# WORLD TRADE ORGANISATION/SANITARY AND PHYTOSANITARY (WTO/SPS) AGREEMENT: FOOD SAFETY AND FOOD QUALITY

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## 1. BACKGROUND

In 1996, world exports of agricultural products (food and raw materials) was 586 billion dollars, with world trade in food being US$460 billion (WTO, 1997). In 2000, world trade in merchandise goods and commercial services will likely exceed $8 trillion or $2 trillion more than was transacted in 1995 (WTO Focus, 1996). By that date, the World Trade Organization (WTO) will likely have more than 130 member countries, which account for about 95 percent of world trade. Over the last decade, there have been a number of remarkable developments in the architecture of the international trade system. The General Agreement on Tariffs and Trade (GATT) was established in 1947 as a framework that would regulate international trade and stimulate international commerce. In 1986, member countries of the GATT felt the need to hold a new round of negotiations to include the important but neglected trade sectors of agriculture and textiles. The World Trade Organisation (WTO) which came into being on 1 January 1995 replaced GATT. The Sanitary and Phytosanitary (SPS) and the Technical Barriers to Trade (TBT) Agreements were included among the Multilateral Agreements on Trade in Goods, annexed to the 1994 Marrakesh Agreement that established the WTO. The SPS Agreement established the regulatory framework for the setting of international food standards in the protection of the health of humans, plants or animals.

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## 2. TRADE AGREEMENTS

The need for international regulations lies mainly in that food regulations in many countries may suit the producer and consumer in that country but not their trading partners. In the past, all countries would have had some "so-called SPS measures" such as inspection and quarantine of imported products, guarantees on hygienic levels, maximum levels for pesticide and veterinary drug residues, restrictions on the presence and amounts of food additives, limits on harmful contaminants to ensure safety of agricultural products and food for the consumer and to prevent the spreading of animal or plant diseases. By definition, these measures were barriers to trade and because of their complicated technical nature varied among countries unless cooperation was developed (van der Heide, 1999).

International trade agreements confer rights to their signatories regarding the actions of other governments, but they also have obligations and thus constrain a country's own actions. Countries accept these constraints because international trade accords provide beneficial bargains that strengthen their interests in world markets. The WTO can rule on the conformity of national practices with the rights and obligations undertaken in the WTO, but member countries are responsible for ensuring compliance (Croley and Jackson, 1996). The original GATT did apply to agricultural trade, but it contained loopholes in that it allowed the use of non-tariff measures such as import quotas and subsidies (WTO, 2000). WTO members must accept all of the obligations of GATT and its corollary agreements negotiated in the Tokyo and Uruguay Rounds, and are required to adopt these through the development of national legislation and regulations. Countries that formerly received the benefits of some GATT codes without having to join and undertake new obligations must now end their 'free ride.' For many Caribbean countries, the single undertaking obliges them to substantially more trade obligations than previously required under the GATT regime. Under WTO rules, developed countries must commit to maintain their open market (along with partial reforms of some of their long-standing tariff and non-tariff barriers). The agreements that constitute the WTO trading rules allow asymmetric implementation of the WTO obligations for developing countries and countries in transition to market economies (i.e., longer periods for them to assume those obligations). In addition the poorest countries are exempted from some requirements. However, in most instances the transition period afforded to developing countries before they assume full WTO obligations is relatively short. In less than 10 years, the WTO will essentially eliminate the free-rider problem. The legal

instruments negotiated under the Uruguay Round were to ensure that producers from one country could trade with other countries on a fair and equitable basis without the disruption of sales by the sudden imposition of restrictions, thus facilitating trade liberalisation between countries (Ministry of Agriculture, Land and Marine Resources, Trinidad 2000).

## 3. FOOD SAFETY AND FOOD QUALITY

A Food and Agriculture Organisation/ World Health Organisation International Conference on Nutrition in 1992, reported ....access to nutritionally adequate and safe food is the right of each individual (FAO/WHO, 1992). To meet established food safety requirements, the following need to be considered: the health risks to the consumer, risks from biological, chemical and physical hazards such as unsafe raw materials and ingredients, poor sanitation, dirty equipment, unsafe hygiene practices of employees, packaging and labeling, handling, storage, distribution, the ability to meet established safety requirements.

Quality can be defined as: "performance to the standards expected by the customer" (Smith, 1991). It involves meeting or exceeding customer expectations. Quality is dynamic, associated with products, services, people, processes, and environments that meet or exceed expectations (Goetsch and Davis, 1994).

## 4. SANITARY AND PHYTO-SANITARY MEASURES (SPS)

The WTO will not promulgate any specific sanitary and phytosanitary requirements but will recognise regulations established by international consensus. The Agreement on SPS Measures sets out basic regulations for food safety, and animal and plant health standards. Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods: testing, inspection, certification and approval procedures: quarantine treatments including relevant requirements associated with the transport of animals or plants, or with materials necessary for their survival during transport: provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labeling requirements directly related to food safety.

- Article 2.1 defines World Trade Organisation member nations' basic rights, (WTO, 1999) :

*'Members have the right to take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health, provided that such measures are not inconsistent with the provisions of this Agreement.'*

- Article 2.2 defines Members' basic obligations, in that :

*"Members shall ensure that any sanitary and phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles, and is not maintained without scientific evidence."* (Id., at Art. 2, para. 2)"

- Article 3.1 requires Members to harmonise their SPS measures and states :

*"To harmonise sanitary and phytosanitary measures on as wide a basis as possible, Members shall base their sanitary and phytosanitary measures on international standards, guidelines or recommendations where they exist, except as otherwise provided for in this Agreement."*

Sanitary or phytosanitary measures are any measures applied: (a) to protect animal or plant health within the territory of the member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms; (b) to protect human or animal life or health within the territory of the member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feed-stuffs; (c) to protect human life or animal health within the territory of the member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or (d) to prevent or limit other damage within the territory of the member from the entry, establishment or spread of pests. The SPS Agreement allows countries to set their own standards which must be based on science. Standards should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail. Article 3 of the SPS Agreement encourages member countries to use international standards, guidelines and recommendations where they exist. Article 5 of the SPS Agreement outlines the procedures members must follow when assessing risk and determining their appropriate levels of protection. It repeatedly cautions members to take into account possible negative trade effects when setting their appropriate level of protection e.g. Article 5.4 of SPS Agreement reads :

*"Members should, when determining the appropriate level of sanitary or phytosanitary protection, take into account the objective of minimising negative trade effects".*

They can also set higher standards based on appropriate assessment of risks so long as the approach is consistent, not arbitrary. However, SPS measures that achieve higher level of human, animal, or plant protection than relevant international standards must pass a series of tests (scientific justification) to be proved not to be illegal trade barriers. A member has 'scientific justification'

only if it analyses available scientific data and determines that the international standard is insufficient to attain its appropriate level of sanitary or phytosanitary protection. In such cases, risk assessment techniques developed by relevant international organisation (Codex), available relevant scientific evidence, processes and production methods, inspection, sampling and testing methods shall be taken into account by the member when determining and implementing the higher level of sanitation. Given the burden of proof falls on the member country with more protective standards that member must prove that the international standard is unsafe. The SPS Agreement's terms eviscerate the precautionary principle, which requires proof of safety before a product which poses potential risks is allowed on the market. The precautionary principle is based on the premise that science does not always provide the information or insights necessary. To take irreversible effects may result if action is not taken until science does provide such insights. The precautionary principle allows countries to protect their citizens from potential, but scientifically uncertain, harm. The addition of the phrases 'appropriate level of protection' and 'acceptable level of risk' itself leaves a door open to challenges, except to subject a member's level of risk to a WTO challenge if it provides more consumer protection than the relevant international standard. If scientific proof of their necessity and a binding recommendations form an international referee body cannot be provided, they have to be withdrawn. Sanitary and phytosanitary measures which are based on international standards are presumed to be GATT-legal and recognise for food safety, those standards, guidelines and recommendations established by the Codex Alimentarius Commission, for animal health those developed by the International Office of Epizootics (OIE), and for plant protection, those developed under the auspices of the secretariat of the International Plant Protection Convention (IPPC). The SPS Agreement allows countries to use different methods of inspecting products. It includes provision on control, inspection and approval procedures. Governments must provide advance notice of new or changed sanitary and phytosanitary regulations, and establish a national enquiry point to provide information. The SPS Agreement attempts to improve on an unsatisfactory feature in that countries were finding it easier to use SPS standards imposed on imports along with technical barriers to trade to protect the domestic market (Josling, 1997).

## 5. HARMONISATION OF HEALTH AND SAFETY STANDARDS

Harmonised international food standards that protect consumers against unsafe food, when established on the basis of acceptable scientifically supported risk-analysis procedures, provide greater assurance of worldwide consumer health protection and facilitate international trade. Harmonisation stimulates greater confidence by consumers and traders in the trading process, reduces administrative and operational costs of surveillance and monitoring by national food control authorities worldwide, is more effective in minimising food – safety risks, and reduces arbitrary, disguised or discriminatory technical barriers to trade (Whitehead, 1999). Despite the value of science in policy-making, scientific uncertainties concerning the health threats posed by exposure to chemicals remain. More, over political judgement play central role in policy-making regarding risk. While, science informs policy decisions, it is ultimately a legislative body that must make the political decision about how much risk society will face. According to Briggs (1997), the recent spread of sub-regional agreements such as the Mercosur, the Andean Pact, the Caribbean Community, and the Central American Common Market throughout the Americas has had positive effect towards globalisation of competition. Long-standing protectionism barriers have collapsed and new liberalised economies are getting involved in global competition. There is a challenge with health and safety standards, which tend to differ widely from nation to nation and bloc to bloc. One of the challenges is to dispute resolution mechanisms to assure that technical and SPS measures are based on legitimate health and safety needs and not on economic prerogatives.

## 6. STANDARDS

What are standards? Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose (ISO, 1999). Compliance with regulations is mandatory, therefore products which do not comply with regulations cannot be sold in a given market. When standards are voluntary, no product can be refused access to the domestic market because of non-compliance with standards. In practical terms, the distinction between standards and regulations is fading. There is the need for conformity assessment aimed at assessing the compliance of a product with a standard or a regulation. Conformity assessment can enhance the value of standards and regulations by ensuring that the required conditions are met by both domestic and imported products. Domestically

produced and imported goods would be required to conform to regulations and possibly to adhere to standards. In the Caribbean, there is a variety of products, often prototypes being manufactured and traded which would often be of new or modified standards. Thus it is expected that the tasks that standards and regulations aimed to fulfill have expanded and deepened, the number of interested parties involved in setting – up standards and regulations is also increasing, with participation of groups such as consumer and environmental organisations which were not previously involved in these activities.

***Codex Alimentarius Commission (Codex)***: is one of the three sister international organisations recognised in the WTO/SPS Agreement. The FAO/ WHO Codex Alimentarius Commission has been referred to as the international standards organisation for common food safety measures relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes of hygienic practices. In its pursuance of harmonisation, with regard to food safety, the SPS Agreement has identified and chosen the internationally adopted food standards, guidelines, and recommendations established by the Codex Alimentarius Commission. It has been stressed that the food standards shall be based on the principle of sound scientific evidence, which means a thorough review of all relevant information, in order that the standards assure quality and safety of the food supply. Such scientific evidence shall be the basis for any assessment of risk and determination of the appropriate level of sanitary protection if a dispute settlement by Codex is sought. The WTO refers to Codex Alimentarius in the arbitration of trade disputes involving health and safety requirements, if they are to be used as the basis of non-tariff barriers in international food trade (Kaferstein et al. 1999).

The General Principles of the Codex Alimentarius state:

*"The publication of the Codex Alimentarius is intended to guide and promote the elaboration and establishment of definitions and requirements for foods to assist in their harmonisation and in doing so facilitate trade"*

Codex promotes consumer protection and facilitates world trade in foods through the development of food standards, codes of practice, and other guidelines. Three basic texts have been published to help regulatory authorities, food handlers and consumers: Recommended International Code of Practice, General Principles of Food Hygiene, Guidelines for the Application of the Hazard Analysis and Critical Control Point (HACCP) System, and Principle for the Establishment and Application of Microbiological Criteria. Codex is a collection of international

food standards adopted by the Codex Alimentarius Commission, includes standards for all principal foods: processed, semi-processes or raw. Codex contains more than 200 standards in the prescribed format for individual foods or groups of foods.

The *Recommended International Code of Practice – General Principles of Food Hygiene* applies to all foods. It lays a firm foundation for food safety and follows the food chain form primary production through to final consumption, highlighting the key hygiene controls at each stage e.g. applied to the preparation and sale of street-vended foods (regional standard-Latin America and the Caribbean). For microbiological safety of foods, Codex has established codes of good hygienic manufacture containing microbiological criteria. These codes are specific for each food-manufacturing process and provide guidance for the production of food that is safe and suitable for consumption. The *Recommended International Control of Practice for Control of the Use of Veterinary Drugs*, which has the express aim of preventing the use of drugs that create a hazard to human health. There are a number of *Codes of Technological Practice*, which are intended to ensure that the processing, transport and storage of foods produced by Codex are such that consumers receive end products that are wholesome and of expected quality. In the *General Principles, Guidelines and Recommended Codes of Practice* have been developed for the use of additives, food import and export inspection and certification and the addition of essential nutrients.

***Codex and the Protection of Consumers:*** Codex together with its subsidiary committees have given top priority to the protection and interests of consumers in the formulation of food standards and related activities. The adapted format for standards reflects the emphasis that Codex places on ensuring consumers receive products that are of minimum acceptable quality, are safe and do not present a health hazard. Format provisions for commodity standards, including the *name of the standard*, *its scope*, *description*, *weights* and *measures* and *labeling* are intended to ensure that the consumer is not misled and to induce confidence that the food item purchased is what the label says it is. The provision covering essential composition and quality factors that the consumer will not receive a product below a minimum acceptable standard. The provisions concerning food additives and contaminants and hygiene are aimed at protecting the health of consumers. In addition, it includes the General Standard for Labeling of Prepackaged Foods, the Codex General Guidelines on Claims and Codex Guidelines on Nutrition Labeling, all of which are aimed at ensuring honest practices in sale of food while also

providing guidance to consumers in their choice of products.

The purpose of the Codex Guidelines on Nutrition Labeling is to ensure that the nutrition labeling is effective:

*"In providing the consumer with information about a food that a wise choice of food can be made."*

Other general standards for food hygiene, food additives, contaminants and toxins in food and for irradiated foods are of pre-eminent importance in protecting consumers' health and they are valued for this purpose. Similarly, maximum residue limits for pesticides and veterinary drugs and maximum limits for food additives and contaminants have been established that consumers are not exposed to unsafe levels of hazardous materials. The Joint FAO/WHO Expert Committee on Food Additives (JECFA) evaluates food additives, contaminants and veterinary drug residues and the Joint FAO/WHO Meeting on Pesticide residues (JMPR) evaluates pesticides residues. Recommendations are made on Acceptable Daily Intake (ADI) on Maximum Residue levels (MRLs) in the case of pesticides and animal drugs and Maximum Levels (MLs) in the case of food additives.

***Codex and the Ethics of International Trade:*** The work of Codex Alimentarius Commission goes beyond creating means of removing barriers to trade and includes the adoption by food traders of voluntarily ethical practices in the food trade. The Commission has published the *Code of Ethics for International Trade in Food*, which is included in the Codex Alimentarius. A principal objective of the Code of Ethics is to stop exporting countries and exporters from dumping poor-quality or unsafe food on to international standards.

General Principles of the Code of Ethics for International Trade in Food state:

Article 4.1 - *"International trade in food should be conducted on the principle that all consumers are entitled to safe, sound and wholesome food and to protection from unfair trade practices."*

Article 4.2 No food should be in international trade which:

1) *has in it or upon it any substance in an amount which renders it poisonous, harmful or otherwise injurious to health: or*
2) *consists in whole or in part of any filthy, putrid, rotten, decomposed or diseased substance or foreign substance or foreign matter, or is otherwise unfit for human consumption; or*
3) *is adulterated; or*
4) *is labeled, or presented in a manner that is false, misleading or is deceptive; or*
5) *is sold, prepared, packaged, stored or transported for sale under insanitary conditions.*

***Organisation International des Epizooties (OIE):*** is another international standard specified by the WTO/SPS. It was an intergovernmental agency created by the International Agreement of January 25, 1924 and serves as the World Organization for Animal Health. It serves to inform governments of the occurrence and course of animal diseases throughout the world, and of ways to control these diseases. It coordinates studies devoted to the surveillance and control of animal diseases on the international level and harmonises regulations for trade in animals and animal products among Member countries.

***International Plant Protection Convention (IPPC):*** secures common and effective action to prevent the spread and introduction of pests of plants and plant products and promotes measures of control. It provides measures of control and provides a framework and forum for international cooperation, harmonisation, and technical exchange in collaboration with regional and national plant protection organisations.

## 7. TECHNICAL BARRIER TO TRADE (TBT)

Article 2.6 of TBT states: *"With a view to harmonising technical regulations on as wide a basis as possible, Members shall play a full part, within the limits of their resources in the preparation by appropriate international standardising bodies of international standards for products for which they have either adopted, or expect to adopt technical regulations."*

Technical regulations and industrial standards may vary from country to country. If the standards are set arbitrarily, they could be used as an excuse for protectionism. The Agreement on Technical Barriers to Trade (TBT) deals with product specifications not related to food safety and seeks to ensure that technical regulations and standards, testing and certification including packaging, marking and labeling requirements, and analytical procedures for assessing conformity with technical regulations and standards do not create unnecessary obstacles to trade. While Codex is not specifically referenced in the TBT agreement the WTO, has recognised Codex standards as those to be used preferentially in resolving trade disputes (Wehr, 1997). The TBT Agreement requires all member governments to establish and identify at least one 'enquiry point' to respond to requests for information about national technical standards and conformity assessment procedures.

## 8. ISSUES

Developing countries (such as Caribbean countries) are often not well positioned to address the growing

concern that certain SPS measures may be inconsistent with the SPS Agreement and unfairly impede the flow of agricultural trade. The issues facing developing countries are outlined by Zarrilli (1999):

- lack of complete information on the number of measures that affect their exports as they are not certain whether these measures are consistent or inconsistent with the SPS Agreement;
- do not have reliable estimates on the impact such measures have on their exports;
- experience serious problems on scientific problems on scientific research ;
- testing, conformity assessment and equivalency;
- unable to effectively participate in the international standard-setting process and therefore, face difficulties when requested to meet SPS measures in foreign markets based on international standards;
- transparency – related requirements represent a burden for developing countries, while they are unable to benefit from them, due to the lack of appropriate infrastructure;
- provision of adaptation to regional conditions, which would be of great benefit to developing countries, because of difficulty related with its scientific side;
- The provisions relating to special and differential treatment for developing countries remain rather theoretical.

## 9. CHALLENGES

Shifts in trade agreements can prove to be difficult challenges for countries in the Caribbean region. The application of the SPS Agreement is complex and requires a comprehensive approach to food safety, animal and plant health. It requires a systematic examination of a country's regulatory, industry and scientific infrastructure to meet WHO/SPS requirements. The Caribbean Food Safety Initiative (CFSI) and SPS projects grew out of an agreement between the US Department of Agriculture (USDA) and the Caribbean Community and Common Market (CARICOM) to assist CARICOM countries in gaining support for implementing the necessary steps to achieve comprehensive agricultural health and food safety systems (CARICOM and USDA, 2000). There were phases in the CFSI which involved: Phase 1. Issue Identification-identification of specific issues/topic within each component that were most important to the CARICOM region, Phase 2. Needs Assessment - Four technical experts in animal and plant health and food safety assessed food safety infrastructures and Phase 3. Strategy Development which discussed

the major findings. In the report of the Caribbean Food Safety Initiative, the Executive Summary and Actions and Justifications arising from Needs Assessment of Food Safety and Infrastructure in CARICOM Member State, descriptions of logical frameworks and activity profiles have been compiled to assist CARICOM decision-makers better understand specifically the requirements needed to meet SPS Standards. This logical frameworks describe the investments that are needed at country, regional and sub-regional levels and implies a significant investment by outside funding organizations. Logical frameworks and activity profiles also considered the tasks that will assist countries in reaching appropriate levels of local food safety protection. By direct consequences of these frameworks will lead to greater harmony among local food safety infrastructures, technical cooperation among developing countries, as well as demonstrated preliminary activities to leverage support from international donor group. Based on the overview of the findings, an overall assessment of the country food safety infrastructure showed that there was a good level of programmatic effort in all sectors of human, animal and plant health, based on historical precedence, but in general programs are not all up-to-date with international standards e.g. it was not typical to find legislation, regulation, and enforcement policies that meet WTO nor other specific trade requirements, such as Hazard Analysis and Critical Control Point (HACCP) for seafood, poultry and meat products.

- In general national food industries normally become aware of modern trade requirements in response to the demands of competitive international markets. However they do not have ready access to local training programs targeted to new food safety regulatory issues, trade issues as well as issues about new food-borne hazards ;
- Overall, food inspectors show good proficiency in inspections and knowledge of general food safety principles, such as sanitation. However, inspectors commonly state that they need more opportunities for training that will enhance their inspection abilities, as well as help them educate their customers of safety by the media ;
- The findings also indicated that because tourism is a predominant aspect of CARICOM economics, food safety has reached an important level for local food service establishments, as well as for tourists who have been educated about food safety by the media. In many countries, food handler training classes are available to the food service industry, but on a sporadic basis;
- Laboratory staffs have good basic training and proficiency in standard microbiological and chemical

assays. They now need to be trained in more advanced assays, and have the necessary infrastructure (e.g. supplies, equipment, and training) to deliver services that reflect the needs of trade, their local industries as well as the public's general welfare;

- Those laboratories that are not capable of delivering more sophisticated services (and they should not always be expected to), do not always have access to laboratories for more specialized test services;
- Computerised databases were underutilised at the country level, mostly a reflection of the relatively low level that computers are integrated into surveillance, inspection, traceback, and licensing programs. This is likely a reflection of the monetary resources that must be dedicated for staffing these database functions, purchasing and upgrading computers, as well as routine maintenance;
- In the area of plant health, inspection and quarantine officers were very well educated about the impact of WTO requirements, as well as their needs to meet these demands. Plant officers see deficiencies in legislation, staff training, computerised databases, laboratory services, staffing and equipment for inspections and destruction of contaminated products.

## 10. NEEDS

Some actions proposed by the National Strategy Recommendations for the Caribbean Community and Common Market as reported by Gordon (2000):

- Harmonise and identify technical standards and regulations, including SPS regulation of each Caribbean country to meet requirements of WTO and other trade policies.
- Limit technical regulations in the areas of food safety, health, the environment and consumer protection, avoiding such mechanisms causing the transformation of technical standards into technical regulations;
- Select sectors where regional and sub-regional standards could be reviewed for direct harmonisation;
- Create and support organisations or programs for the permanent interchange of technical information such as forums for the discussion of the system and for the harmonisation and limitation of bureaucracy of technical regulations;
- Member countries of WTO should be encouraged to participate in international organisations such as Codex Alimentarius Committee so as to represent the Caribbean's interest or needs in global food trades and have strength in numbers on a global level;

- Countries would need to be continuously informed on standardisation programs and technical regulations as seen in the notification system of the WTO so as to bring uniformity in quality and safety standards for domestic and foreign food;
- Governments should adopt national and regional programs, the requisites set in the Agreement on SPS Measures;
- The private sector must ensure its involvement and active co-operation with the public sector, by means of revising, intensifying and harmonising standards and certification processes and procedures;
- Exporters of animal and plant products will need to have the assurance of receiving technical assistance at the field level in both a timely and professional level;
- The quarantine service will need to be capable of ensuring that products of both plant and animal origin meet the standards of any of its trading partner worldwide;
- There will be need to have HACCP programs for plant and animal products to ensure that exported goods meet stringent SPS standards. Inspectors would need to be trained in modern food safety systems so as to provide a high level of inspection programs;
- Producers of agricultural products whether for export of local markets have available modern laboratory services in the areas of pest and disease identification and management for both plant and animal diseases as well as microbiological and water quality analysis services;
- Development of transparent professional qualification requirements and harmonisation of professional services standards to provide for mutual recognition where harmonisation is not feasible;
- Laboratories upgraded to meet requirements of trade and public health initiatives so as to provide an infrastructure that can deliver the desired level of testing services; laboratories need to be accredited to international standards so as to promote trade through the international recognition of test results;
- Need for food safety campaigns for consumers so as to promote safe food handling;
- Need to strengthen the extension system to provide an efficient infrastructure to disseminate research-based, accurate information to the food industry.

## 11. A POLICY FRAMEWORK

According to Wint (2000), Programme Manager, Health Sector Development,

Caribbean Community Secretariat, there is a huge gap between the high level policy decisions and the actual situation in the countries of the region. A policy framework that has been suggested include: (i) establishment of food safety policies and infrastructure including legislation and their enforcement; (ii) promotion and monitoring the development of safe food technologies and standards with the requisite assessment of hazards and risks; (iii) upgrading the epidemiological surveillance of food borne diseases and chemical contaminants including trace-back systems; (iv) education of food handlers, professionals working in the field, and the consumers in modern approaches to food safety and (v) promotion of food safety in international travel and tourism.

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