

The Ministry of Agriculture, Water and Rural Development provides information in respect of meat and live animal exports. In respect of fish exports the main source of information in relation to country requirements appears to be importers of these products. The Ministry of Agriculture, Water and Rural Development has very limited capacity to disseminate information of this nature to stakeholders.

Problems experienced because of SPS measures in export markets

The EU has classified Namibia as able to export only boneless meat (from its FMD free area) to the EU. As a result, Namibia has been unable to export certain high-value beef cuts to the EU market. Namibia would like to export

bone-in lamb to the EU, as the carcass size is fairly small and not suited to economic boning. Most of Namibia has FMD-free status from OIE, and appropriate controls exist. In another instance, Namibia's exports of ostrich meat were impeded while EU authorities were redefining standards for Newcastle disease-free meat.

Since 1997 Namibia has been exporting small volumes of beef to Norway where it enjoys duty free access. Norway has zero tolerance of salmonella, so meat destined for Norway must be tested in the abattoirs and factories in Namibia, and again in Norway. In 1999 Namibia had a two-day ban imposed by Switzerland because of the presence of hormonal growth promotants in beef. In the same year Namibia applied for access to the United States meat market. Resolving this access issue is likely to take considerable time.

It is understood that in the case of bone-in meat the EU has imposed requirements over and above those recommended by OIE. Namibia does not have the capacity to either represent this issue more strongly or to utilize available dispute settling mechanisms.

The rapidly expanding Namibian grape industry began to seek entry into the United States market for cooled fresh table grapes in 1998. According to the USDA's phytosanitary unit (APHIS) it will be necessary to conduct two years of entomological trapping research, followed by two years of analysis and evaluation, and a further year of administrative procedures before access may be granted. This process has yet to start because of lack of research capacity. Namibia has access to the EU market for grapes.

The Namibian grape application to access the United States market has some interesting features. It is understood that the grapes are grown in the southern region adjacent to the border with South Africa. The border in parts is the Orange River, which is approximately 100 metres wide. A reasonable expectation is that the grapes would be exported via South Africa.

Entre Bacteriosi has been identified in shipments of fish exported to Spain and this has led to the imposition of controls.

Needs assessment for international standards

The international standards for meat and livestock exports broadly meet Namibia's needs. The international phytosanitary standards cannot be complied with by Namibia because of human and financial resource constraints.

Namibia's needs are similar to those of many developing countries in that it lacks the necessary scientific phytosanitary capacity. The only feasible way for countries such as Namibia to participate in the development and revision of international standards is via targeted technical assistance or through a regional organization.

Level of participation in international standard-setting organizations

CAC

The focal point for CAC is the Directorate of Extension and Engineering Services in the Ministry of Agriculture, Water and Rural Development.

Namibia is a member of CAC but has just one person covering Codex and phytosanitary issues. If additional resources were available, participation in the annual meetings would be possible. However, participation in technical committees is beyond the present human and financial resources available to Namibia.

IPPC

Namibia is not yet a signatory to IPPC. Its focal point for IPPC is the Directorate of Extension and Engineering Services in the Ministry of Agriculture, Water and Rural Development.

OIE

Namibia's focal point for IPPC is the Directorate of Veterinary Services in the Ministry of Agriculture, Water and Rural Development. Namibia is a member of OIE and participates in its annual meetings. However, its capacity to be involved beyond this level, for example in technical committees or in an administrative role, is severely limited by human and financial resource constraints.

In the case of livestock, meat, fish and a limited number of plant products, the responsible officers in Namibia are well aware of the national interest involved. The national SPS Committee within the Ministry of Agriculture, Water and Rural Development assesses the benefits of participation; it is then a question of whether resources are available. The benefits of participation are recognized by the responsible officers, but the resource limitations effectively preclude participation.

There are coordination arrangements between agencies. For example, when responsibility for Codex matters was moved to the Ministry of Agriculture, Water and Rural Development, the Government directed that close consultative arrangements be maintained between the Ministry of Agriculture, Water and Rural Development and the Ministry of Health and Social Services. There are some coordination problems between the Ministry of Trade and Industry and the Ministry of Agriculture, Water and Rural Development. Effective coordination between agencies responsible for SPS controls is severely limited by resource constraints.

Namibia is represented at the annual OIE Commission meetings. However, beyond that its capacity to be involved in international phytosanitary and food meetings is limited by resource constraints. Namibia does not have a Mission in Geneva because of resource constraints. Some African countries do have single-person representation in Geneva, although additional specialist expertise is important when it comes to representing SPS issues. Perhaps a regional approach should be explored in which specific technical expertise would be made available to represent technical issues on behalf of a group of nations.

Participation in regional arrangements for standard-setting

SADC has been active in trying to eliminate tariff and non-tariff barriers in relation to intra-SADC trade. Some efforts have been or are being made to harmonize SPS standards between member countries. A dispute settling mechanism has also been established.

USAID is funding a project within SADC in support of the SADC Trade Protocol. The outcome of this project is meant to support efforts towards

harmonization of SPS measures in the SADC region. An SPS Committee of SADC met for the first time in May 2000 with a view to facilitating the implementation of the SADC Protocol on Trade. However, very limited resources are available for the SPS task.

Links with SADC provide the opportunity for some harmonization of standards and a capacity to represent issues on behalf of more than one country in sanitary and phytosanitary matters. The African Phytosanitary Council recognizes the need to harmonize standards between countries. However, limited resources preclude effective action. Namibia participates in regional meetings when resources permit. In food matters limited harmonization of food standards occurs through SADC.

Constraints on effective participation in international standard-setting organizations

Namibia faces constraints in terms of both financial and human resources. The cost of participation for a single officer for a one-week meeting in Europe is around US$ 5,000. Namibia's phytosanitary human resources totals two officers. One of these officers also has responsibility for Codex matters. In the case of animal health matters, Namibia is able to send one officer to annual OIE Commission meetings.

Physical infrastructure such as laboratory capacity is extremely limited for fish, and virtually non-existent for plants and plant products, hampering the capability for effective participation in the development of international standards.

Specific technical assistance requirements

Technical assistance is received from a number of development assistance organizations. However, generally it is not coordinated and not well targeted. Some training and participation assistance has been provided but this is not addressing core needs.

Resources are needed to overcome constraints, as are strengthened institutional arrangements. Key officers within the Ministry of Agriculture, Water and Rural Development and key industry organizations understand the implications of the Agreement on SPS for Namibia. The private sector, with the exception of the meat industry and the Agronomic Board, generally does not have a good understanding of the Agreement on SPS and related standard-setting organizations.

Very significant training needs are evident; however, generally it is not realistic to train in the absence of more appropriate resourcing. For example, training in risk analysis is of limited use to a country if no specialists are available to provide specific scientific advice. Assistance given in this area may best be directed at specific problems Namibia is experiencing in relation to market access. Mechanisms that identify priority needs involving both the private sector and Government must underpin this assistance.

Human capital, regulatory systems, administrative structures, and the education of stakeholders are needed in Namibia. Legislation is also in need of updating.

Extensive 'hard' infrastructure targeted towards specific opportunities for Namibia is needed. Priority determination will be important in ensuring that hard infrastructure development is directed towards the areas of greatest need. Addressing specific problems that have been identified as priorities will highlight specific requirements.

Specific product assistance is an option for the key products Namibia exports or has good potential to export, such as meat, fish, and some horticultural products. This could include undertaking pest surveys and preparing information needed to support an access request or to support the tackling of what may be an unreasonable SPS measure.

Overall assessment

Namibia maintains viable meat and fish export industries in so far as SPS requirements are concerned. However, its capacity to diversify export industries particularly into plant products is severely constrained by the available resourcing.

Substantial opportunities exist for both short-term and long-term technical assistance although care must be taken in planning and implementing such assistance to ensure its sustainability. Options such as regional capacity strengthening and specific product technical assistance warrant consideration.

The involvement of Namibian officials in SPS-related international forums can be achieved only if the available resources are increased.

Chapter 22

Uganda

Agricultural and food exports

Uganda's major exports include coffee, tea, tobacco, cotton and fish harvested from Lake Victoria. Other exports including non-traditional cash crops such as fresh fruits and vegetables are valued at less than US$ 10 million per year. The EU is the most important destination for Uganda's exports, representing over 40% by value. The next most significant markets are COMESA member countries, representing about 19% by value of exports.

Coffee and tea have been traditional exports and are likely to remain so in the years ahead. They have not been subject to problems in terms of SPS measures imposed by importing countries. Fish exports are strongly influenced by the sanitary requirements of the EU, but perhaps equally by the sustainability of the fish resources in Lake Victoria.

Transportation remains a key issue in terms of export competitiveness with Uganda having no sea access. Substantial quantities of fish are air freighted to the EU at a relatively high cost. The road and rail infrastructure is generally not strong.

Many countries that Uganda can access with relative ease produce similar products and hence export competitiveness is an issue.

Administrative arrangements and responsibilities for SPS measures

The Uganda National Bureau of Standards (UNBS) is the national enquiry point under the Agreement on SPS. As indicated below, the Ministry of Agriculture, Animal Industry and Fisheries is responsible for both animal health and phytosanitary matters. The Ministry of Agriculture, Animal Industry and Fisheries operates with a central staff of approximately 300 officers who in turn work through district government structures. There appear to be considerable coordination difficulties between national agricultural authorities and district authorities. E-mail and Internet facilities are not common, and even telephone and facsimile communication can be difficult. Resources to facilitate travel are extremely limited.

The animal health area of the Ministry of Agriculture, Animal Industry and Fisheries is responsible for SPS matters relating to livestock and their products. It also assumes responsibilities in the area of aquatic animal health although the primary responsibility for export certification rests with the Fisheries Department of the Ministry of Agriculture, Animal Industry and Fisheries. The animal health area is responsible for animal disease surveillance, disease control and prevention and animal health-related extension as well as veterinary public health.

Formerly UNBS was the competent authority for fisheries products. However, the fisheries area of the Ministry of Agriculture, Animal Industry and Fisheries is responsible for resource management issues relating to fisheries and for the certification of exports of fish and fish products. In terms of specific SPS matters, the responsibility rests with the animal health area of the Ministry of Agriculture, Animal Industry and Fisheries. Fish Quality Regulations were prepared in 1998 based on the requirements of the EU. The intent of these regulations was to maintain access for fish exports to the EU market.

The crop protection area of the Ministry of Agriculture, Animal Industry and Fisheries is the responsible authority for phytosanitary matters. It is responsible for the regulation of agrochemicals, seeds and plant varieties, clearance of plants or plant products for import, and export, monitoring, surveillance, diagnosis and control of plant pest epidemics.

Uganda is not yet a signatory to IPPC. However the Plant Protection Act is regarded by plant protection officers as conforming to the principles of IPPC in that access decisions can be made having regard to the phytosanitary risks involved.

The responsible authority for food safety is the Ministry of Health but district authorities have responsibility for implementing controls. There is a Food Hygiene Advisory Committee which includes representation from the Ministry of Agriculture, Animal Industry and Fisheries. The National Codex Committee, comprising representatives from various organizations, deals with Codex matters. Approximately 40 food standards have been developed and have been published by UNBS. The development of food standards has been prioritized, for instance there are standards for infant formulas and labelling. Where technical input (e.g. a maximum residue level) has been required as part of standards development, Codex standards have been used, as there is virtually no capacity within Uganda to develop scientifically based food standards. The level of enforcement of food standards appeared to be low because of resource constraints.

Assessment of SPS infrastructure

Uganda has a very limited capacity in relation to sanitary, phytosanitary and food safety in terms of compliance with the Agreement on SPS. Unlike Namibia, Uganda does not need to import most of its food, as soil and climatic conditions allow the production of most foods within the country.

Agricultural inspectors in collaboration with customs officers undertake import inspection and quarantine activities. Agricultural inspectors cover animal, plant and fish health aspects while the main priority of customs is revenue. Requirements for foods are taken care of by UNBS. The resources available are too limited to establish a full-fledged quarantine service. There are 28 gazetted border inspection posts, although not all are staffed.

Export and import certification systems

Uganda's meat exports are minimal although veterinary certification is provided. Very limited screening of imported meat products takes place. The land border arrangements are not conducive to maintaining strict livestock movement controls. Fish export inspection and certification activities are provided by the Ministry of Agriculture, Animal Industry and Fisheries in conjunction with private laboratories. The EU has provided capacity building in this area.

Phytosanitary certificates are generally issued based on visual inspection. Limited inspection of imported plant products is undertaken. The land border arrangements are not conducive to maintaining strict controls over the movement of plants and plant products.

Laboratory testing facilities

Veterinary laboratory facilities are limited. In relation to fish exports some simple laboratory capacity (e.g. water testing and organoleptic testing) is available. However, an accredited private sector laboratory undertakes all complex tests (histamines and heavy metals). Uganda was required to prove to the EU by 2002 that systems for monitoring residues were in place.

Laboratory facilities are not available to support phytosanitary certification and pesticide analysis although the research area of the Ministry of Agriculture, Animal Industry and Fisheries has some capacity, the use of which is subject to its own priorities.

Surveillance activities

Vaccination for FMD is undertaken as necessary. Surveillance of wild caught fish other than resource management is not undertaken.

The Ministry of Agriculture, Animal Industry and Fisheries has a small plant protection capacity with specialists in some disciplines. This capacity can be added to by the agricultural research institution and from private sector boards (e.g. coffee). However, any supplementation of capacity is subject to the priority of the 'owning' organization.

Risk analysis

Uganda has a small amount of veterinary capacity to undertake risk analysis, and very limited capacity to undertake structured risk analysis. Some limited risk analysis has been undertaken in relation to the importation of seeds from Zimbabwe and South Africa, rooted rose flower planting materials and other plant imports. Virtually no capacity exists for risk analysis to support food standards. Instead of developing new food standards, Codex standards are used as a basis for national standards. New food legislation has been under development for some time.

Controls on agricultural chemicals and drugs

Minimal control is exercised over agricultural chemicals and drugs.

Control and eradication of pests and diseases

Aside from fish, livestock and meat, exports are minimal. Vaccination is practised when necessary for FMD control.

The crop protection department within the Ministry of Agriculture, Animal Industry and Fisheries exists to control pests and diseases. Some limited capacity exists within organizations such as the Uganda Coffee Development Authority in respect of their own commodities. Major flower exporters tend to rely on both Government and their own specialist capacity.

Administrative arrangements for the Agreement on SPS

Uganda is dependent on agricultural exports, so the Agreement on SPS has great applicability to the country. Over 90% of the country's exports are agriculture based.

The national notification authority is the Ministry of Tourism, Trade and Industry. Paper notification is generally used between agencies with responsibility for SPS matters. Internet access and e-mail are very limited, and even more so outside Kampala and Entebbe. Issues are identified according to particular situations that arise with Uganda's main export commodities. With coffee the commodity board is involved. However, typically with other product stakeholders involvement is via direct contact by the Ministry of Agriculture, Animal Industry and Fisheries with the stakeholder.

In the case of animal health matters, regular reporting via OIE is maintained. Limited capacity to comply with the Agreement on SPS has restricted notifications being made. Only one notification had been made by September 2002.

A national enquiry point has been established within UNBS. The plant protection area of the Ministry of Agriculture, Animal Industry and Fisheries is responsible for phytosanitary matters and the animal health area for animal health issues.

Effective participation in international SPS forums is extremely difficult because of financial resource constraints. However, Uganda is able to attend and participate in the annual OIE Commission meetings. Decisions in relation to participation in the Committee on SPS and international standard-setting organizations for SPS matters are made according to available resources.

The available dispute settlement procedure has not been utilized. The available human and financial resources are the prime reason for this.

Awareness and understanding of SPS issues

Government officials have a reasonable understanding of SPS issues in relation to sanitary, phytosanitary and food issues. Most of this knowledge has been drawn from workshops and training seminars. With regard to private sector organizations, a very limited understanding of SPS issues generally exists. The exceptions are generally commodity boards (e.g. coffee), which tend to be aware of the principles of the Agreement on SPS.

The Ministry of Agriculture, Animal Industry and Fisheries provides information related to sanitary matters in respect of fish exports to the private sector. In relation to phytosanitary matters the Ministry has limited capacity to disseminate information to stakeholders.

Problems experienced because of SPS measures in export markets

Flowers are exported to the Netherlands and then sent on to destinations such as the United States and Japan. The presence of insects has been detected a number of times but the limited capacity available has contained the situations to individual shipments.

Fish exports to the EU were stopped in 1998 because of the presence of cholera and standards that were assessed as not meeting the requirements of the EU. As a result the price received for Nile Perch dropped from US$ 4 per kilogram to US$ 2 per kilogram. Since exports have been able to resume the price has returned to a level of US$ 3.60 per kilogram. Employment in the industry was reduced by approximately 50% while the 1998 problems were being rectified. The relevant EU directive is the prime norm Uganda's fish exporters adhere to and exports of fish have resumed since compliance with the EU directive.

The scientific capacity and resources available to veterinary and phytosanitary matters within Uganda are limited and as such affect Uganda's ability to respond to specific problems raised in relation to fish product exports.

Needs assessment for international standards

With regard to SPS capacity in Uganda, specific country requirements such as those of the EU in relation to fish are more relevant than current international standards.

The small number of food standards that exist can be considered broadly appropriate as they are based on Codex standards. Codex standards are suitable benchmarks for Uganda although the capacity to implement them is extremely limited.

Uganda has an institutional framework able to develop limited standards. The capacity of this framework is limited at present. Uganda is in the process of developing further standards and, for example, Codex standards will prove useful benchmarks. The relevance of standards is related to the scientific capacity of Uganda to implement and monitor adherence to these standards.

Level of participation in international standard-setting organizations

CAC

The focal point for CAC is UNBS. The annual meeting and possibly four other meetings are attended although resources generally preclude attendance at technical committee meetings. The National Codex Committee is instrumental in deciding which meetings should be given priority for attendance.

IPPC

Uganda is not yet a signatory to IPPC and only has observer status. The focal point for IPPC matters is the Ministry of Agriculture, Animal Industry and Fisheries. Uganda has not been able to attend IPPC or IAPC meetings because of lack of funds.

With Uganda not yet a signatory to IPPC very limited participation takes place in relation to plant and plant product standards development.

OIE

Uganda is a member of OIE and participates in annual meetings. The focal point for OIE is the Ministry of Agriculture, Animal Industry and Fisheries. However, its capacity to be involved beyond this level, for example, in technical committees or in an administrative role, is severely limited by human and financial resource constraints.

Uganda has very limited ability to participate in the international standard-setting organizations and influence the development of international standards. Decisions relating to participation in the different activities of standard-setting organizations are taken at government level according to resource availability. The benefits of participation are understood and perhaps not really relevant at this stage of Uganda's development. The general economic status of Uganda is not able to support more than basic participation. As an example, the cost of airfares and travelling allowance for a one week visit to Geneva is estimated at US$ 5,000.

It was difficult to establish how well coordination arrangements operated between the various agencies although the Codex Coordinating Committee appeared to function well. Limited access to the Internet and e-mail would inhibit more effective communication.

Limited scientific and resource capacity influences the ability of Uganda to participate in all international standard-setting organizations. Domestically UNBS operates an effective food standards committee having regard to the resources available.

Participation in regional arrangements for standard-setting

The effectiveness of OIE's regional infrastructure and the limited financial and human resources available to Uganda strongly influence its participation in regional standard-setting bodies.

The Inter-African Phytosanitary Council recognizes the need to harmonize standards between countries. However, limited resources preclude effective action. Uganda participates in regional meetings. The council apparently does not have the capacity to argue specific issues on behalf of countries, and is concentrating on harmonizing standards.

The limited scientific and resource capacity of Uganda provides a significant barrier in terms of participation in regional food standards development.

Constraints on effective participation in international standard-setting organizations

As mentioned, the cost of participation for a single officer for a one week meeting in Europe is around US$ 5,000. As a consequence financial and human resources constraints bear heavily on the ability to participate across all SPS areas.

The available scientific capacity and associated physical infrastructure (e.g. laboratory capacity) are extremely limited for all sanitary and phytosanitary products. The ability to operate effective coordination arrangements is heavily influenced by the general resource constraints.

Specific technical assistance requirements

Technical assistance is received from a number of development assistance organizations. However, generally it is not coordinated and not well targeted. Some training and participation assistance has been provided but these are not addressing core needs. Additional resources (either national or regional or both) are needed to overcome constraints; this assistance needs to be targeted, coordinated and built on a sound foundation in terms of matching commitment from the Ugandan Government.

Key officers within the Ministry of Agriculture, Animal Industry and Fisheries and some key industry organizations understand the implications of the Agreement on SPS for Uganda. The private sector generally does not have a good understanding of the Agreement on SPS and related standard-setting organizations.

Very significant training needs are evident; however, generally it is not realistic to train in the absence of more appropriate resourcing and institutional arrangements. Training should focus on at least 50% private sector participation in terms of personnel present.

Human capital, regulatory systems, education of stakeholders and administrative structures and procedures are all needed in Uganda. Updating of legislation and establishing appropriate record management systems so that information is accessible are also priorities.

Extensive 'hard' infrastructure targeted towards specific opportunities for Uganda is needed. Easier access to potentially useful web-based material is required. However, Internet and e-mail usage is not well established in Ugandan government agencies.

In the case of food hygiene the Ministry of Health has limited laboratory capacity available, which needs to be augmented.

Assistance in meeting the 2002 EU residue requirements may well become a priority for Uganda if exports to that market are to be maintained. Specific product assistance is an option for the key products Uganda exports or has good potential to export. This could include undertaking pest surveys and preparing information needed to support an access request or to support the tackling of what may be an unreasonable SPS measure. Support of this nature should lead to statutory boards or the private sector assuming greater knowledge and responsibility over time.

Overall assessment

Uganda manages to maintain valuable fish, flower and coffee export industries in a situation where financial and human resources are extremely limited, as are administrative structures capable of supporting sanitary and phytosanitary advances.

The effectiveness of further development of SPS capacity in Uganda will be influenced by the extent to which development assistance agencies coordinate their efforts and the responsiveness of the Ugandan Government in terms of building supporting administrative structures.

Regional as well as national capacity building must be considered in order to sustain the efforts of development assistance agencies. The need for scientific capacity is very evident across all sanitary and phytosanitary areas. However, building this capacity so that it can be sustained will depend as much on effective administrative structures as on the availability of qualified personnel and financial resources.