SANITARY AND PHYTOSANITARY MEASURES

Report of the APO Seminar on Sanitary and Phytosanitary Measures held in Japan, 4-11 December 2002 (02-AG-GE-SEM-09)

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* Cambodia joined the APO in 2004.

SEMINAR HIGHLIGHTS

INTRODUCTION

The Seminar on Sanitary and Phytosanitary Measures which was organized by the Asian Productivity Organization (APO) and hosted by the Government of Japan was held in Tokyo from 4 to 11 December 2002. The Association for International Cooperation of Agriculture and Forestry (AICAF)* implemented the program in cooperation with the Ministry of Agriculture, Forestry and Fisheries (MAFF). Eighteen participants from 14 member countries and three non-member countries, and six overseas and local resources speakers, attended the Seminar.

The objectives of the Seminar were to:

* review recent developments in the application of sanitary and phytosanitary (SPS) measures in Asia and Pacific countries;
* identify major problems and issues relating to the implementation of such measures;
* suggest ways/means of resolving them to ensure better food safety/security; and
* facilitate world trade in food and agricultural products.

The Seminar consisted of the presentation and discussion of resource papers and country papers, as well as the conduct of a workshop and field studies in Kanagawa prefecture. The topics covered by the resource papers were:

1. Sanitary and Phytosanitary (SPS) Agreement: Overview and Recent Developments;
2. Codex Standards and Food Safety;
3. Bovine Spongiform Encephalopathy (BSE) Outbreaks and Commutable Disease Control Measures in Japan;
4. Measures for Enhancement of Food Safety and Quality Assurance Systems for Enhanced Trade;
5. Rights and Obligations under the SPS Agreement: Responses of Governments, Japan's Case; and
6. Enhancement of Phytosanitary Measures for Trading of Plants and Plant Products.

The country papers, on the other hand, focused on the current situation concerning the implementation of SPS measures, main issues regarding the application of such measures in the respective participating countries. The field studies comprised visits to the Plant Protection Station and Animal Quarantine Service under the MAFF, both located in Yokohama, and the Kanakei Sangyo Co. in Ayase city.

The highlights of the Seminar are presented below.

RESOURCE PAPERS

Sanitary and Phytosanitary (SPS) Agreement: Overview and Recent Developments

(Dr. Kazuaki Miyagishima)

The Uruguay Round of Multilateral Trade Negotiations was concluded in Marrakesh in 1994. In order to implement about 20 agreements, a new World Trade Organization (WTO) was established in 1995. The WTO has currently 144 members.

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) which aims at ensuring that technical requirements are not used as disguised trade barriers has a twofold purpose, namely; facilitating trade while at the same time offering appropriate level of protection. It covers three areas:

* It was reconstituted to the Japan Association for International Collaboration of Agriculture and Forestry (JAICAF) in 2004.

food safety, animal health and life, and plant health and life. The basic rights and obligations of members involved is: applying measures only when necessary; ensuring that the measures are based on scientific principles and not maintained without sufficient scientific evidence; and making sure also that there is no arbitrary or unjustified discrimination.

The Agreement spells out several principles/provisions. The first one is harmonization. The Agreement encourages WTO members to use the international standards, guidelines or recommendations wherever possible and it recognizes that the measures conforming to these standards are "deemed necessary" and "consistent with the SPS Agreement". Such principle, however, does not preclude a WTO member from applying stricter measures if there is scientific justification or if a higher level of SPS protection is necessary. The second principle is equivalence. It recognizes different measures that provide the same level of health protection against risks of disease or contamination. This is helpful to developing countries that may use less sophisticated health and safety technologies than those required by importing countries. On risk assessment the Agreement requires that SPS measures be based on appropriate assessment of risks, taking into account available scientific evidence, relevant processes and methods, relevant economic factors and the objective of minimizing negative trade effects. It also requires consistency in the application of the concept of appropriate level of SPS protection and that measures are not more trade-restrictive than necessary. Members should also ensure that their SPS measures are adapted to the regional conditions (e.g., recognizing the concepts of pest- or disease-free areas and areas of low pest or disease prevalence). On the principle of transparency, members are required to notify about changes in their SPS measures and provide relevant information through "enquiry points", in accordance with the notification procedures.

The SPS Agreement also provides for WTO members to facilitate the provision of technical assistance to other members, especially developing countries, bilaterally or through appropriate international organizations in order to upgrade relevant infrastructure and capacities to implement SPS measures. The principle of special and preferential treatment allows members to take into account special needs of developing countries in terms of phased introduction of new SPS measures, longer time-frame for compliance and specified time-limited exceptions from obligations. In this regard, developing countries are encouraged to actively participate in the relevant international standard-setting bodies (the so-called "three sisters": Codex, International Office of Epizootics [OIE] and International Plant Protection Convention [IPPC]).

The WTO Ministerial Conference in Doha in 2001 brought out the Doha Development Agenda, which attempted to reconcile the various views of the developed and developing countries. Specifically, it came with a number of decisions. One is that the longer time-frame for developing countries to comply with other members' new SPS measures should be defined to mean at least six months. The "reasonable interval" between publication and entry into force of a new SPS measure will also be understood to mean six months. On equivalence, the Doha decision was for the SPS Committee to develop expeditiously the specific program to further the implementation of the equivalence provisions. It was also decided that the SPS Committee should review the operations of the agreement at least once every four years so that more efforts can be channeled to the implementation of the existing agreement. The Doha Development Agenda also encouraged the WTO to help developing countries to participate more effectively in the setting of international SPS standards and for its members to provide financial and technical assistance to least developed countries so that they can respond adequately to new SPS measures that could hinder their trade. On disputed settlements, there are several channels including:

1. informal consultations conducted at the capitals or in Geneva when the SPS Committee meets;
2. the SPS Committee in relation to its standing agenda item "Specific Trade Concerns"; and
3. panel process.

Developing countries are encouraged to increase their involvement in WTO/SPS by:

1. making the best possible use of the WTO/SPS website;
2. participating in risk analysis seminars;
3. participating in the activities of the standard-setting bodies (three sisters);
4. attending the sessions of the SPS Committee; and
5. building national infrastructure.

In the future, developing countries may benefit from adopting the "bio-security" or "bio-protection" approach, as opposed to traditional, sectoral approach, by integrating the three major areas of concern (i.e., food safety, animal health and plant health) so as to develop a common risk analysis framework and infrastructure (enforcement, laboratory, etc.)

Codex Standards and Food Safety (Dr. Yukiko Yamada)

The SPS Agreement is concerned with the protection of the life and health of human, animal and plant. The Agreement discourages the use of SPS measures as barriers to trade. It recognizes Codex as the reference on food safety and for settling disputes. The Agreement calls for harmonization of standards based on Codex. The Agreement on Technical Barriers to Trade (TBT), on the other hand, involves all aspects of consumer protection not covered by the SPS Agreement. It prevents the use of technical requirements as barriers to trade and places emphasis on international standards such as Codex for food products. The implications of these two agreements are that WTO members are obligated to base their requirements on Codex and therefore, they should become more involved in Codex work and should harmonize their standards with those of Codex.

The Codex Alimentarius Commission is an inter-governmental organization founded in 1962 by the FAO and the WHO to implement the Joint FAO/WHO Food Standards Programme. Its primary objectives are:

1. to protect the health of consumers;
2. to ensure fair practices in international food trade; and
3. to promote coordination of all food standards work undertaken by international governmental and non-governmental organizations (IGOs/INGOs).

At present the Commission consists of 167 member countries and observers from IGOs and INGOs. It meets twice a year to adopt Codex standards and review the work program and the budget. Its management organs include the Executive Committee and the Secretariat which is based in Rome. It has many subsidiary bodies including: six regional committees; nine general subject committees; 11 commodity committees; and three *ad hoc* inter-governmental task forces. In addition, the Commission has the following independent advisory bodies:

* Joint FAO/WHO Expert Committee on Food Additives (JECFA);
* Joint FAO/WHO Meeting of Pesticide Residues (JMPR);
* Joint FAO/WHO meetings on microorganisms; and
* Ad hoc expert consultations.

The elaboration of Codex standards and other recommendations follow the 8-step elaboration procedure as stipulated in the "Procedures for the Elaboration of Codex Standards and Related Texts" contained in the Procedural Manual. The eight steps are:

1. decision to initiate elaboration which can only be made by either the Commission or its Executive Committee;
2. arrangement for the preparation of a proposed draft standard;
3. request for written comments from members and interested international organizations;
4. consideration by the relevant Codex committee;
5. consideration for adoption as a draft standard by the Executive Committee;
6. request for written comments;
7. consideration of the draft standard by the relevant Codex committee; and
8. consideration for adoption as a Codex standard by the Commission.

Codex focuses on risk-based inspection and certification system which implies inclusion of Hazard Analysis and Critical Control Point (HACCP) in the General Principles of Food Hygiene. It implies also the development of import/export food inspection and certification guidelines and work on risk analysis. Codex

reaffirms the role of science in its work and decision-making process. Members of WTO shall ensure that food safety measures are based on a risk assessment taking into account risk assessment techniques developed by Codex. Codex recommendations shall be based on assessment of risks to human life or health and scientific evidence. Risk assessment is a scientifically based process consisting of hazard identification, hazard characterization, exposure assessment and risk characterization. Article 5.1 of the SPS Agreement stipulates "Members shall ensure that their sanitary ... measures are based on an assessment, as appropriate to the circumstances, of the risks to human ... life or health, taking into account risk assessment techniques developed by the relevant international organizations". Article 3.2 of the Agreement also states that "Sanitary ... measures which conform to international standards, guidelines or recommendations shall be deemed to be necessary to protect human ... life or health, and presumed to be consistent with the relevant provisions of this Agreement and of GATT 1994". This means that no further risk assessment is required as Codex has already provided the risk assessment.

As a prerequisite for Codex work in member countries, Codex Contact Points need to be designated which shall serve as the link with the Codex Secretariat and member countries. The Codex Contact Points will coordinate all relevant Codex activities within their own countries; receive the invitations to Codex sessions; inform the relevant chairpersons and the Codex Secretariat of the names of participants from their own countries; receive all Codex final texts and working documents of Codex sessions; ensure that they are circulated within their countries; send comments on Codex documents or proposals; work in close coordination with the national Codex Committee; act as liaison point with the food industry, consumers, traders and all others concerned; act as a channel for the exchange of information and coordination of activities with other Codex members; maintain a library of Codex final texts; and promote Codex activities throughout their own countries.

National Codex Committees are also established to supplement the work of the Codex Contact Points and involve all concerned parties in their countries (i.e., government agencies, consumers, industry, academia, etc.) The Committees are further tasked to elaborate on national positions on issues and proposals of the Codex Alimentarius Commission or its subsidiary bodies, disseminate information and ensure transparency in decision-making in relation to Codex work.

As Codex recommendations have gained importance, especially in international trade of food and as consumer interests in and concerns for food safety have increased significantly in the world in recent years, it is important for Codex members to actively and constructively participate in Codex sessions and to promote the Commission's work in their respective countries so as to obtain as wide a range of opinions as possible from their consumers and industry.

Bovine Spongiform Encephalopathy (BSE) Outbreaks and Commutable Disease Control Measures in Japan (Minoru Yamamoto)

After the implementation of a stricter surveillance system, a BSE-infected cow was found in September 2001 in Japan, the first of such cases outside Europe (the first case broke out in the U.K. in 1986 and had since spread to other European countries). Forty-six cows were kept at the same farm where the case was found. Forty-four of the animals were confirmed as cohort animals for destruction. All the cows at the farm were destroyed and BSE tested. Basic measures such as provision of BSE tests, elimination of Specified Risk Material (SRM) at slaughterhouses and incineration of meat-and-bone meal (MBM) produced from ruminant animals were taken immediately to lower the risk of the disease.

BSE had a long incubation period (up to two years) so that it was difficult to detect it during the early stages of infection. There was no ante-mortem diagnostic technique and physiochemical resistance of infection agent was strong. Many aspects of the infection mechanism also were not yet known. Furthermore, it was not clear whether the disease affected human beings. Thus, the first outbreak caused serious social confusion soon after its detection. The measures adopted helped the people treat the matter in relative calm although five cases of BSE were found over the last one-year period.

Specifically, in order to ensure the safety of food for consumers in Japan, the following guidelines/ measures were implemented:

1. The meat and viscera of cows that have passed the BSE test were allowed to be shipped;
2. Regardless of BSE infection, the SRM were completely removed and incinerated;

3. The distal part of ileum of intestine to be shipped was removed;
4. Beef (muscular tissue) should not be infectious; and
5. Milk and dairy products were not infectious.

The BSE inspection system involved two ministries: Ministry of Health, Labor and Welfare (MHLW) and MAFF. The responsibility of MHLW was the prevention of distribution of meat of BSE-infected cows while that of MAFF was the prevention of the outbreak of the disease at production stage and prevention of its spreading when there was an outbreak. The Meat Inspection Station under the MHLW conducted the inspection with the assistance of the Quarantine Stations in Yokohama and Kobe, the National Institute of Infectious Diseases and the Agriculture and Veterinary Medicine Department of Obihiro University. In the case of MAFF, its Livestock Animal Health Center was responsible for the inspection system, assisted by the National Institute of Animal Health. Both inspection systems employed the ELISA (Enzyme-linked Immunosorbent Assay) method, Western blotting test or immunohistochemical test.

The government had taken measures also to strengthen the surveillance system for BSE-infected cows. Surveillance undertaken at dairy farms targeted the following animals:

1. Cows that had shown central nervous system symptoms suspected of being infected with BSE;
2. Cows that died after exhibiting such symptoms;
3. Cows that had ataxia or disataxia and the cause of the conditions could not be identified; and
4. Forty-five hundred cows that died annually at age 24 month and older.

Under the Law Concerning Measures on BSE (Act 70, 2002) that went into force on 4 July 2002 all cows that died at 24 months or older were required to receive BSE screening from FY 2003. To implement the system, an efficient screening and disposal mechanism and facilities are being constructed.

In order to prevent the risk of BSE contamination, Japan had requested exporting countries with outbreaks of the disease in the past, to heat treat the MBM before they exported it to the country in accordance with international standards and to have an official certification. At present, however, the importation of MBM from any country had been banned.

The government intends to further improve measures against BSE and implement a wide range of sanitary measures, including introduction of risk analysis and traceability methods, in response to the need to raise social interest in food safety.

Measures for Enhancement of Food Safety and Quality Assurance Systems for Enhanced Trade
(Cornelis Sonneveld)

There are a number of food safety systems and quality assurance systems that can be used and considered for the private sector. Among these are: the HACCP system, Hygiene Guides or Codes, BRC (British Retail Consortium) system, EUREP GAP (**Eu**ro-**Re**tailer **P**roduce Working Group Good Agricultural Practice), SQF (Safe Quality Food) 1000 and 2000 and ISO 9001-2000.

The HACCP system was introduced in the U.S. in 1971 by the Pillsbury Company in collaboration with the National Aeronautics and Space Administration (NASA) and the U.S. Army Natick Research and Development Laboratories. It has become the internationally recognized system for the management of food safety for all companies involved in the production, transformation, storage and distribution of food for human consumption. The HACCP concept involves the identification of specific hazards throughout the entire process involved in the production of a food product and focuses on the preventative measures for their control to assure the quality and safety of the food.

In general, Hygiene Codes work with a common HACCP system with predetermined Critical Control Points. They are basically, but not exclusively, established for the small- and medium-size enterprises, or even shops like butcheries and bakeries with limited manpower, where the Critical Control Points have been predetermined. Examples for Hygiene Codes or generic documents are for cold or refrigerated and frozen storage of goods, transportation of cold, chilled, refrigerated and frozen goods.

The BRC has developed the Technical Standard (Checklist) for those companies supplying retailer-branded food products. The Standard has been developed to assist retailers in their fulfilment of legal

obligations and protection of the consumer by providing a common basis for the inspection of companies supplying retailer-branded food products. The Standard includes HACCP.

The objective of the EUREP, which is made up of leading European food-retailers, is to raise standards for the production of fresh fruit and vegetables. The prepared document (checklist) sets out a framework for Good Agricultural Practice (GAP) on farms, which defines essential elements for the development of best practice for the global production of horticultural products (e.g., fruits, vegetables, potatoes, salads, cut flowers, and nursery stock).

SQF 2000 is a HACCP quality code (system) designed in Australia specifically for business in the agri/ food industry. The code is aligned with the Codex Alimentarius Commission Guidelines for the application of HACCP. SQF focuses on food safety and quality issues including good manufacturing practice (GMP), Standard Operating Procedures (SOPs) and HACCP and is compatible with the ISO 9000 standard. The code has been specifically developed for the food industry, to include rural producers, processors transport, storage, catering and hospitality sectors. SQF 1000 has been especially developed for the primary sector as a food safety and quality standard.

ISO has developed a new standard: ISO 15161: guidelines on the application of ISO 9001:2000 for the food and drink industry. This guideline is based on the ISO 9001:2000 guideline and includes HACCP. Presently ISO is working on an international standard: ISO 22000 Food Safety Management Systems: Requirements. This document will further contribute to the standardization and harmonization of systems worldwide. This document is expected to be available in 2003.

The EHEDG (European Hygienic Equipment Design Group) is a consortium of equipment manufacturers, food industries, research institutes and public health authorities founded in 1989 with the aim to promote hygiene during the processing and packing of food products.

The present EU Directive 93/43/EEC of June 1993 on the hygiene of foodstuffs speaks about HACCP in Article 3 and specifically about hygiene guides in Article 5. The 93/43/EEC Council Directive has been adopted into a newly to be developed and introduced Directive: Regulation of the European Parliament and of the Council on the Hygiene of Food Stuffs (2000/0178 COD). This document gives reference to HACCP in Article 5 and speaks about hygiene guidelines in Article 7. Article 12 speaks about imports. Regulation EC no 178/2002 of the European parliament and of the Council of 28 January 2002 lays down the general principles and requirements of the food law, establishes the European Food Safety Authority and lays down procedures in matters of food safety.

The necessary policy framework and requisites for upgrading developing countries capability in setting up and implementing food safety and quality assurance systems for enhanced trade require action at two levels: the private sector and the government.

Implementation of the Food Safety Systems in the private sector will need to be coordinated through the respective associations like the Chambers of Commerce, product or commodity boards or other (trade) associations. They will have to be proactive in the implementation of food safety systems.

Identification of funds is necessary and such information can be obtained by the associations at the embassies and UN organizations. Project proposals need to be prepared according to the criteria laid down by the donor agency. Through bilateral agreements between the developing and developed country, these funds might be available. FAO and UNIDO are UN organizations providing technical assistance to the private sector.

At the governmental level, the regulatory food control systems will typically consist of the following basic building blocks or components: food laws and regulations; management; inspection services; laboratory services; and information, education, communication and training center. These components need to be upgraded with specific emphasis to lay down a strategy and assess the present food control system on its merits. National Food Safety Council, represented by various stakeholders is recommended to be established.

The FAO and WHO are the two main specialized agencies of the United Nations to provide technical assistance to the developing countries. These agencies establish the necessary institutional framework and infrastructure to improve the safety and quality of food products and adapt the legislation to comply with the Codex Alimentarius standards and guidelines. Assistance through bilateral agreements is also a possibility. The technical assistance should be based on the joint FAO/WHO publication “Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems”. Project funds or loans might be available through trust funds, World Bank or bilateral agreements.

Some lessons learned from specific country experiences in implementing food safety and food control systems include the following:

1. HACCP implementation projects should have the following components: seminars for senior management and key government officials for familiarization and information dissemination; workshop for the staff; conduct of a workshop on auditing followed by test audits or inspections towards the end of implementation; and holding of a closing seminar for all stakeholders to present the results of the project;
2. Food inspectors are recommended to participate in the complete trajectory of HACCP implementation;
3. Projects must have clear objectives and measurable outputs; and
4. Vital stakeholders have to be involved at least and the private and public sectors should work together on the issue of food safety in pilot demonstration projects.

Food safety systems like HACCP and quality assurance systems have existed for more than 10 years. Hands-on experiences have been gained in implementing these systems, especially in the developed countries. These experiences can be used for upgrading national food control systems of those countries to higher levels. In this regard, governments of those countries should take a proactive role and their associations representing the private sector should initiate projects.

Rights and Obligations under the SPS Agreement: Responses of Governments, Japan's Case
(Shiroh Inukai)

The World Trade Organization was established by the Marrakesh Agreement which included the SPS Agreement and other agreements and legal texts. The bridging provisions for the SPS Agreement are referred to in the Agreement on Agriculture and Agreement on Technical Barriers to Trade which clearly separate responsibility for SPS and other agreements.

The SPS Agreement was negotiated as part of the Agricultural Negotiations in the Uruguay Round. The Agreement which regulates application of the provisions of Article XX (b) of GATT 1994 established a multilateral framework of rules and disciplines to guide the development, adoption and enforcement of SPS measures in order to minimize their negative effects on trade.

According to the definitions in Annex A of the Agreement SPS measures include inspection, approval procedures, risk assessment, regulations and labeling. Packing and labeling requirements directly related to food safety is covered by the Agreement and not by the TBT Agreement.

The basic rights and obligations which are spelled out in Article 2 of the Agreement stipulate that members have the right to take SPS measures necessary to protect human, animal or plant life or health but only to the extent necessary and should be based on scientific principles and not maintained with sufficient scientific evidence. There should be no arbitrary discrimination between members where identical or similar conditions prevail and the SPS measures should not be applied so as to constitute a disguised restriction on international trade.

On harmonization, the Agreement requires members to base their SPS measures on international standards, guidelines or recommendations where they exist and to harmonize such measures on as wide a basis as possible. On transparency, members shall notify changes in their SPS measures and shall provide information on such measures. On equivalence, members shall accept the SPS measures of other members as equivalent if the exporting member objectively demonstrates to the importing member that its measures achieve the latter's appropriate level of SPS protection (Appropriate Level of Protection [ALOP]). Based on Article 5.5, each member can determine its ALOP and there is no obligation on the part of any member to harmonize its level of protection with that of other members. However, comparison with international guidelines determined by other members will be helpful.

Under dispute settlement, the Panel report or the Appellate Body report which had been adopted by the Dispute Settlement Body, has effect on only the specific dispute. But if another panel will be established for the similar cases, the said reports will be invoked. Thus, the dispute settlement system has the function not only to settle the dispute but also to provide substantial understanding of the specific provisions of the WTO agreements. Since disputes under the SPS Agreement may involve scientific or technical issues, a panel may seek the advice from experts chosen by it in consultation with the parties to the dispute. To this end, the panel

may establish an advisory technical experts group, or consult with the relevant international organizations, at the request of either party to the dispute or on its own initiative.

In risk assessment, members need to take into account: the available scientific evidence; relevant processes and production methods; relevant inspections; sampling and testing methods; prevalence of specific diseases or pests; existence of pest- or disease-free areas; relevant ecological and environmental conditions; and quarantine or other treatment. The requirement for appropriate risk assessment is one reason for the time-consuming process involved in the removal or lifting of the import prohibition.

Members have to base their SPS measures on international standards. However, when there are no such relevant standards they shall ensure that their SPS measures are based on appropriate assessment taking into account risk assessment techniques developed by relevant international organizations. Where relevant scientific evidence is insufficient, a member may provisionally adopt SPS measures based on available pertinent information, including that from relevant international organizations, as well as from SPS measures applied by other members.

Each member has to ensure that one enquiry point exists which will be responsible for the questions and requirements of other members.

The Committee on SPS Measures encourages consultations among members on specific issues, encourage harmonization, securing the best available scientific and technical advice and to review the operation and implementation of the SPS Agreement.

The provision on special and differential treatment (S&D) requires members to consider the special needs of developing countries, allows a longer time-frame for compliance and encourages and facilitates participation in the relevant international organizations. In the preparation and application of sanitary or phytosanitary measures, members have to take account of the special needs of developing country members, and in particular of the least-developed country members.

Developing country members request technical assistance which are tailor-made and/or directly related to market access. But to grasp the real need of developing countries, the SPS Committee provided questionnaire to developing country members, but only a few members have replied so far. It is necessary to provide enough information from developing country members to operate S&D more effectively. Technical assistance is a useful tool of S&D, but with the limited funds and human resources of developed countries, developing country member should also make efforts to make use of technical assistance more effectively.

The SPS Agreement benefits consumers as it helps to ensure the safety of their food by encouraging the systematic use of scientific information and thus reducing the scope for arbitrary and unjustified decisions. The elimination of unnecessary trade barriers allows for greater choice of safe foods and for healthy international competition among producers. For exporters, the Agreement reduces the uncertainty about the conditions for selling to a specific market. For importers, it allows for clearer basis for SPS measures which restrict trade. For domestic producers, the Agreement protects them from the invasion or spread of disease from foreign countries or areas.

Enhancement of Phytosanitary Measures for Trading of Plants and Plant Products

(Dr. Jane Chard)

The International Plant Protection Convention (IPPC) is the inter-governmental mechanism for international cooperation for plant protection. The IPPC has clear applications to the regulation of trade but is not a trade agreement. The organizations operating within the framework of the IPPC are responsible for the production of international phytosanitary standards and this role is recognized in the SPS Agreement.

The Convention came into force in 1952 and was amended in 1997 to reflect the role of the IPPC in the SPS Agreement. The revised Convention includes provision for a Secretariat and a Commission for Phytosanitary Measures (CPM) to promote the full implementation of the objectives of the Convention. Until the revised Convention comes into force, an interim Commission (ICPM) fulfils the functions of the CPM. All members of the FAO may participate in the ICPM, whereas only contracting parties to the Convention will participate in the CPM.

The International Standards for Phytosanitary Measures (ISPMs) developed under the IPPC are guidelines and reference documents, guidelines to avoid disputes, designed to protect the environment whilst facilitating international trade, designed to be transparent and to harmonize regulations for trade, designed to remove artificial trade barriers, and developed on the basis of the best scientific knowledge at the time.

The process of standard development involves three stages (drafting, country consultation and adoption) and is facilitated by the IPPC Secretariat and a Standards Committee. Priorities for new standards are agreed by the ICPM, taking into account key criteria. The process is transparent and participatory. ISPMs are adopted by the ICPM.

International cooperation is an important underlying principle of the Convention. Contracting parties agree to provide official information to the IPPC Secretariat for distribution, and to make information available on request. The IPPC Secretariat has a responsibility to facilitate the exchange of official information and documents and hosts the International Phytosanitary Portal (IPP) at www.ippc.int

Article 3 of the SPS Agreement spells out the relationship of IPPC to the SPS. The Agreement stipulates that members shall base their SPS measures on international standards or justify deviations. Members shall also play a full part in the relevant standard setting organizations, in particular, the Codex Alimentarius Commission, the OIE and the international and regional organizations operating within the framework of the IPPC. Thus, SPS makes provision for phytosanitary protection in a trade agreement while IPPC makes complementary provision for trade in a protection agreement.

The IPPC Secretariat routinely interacts with the other standard setting bodies recognized under the SPS Agreement and it is an active observer at the SPS Committee. The Secretariat has also been active in developing links with the Convention on Biological Diversity Secretariat.

The IPPC has a program to facilitate technical assistance and provides support to FAO Technical Assistance and other programs. The ICPM endorsed the use of the Phytosanitary Capacity Evaluation (PCE) program as a tool for countries to determine their phytosanitary capacity needs and to help them develop a national phytosanitary strategy.

COUNTRY PAPERS

As a result of the changing global trade environment in agriculture many developing countries were currently facing new challenges. In particular, the challenge of enhancing food quality and safety had grown in importance in recent years as the movement of people and trade in goods had become more and more global. The response at the national level had been the further strengthening of national food control systems and phytosanitary and animal health infrastructure. Internationally, an SPS Agreement had been concluded as one of the agreements coming out of the Uruguay Round. The Agreement provided a multilateral framework of SPS rules and disciplines for the protection of human, animal and plant life or health in the context of international trade.

Implementation of SPS measures had become a major concern for the participating countries due in large part to the increased opportunities afforded in recent years by exporting their agricultural/food products, particularly some specific foods such as marine products, fruits and vegetables, and to the shift towards more processed foods. Since the major markets for many of the countries were the U.S., EU and Japan where consumers had increasingly placed a premium on quality and safety of foods, exporting countries had been pressured to adopt appropriate food quality and safety measures in order to maintain or get market access in developed countries. The many cases of rejection of consignments due to food contamination or inadequate labeling had not been uncommon so that increasingly, rather than continue to absorb significant revenue losses from such rejection, exporters in developing countries had found that they would be better off by just adopting appropriate SPS systems based on internationally accepted food safety standards. This concern for greater food quality and safety had also increased from the viewpoint of domestic consumers in developing countries due to recent outbreaks of food contamination and introduction of genetically modified organisms (GMOs) in food. Thus, governments in those countries had made efforts also to strengthen their SPS measures to deal with the greater trans-boundary movement of pests and diseases resulting from increased trade.

The country presentations revealed the varied conditions of SPS implementation in respective countries. While most have acceded into WTO as members, their capacity to apply SPS measures as spelled out in the Agreement differed. As can be expected, the higher income countries like those in East/Southeast Asia had exhibited greater capacity in terms of necessary legal framework and infrastructure. In particular, their food control system was more advanced and their regulatory structure for plant and animal health protection was more developed compared to that in the other developing countries in the region. Surveillance systems,

inspection and approval procedures were also more streamlined. In the less developed countries, on the other hand, many aspects of the legal/legislative framework (e.g., food safety/sanitation laws and regulations) still needed to be reviewed/revised to make them more consistent with modern food safety systems, as well as with provisions of the SPS and other related agreements. For instance, while some of the more advanced countries had already based their national food standards on Codex standards, many developing countries still had to harmonize theirs with those that had been set by international organizations such as IPPC, OIE and Codex.

Food safety and quality assurance systems such as HACCP were also relatively less applied in the less developed countries. A few larger firms had adopted HACCP but many including small and medium enterprises had yet to upgrade hygiene standards in the production, handling and distribution of foods.

There were, however, also many similarities, e.g., in terms of issues and constraints faced. For instance, because the subject of food safety was multifaceted in character, all the countries had a multiplicity of departments or agencies involved such as Agriculture, Health, Commerce or Industry. This sectoral approach had resulted in many coordination problems. Some of the participating countries had addressed this issue by establishing/proposing to form some inter-ministerial/interagency committee or national food regulatory authority to serve as a nodal point in order to minimize the fragmented activities and promote a more coordinated approach to the implementation of SPS measures.

Another major issue that most of the participating countries highlighted was the limited benefits so far derived from the SPS Agreement. Because the developing countries were financially and technically less equipped to pursue the proper implementation of SPS measures the perception among many was that the developed countries were having more benefits. To address this concern, governments had to some extent pursue enhancement measures in the form of strengthening the legal/regulatory framework, upgrading SPS infrastructure, including adoption of appropriate food safety and quality assurance systems and increasing capacity of SPS personnel (e.g., in risk assessment, pest surveillance/early warning system for pests and diseases, residue and mycotoxin analysis). The efforts to date, however, had been found to be still seriously wanting so that the need for technical assistance from the developed countries and/or multilateral (donor) agencies was articulated by many of the countries. In this regard, there was a suggestion also to "incorporate" the quarantine and veterinary services or out-source these to the private sector.

A serious constraint faced by all the countries was the lack of adequate information on SPS measures (e.g., on plant/animal health status and treatments), both at national and regional levels. There was a need to set up appropriate databases that could be readily accessed by all stakeholders in order to enhance the implementation of SPS measures.

The issue about representation of developing countries/region in SPS forums was underlined by the country reports. There was a need in particular to properly communicate the views of these countries and their specific needs/conditions in such forums (e.g., in the matter of international standards setting). Many of the standards were said to have been set using technical data that had been provided by the developed countries. Most of the developing countries, and the region as whole, had not been able to adequately address this need due to the cost involved in attending the meetings, as well as to the failure to dispatch staff that were both well trained technically and had good negotiating skills.

WORKSHOP

A workshop was conducted to provide an opportunity for further discussion of the issues and to come up with specific recommendations. In this regard, the Seminar participants discussed a variety of issues affecting implementation of SPS measures. However, only two specific points were addressed in depth:

1) What practical measures can you suggest to further enhance understanding of SPS and other related agreements by developing countries?
2) How would you propose to upgrade the capability of developing countries in meeting SPS standards/ requirements? (please identify the priority areas and practical solutions.)

To facilitate the discussions two small groups were formed consisting of the following members:

Group I: Mr. Md. Zahangir Alam (Bangladesh), Dr. Yueh-Jong Wang-Chung (ROC), Mr. Epeli T. Dugucagi (Fiji), Dr. Aparna Sawhney (India), Ms. Farnaz Dastmalchi (Iran), Dr. Doloonjin Orgil (Mongolia), Ms. Nabin Chand Tara Devi Shrestha (Nepal), Mr. Maher Sher Mohammad (Pakistan) and Dr. Ilagi Puana (PNG)

Chairperson: Mr. Maher Sher Mohammad
Rapporteur: Dr. Aparna Sawhney
Facilitator: Mr. Cornelis Sonneveld

Group II: Ms. Woan-Ru Lee (ROC), Mr. Prem Narain (India), Dr. Annamalai Sivapragasam (Malaysia), Mr. Larry R. Lacson (Philippines), Ms. Chua Lay Har (Singapore), Ms. Aroonsri Oyviratana (Thailand), Ms. Tran Thuy Hai (Vietnam), Mr. Khlauk Chuon (Cambodia) and Mr. Than Aye (Myanmar)

Chairperson: Dr. Annamalai Sivapragasam
Rapporteur: Dr. Jane Chard
Facilitator: Dr. Jane Chard

The reports of the two groups were presented in a plenary session. Due to many similarities in the recommendations, a small committee of resource persons and participants later integrated the two reports. The integrated report which was presented as the recommendations of the Seminar appears below:

Enhancing Understanding of SPS Measures and Upgrading Capacity in Developing Countries: Recommendations

The objectives of the Seminar were twofold: (1) to review recent developments in the application of the SPS Agreement in APO member countries, and some non-member countries such as Myanmar and Cambodia; and (2) to identify the major problems and issues relating to its implementation and to gauge the level of implementation. These objectives were met from the presentation of country papers by the respective countries and complemented by papers presented by the resource speakers on overviews and recent developments pertaining to SPS.

In their presentations, the participants generally underscored the following issues and problems impeding the smooth implementation of SPS measures in the respective countries. At the outset, it is generally accepted that every participant country is currently implementing the various Articles which are part of the SPS Agreement, and that the degree of compliance has been largely dependent on the availability of basic resources such as infrastructure, human and financial instruments. However, given the time-frame since the initiation of the WTO/SPS Agreement, and the agreed commitment by countries, it is recognized that there is need to put in place specific strategic action plans to expedite the implementation process. Several issues captured the attention of the country's participants and some suggestions to improve the functioning of the Agreement and its implementation process were forwarded as follows:

Issues	Recommendations	Mechanisms
1. Inadequate regulatory framework to take into account SPS commitments	Further expedite the process of harmonizing and/or amending existing laws to bring them into line with international SPS requirements and standards	Form committee to review and amend the existing laws. Ensure appropriate allocation of resources within the country and/or obtain funding to assist with this process
2. Uncoordinated organization/administration for implementing SPS measures	Adopt or develop a coordinated and focused approach to implement SPS measures across all concerned departments to prevent duplication and to avoid fragmentation of responsibilities and to achieve better under-standing of the legal aspects	Coordinate responsibilities by establishing an SPS committee comprising of representatives from all concerned departments (agriculture, fisheries, health, certification, etc.) including technical personnel, as well as legal experts

... To be continued

Continuation

Issues	Recommendations	Mechanisms
3. Inadequate infrastructure to implement SPS measures	Upgrade food control systems and phytosanitary and animal health infrastructure. In particular address the need for enhanced laboratory facilities, technical and inspectorate capacity. Also the need for accreditation of laboratories to meet market standards. Where appropriate, countries should adopt the basic hygiene codes as the food safety standard.	Allocate public sector resources and/or seek funding through donor agencies. Out-sourcing of functions as appropriate, e.g., accredited private sector facilities.
4. Limited knowledge base	Training of key personnel and other staff within each department	In-country training of all stakeholders through National Productivity Organizations (NPOs) and through national Human Resource Development (HRD) initiatives. The training within countries can be provided by country experts and/or inviting regional experts/international resource staff. Regional and national organization like APO, NPO and international organizations like FAO and WTO should facilitate and organize relevant workshops to enhance the understanding on specific areas of SPS.
5. Lack of funds for implementation	5.1: Draw up national action plans and exploit available financial resources to fund improved implementation of technical, legal and administrative aspects on SPS measures. 5.2: Draw up specific proposals and time-frames for achievements pertaining to the requests for technical assistance or funding from international agencies for projects identified within the action plan. 5.3: Government should encourage the industry (e.g., food processing) to seek and earmark more funds to implement/ upgrade their food safety systems.	5.1: Sufficient allocations for SPS implementation should be provided in national budget. 5.2: Proactive submission of proposals to appropriate funding agencies such as World Bank, Asian Development Bank or through bilateral agreements with developed countries. 5.3: Submit project proposals to local development banks or funds made available through bilateral agreements.
6. Lack of awareness on food safety	Increase awareness for all stakeholders including consumers	Organize appropriate seminars, workshops, campaigns, etc. under the auspices of the government and WHO
7. Inability to effectively participate in standard-setting committees and meetings	Active participation in Codex Alimentarius, OIE and IPPC should be supported to adequately reflect inherent conditions in developing countries	7.1: Provide full support and access to technical experts during negotiations. 7.2: Allocation of funds specifically for developing country participation at meetings (OIE, IPPC and Codex). 7.3: Utilize regional setups (e.g., ASEAN)

... To be continued

Continuation

Issues	Recommendations	Mechanisms
8. Inadequate information database on SPS implementation	8.1: Compile data on SPS measures across all concerned departments so that it is easily accessible 8.2: Develop regional referral centers	8.1: Establish a national SPS information system 8.2: Make use of regional expertise and technical cooperation within the region, particularly any advances made within different areas in these countries (e.g., laboratory testing and diagnostic analysis)

FIELD STUDIES

For their field studies the participants visited three places, namely; 1) Plant Protection Station; 2) Animal Quarantine Service; and 3) Kanakei Sangyo Co. The highlights of their visits are presented below:

Plant Protection Station

The plant quarantine service in Japan was established in 1914 with the promulgation of the Export and Import Plant Quarantine Law. The service aimed to protect domestic agriculture from the infiltration of quarantine pests from abroad by means of import quarantine, as well as to conduct export quarantine activities to comply with requirements from foreign countries. It was also tasked with preventing the proliferation and spread of local pests which could seriously threaten agricultural crops in the country (domestic plant quarantine).

Plants and plant products imported from foreign countries by means of freight, personal luggage and parcel post were subjected to plant quarantine. Under the Law, a phytosanitary certificate issued by the authorities of the exporting country should be attached, that certain seed crops be inspected at the growing site in the exporting country and that the plants should be imported through designated ports of entry. Imported plants were classified into: 1) import-banned items; 2) items subject to quarantine; and 3) items not subject to quarantine.

Certain import-banned items could be conditionally imported but they were subjected to pre-shipment quarantine. The latter involved dispatching Japanese plant quarantine officers abroad to witness the sterilization treatment and export inspection was conducted by the authorities of the exporting country. Regarding exports from Japan, the plants were quarantine to comply with the import restrictions of the importing countries. For example, the export of Unshu orange to the U.S. and New Zealand, Japanese pear to the U.S. and Australia and apple to Australia, New Zealand and the U.S. were admitted under special quarantine procedures which included the designation of production areas, joint inspection in growing the site and packing facilities, etc.

In the case of domestic quarantine, inspections on seed potato and major fruit nursery plants to certify immunity from the virus and other harmful diseases were undertaken in order to provide healthy propagation materials to farmers. In the case when a pest was detected the country and seriously endangered domestic agricultural production, the movement of host plants was restricted and the emergency control measure was initiated by the government.

For the effective enforcement of the plant quarantine service, various researches were actively being conducted. Among the research areas were:

1. development of diagnostic techniques;
2. conduct of pest risk analysis and how to work out appropriate quarantine measures;
3. development of more sophisticated techniques of chemical and physical sterilization treatment;
4. collection of information on outbreak of pests and the status of their control in other countries;
5. exchange of information on pests with research institutes and universities at home and abroad; and
6. compilation of data on all aspects of plant quarantine.

A series of training courses were also conducted at the Yokohama Training Center to enhance the professional knowledge of quarantine officials.

The participants visited the Plant Protection Station of the MAFF located in Yokohama where they were briefed on the operations of the station and shown the exhibition room.

Animal Quarantine Service

The Animal Quarantine Service (AQS) which was also under MAFF was responsible for preventing the introduction of infectious diseases of animals into the country through importation of animals and animal products, as well as for improving the domestic health situation of other countries by exporting animals and animal products that were free from infectious diseases. To fulfill its functions the Service regularly liaised with other agencies such as the Animal Health Division of the Livestock Industry Department, Agricultural Production Bureau at MAFF which was in charge of exchanging information and making arrangements with international organizations and authorities of other countries concerned with domestic animal health; the animal health division of prefectures which was responsible for inland preventive and control measures; the MHLW which was concerned with food safety; and the National Institute of Animal Health which conducted researches on infectious diseases of domestic animals.

Inspections at the time of importation and exportation were based on the Domestic Animal Infectious Diseases Control Law, the Rabies Prevention Law and the Law on the Prevention of Infectious Diseases and Medical Care for Patients with Infection. Upon arrival at a port, animals were immediately inspected onboard by quarantine officers, after which they were taken to and detained for a certain period at the inspection sites designated by the MAFF Minister or AQS. During the detention period, the animals underwent clinical examinations, serum reaction tests, allergic reaction tests and other tests along with thorough checkups such as pathogenic and histo-pathological tests. In the case of animal products, inspections were done at AQS or at other places such as bonded sheds, warehouses and container terminals designated by the MAFF Minister or AQS. Whenever necessary, samples were collected for testing and inspection.

Based on the result of inspections conducted by the AQS some of the imported and exported animal products would be disinfected or incinerated in order to prevent the introduction of notifiable or reportable diseases. Disinfection methods included steaming, boiling and spraying or soaking in chemical solution, and SK fumigation on compressed packages under decompressed condition. Some animal products failing to meet the requirements may be denied entry. In case of animals diagnosed as being infected or suspected to be infected by a notifiable disease, importation was not allowed or the animals may be slaughtered.

The AQS conducted research to develop new diagnostic/testing methods which would be less time-consuming and more accurate. It also held regular technical and administrative workshops and seminars by inviting outside lecturers and discussing reports on the animal health situation of other countries. Currently, the AQS was making every effort to computerize their operations to speed up the inspection process of animal products, as well as to provide information in its homepage for overseas travelers and respond to various enquiries from citizens through email.

The participants visited the AQS Head Office in Yokohama where they were given a quick bus tour of the facilities and briefed on the animal quarantine procedures in Japan.

Kanakei Sangyo Co.

The Company was engaged in the business of milling and marketing rice. It started its operation in November 2001 after the rice milling plant was completed at the cost of ¥3 billion. The investment was provided by the Kanagawa Economic Federation of Agricultural Cooperatives. The plant operation applied HACCP based on a technology provided by a Swiss company, Buhler. The Company milled about 100-200 mt of brown rice a day and it produced 89 brands and 272 items of rice. In particular, it produced rice that needed no washing before cooking (“Pearl Rice”).

The investment in the facility was prompted by consumers’ concern about recent cases of food poisoning and contamination of food in the country. To address this, the Company had installed a high level of HACCP. It was characterized by the use of tapioca which acted as an absorbent of residual bran. Magnets were also used to remove metals like iron. It used a combination cleaner for separating other foreign substances mixed in the brown rice using specific gravity sorting and separation by air aspiration channel. The rice was polished three times and a glass color sorter was also used to discriminate color by infrared rays

with short wavelength. Robotic equipment was employed in the packaging. The entire operations were controlled by computers.

One of the major concerns of the Company was traceability. To ensure this, it collected information (e.g., place of production, brand, name of the agricultural cooperative (JA), cultural method used and the number of brown rice tank) based on unique lot numbers. A bar code checking system was also in place and the rice was packed according to the information included in the bar code.

To address the quality and safety concerns of consumers, Zennoh (National Federation of Agricultural Cooperatives) initiated the "Zennoh Safe System" which involved an inspection system that was carried out during production, processing and marketing of the product. Producers undertake consultations with customers/sellers to determine place of production, production method, actual production and quantity. Producers were to keep a daily record (e.g., how much chemicals and fertilizers they used) and this was checked by the JA. Based on the record, information about the product (e.g., where it was produced, how it was produced, by whom, how it was processed, what the quality was, and what residual chemicals were present) was provided to consumers through the Internet.

After the briefing, the participants were given a special tour of the plant facilities including the milling process, followed by the Company tour.

CONCLUSION

Food safety and quality has in recent years risen to the forefront of policy concerns of many countries in the Asia and Pacific region. The reasons for this are diverse. For one, consumers are increasingly demanding higher quality and safety of the foods that they eat. For another, the progress in processing technology and changing lifestyles has brought about a shift towards consumption of more processed foods. The globalization of food chains and international integration of the production processes have also increased the concern for food safety and quality. For these and many more reasons, governments in the regions have taken various steps to enhance their food control system and phytosanitary and animal health infrastructure. SPS measures should, therefore, be seen first and foremost as a framework of transparent rules and disciplines aimed at protecting human, animal or plant life or health.

The way that the SPS framework had been embodied in a multilateral trade agreement, however, has not been viewed positively by all. While aiming to be a fair and balanced covenant for all members, the SPS Agreement is still perceived by many as favoring the developed countries, at least in the short term. This is because the basic requirements for proper implementation of the SPS measures are very demanding and which many developing countries can not readily meet. For instance, at the very least, a country needs to have adequate human and technical capacity and adequate infrastructure. Without these it would be difficult, especially for the least developed countries to benefit much in terms of trade as has been indicated by many of the country presentations. There is, therefore, a need for the more advanced countries to provide the needed financial and technical assistance to the developing countries in order to narrow the gap in the implementation of SPS measures. On the part of the developing countries, they will need also to exert sufficient effort, particularly in modernizing their national food safety control system/laws which would involve, among others, promoting greater awareness and understanding of the importance of SPS measures and aligning national SPS standards to those that have been established by standard setting international bodies. Regarding the latter, a stronger endeavor should be made at national and regional levels, to raise the quality of representation of developing countries in these bodies.

The Seminar provided the participants with an opportunity to learn more about recent developments and achievements with regard to the implementation of SPS measures in the respective participating countries. The active exchanges of views and sharing of experiences, in particular, added much to the participants' knowledge about the subject. The recommendations made by the Seminar should provide individual participants/participating countries, as well as relevant international/regional organizations, concrete indications/proposals on how implementation of SPS measures, can be further enhanced in the region. For instance, as has been recommended, the APO and its network of NPOs can support more programs aimed at promoting greater awareness and understanding of food safety and quality in general and implementation of SPS measures in particular.

1. SANITARY AND PHYTOSANITARY (SPS) AGREEMENT: OVERVIEW AND RECENT DEVELOPMENTS

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INTRODUCTION

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) is one of the multilateral trade agreements, which all members of the World Trade Organization (WTO) are committed to observe. As the membership of the WTO grows, the principles embodied in the SPS Agreement are becoming *de facto* international rules governing the domestic and foreign trade of foods, feeds and other agricultural commodities. The compliance with the obligations of the SPS Agreement as well as the exercise of rights accorded by the Agreement are a key to ensuring food safety and animal and plant health in all countries, while promoting free trade and development.

HISTORY OF THE GATT AND WTO

The Uruguay Round of the Multilateral Trade Negotiations was successfully concluded in 1994. In January 1995, the WTO was established with its headquarters located in Geneva, Switzerland, replacing the Secretariat of the GATT (General Agreement on Tariffs and Trade). Although the long-standing framework of the GATT continues to exist in the form of GATT 1994, the WTO has seen a number of new rules added and the coordination mechanisms reinforced.

The SPS Agreement is one of the new elements in the WTO system and constitutes a part of the package of multilateral agreements, which WTO members are required to comply with. The SPS Agreement has its root in the Technical Barriers to Trade (TBT) Agreement established by the Tokyo Round, as a plurilateral agreement. The SPS Agreement can also be considered as complementing Article XX (b) of the GATT 1947, which allows contracting parties to apply measures "necessary to protect human, animal or plant life or health". While this article was open to a range of different interpretations, the SPS Agreement has brought about, for the first time, more concrete and specific rules based on scientific approaches in this area.

OVERVIEW OF THE SPS AGREEMENT

The SPS Agreement covers food safety, animal life and health as well as plant life and health, in accordance with its scope and objectives found in the Preamble and Article 1. The Article 2 sets out basic rights and obligations of WTO members with regard to sanitary and phytosanitary measures: these measures should be applied only to the extent necessary; measures should be based on scientific principles and not maintained without sufficient scientific evidence; and no arbitrary or unjustified discrimination is allowed, etc. Below are some of the principal provisions of the Agreement.

Harmonization

The Article 3 of the SPS Agreement encourages WTO members to harmonize their national measures with international standards, guidelines and recommendations. The standards and related texts adopted by the Codex Alimentarius Commission (CAC), the International Plant Protection Convention (IPPC) and the

Office International des Epizooties (OIE) are recognized under the SPS Agreement as international benchmarks within the fields of food safety, plant life and health and animal life and health, respectively. Country measures conforming to international standards are "deemed necessary" and "consistent with the SPS Agreement". Stricter measures can be applied only when there is scientific justification or when a higher level of sanitary or phytosanitary protection is chosen by the member.

Equivalence

The Article 4 of the SPS Agreement emphasizes the notion of equivalence. WTO members have to accept different measures providing the same level of health protection against risks of disease or contamination, even if they are less sophisticated than those used by them. Steps to be taken to promote recognition of equivalence have been identified in "Decision on the Implementation of Article 4 of the Agreement on the Application of Sanitary and Phytosanitary Measures" (G/SPS/19), effective on 24 October 2001.

Risk Assessment

The Article 5 of the SPS Agreement underscores the importance of risk assessment as the scientific basis for sanitary and phytosanitary measures. It also identifies factors that need to be taken into account when determining the member's appropriate level of protection (ALOP) from sanitary and phytosanitary risks. Consistency is a key principle when applying an ALOP so as to avoid arbitrary or unjustifiable distinctions and discriminations. Provisional measures can however be applied by a member when relevant scientific evidence is insufficient on a condition that additional information is sought for a more objective risk assessment and reviewing the measure. WTO members have a right to request an explanation to another member applying a measure constraining trade or not based on international standards.

Adaptation to Regional Conditions

The Article 6 of the SPS Agreement requires a WTO member's sanitary and phytosanitary measures to be adapted to the characteristics of the area from which the product originated and to which the product is destined. In so doing they should recognize pest- or disease-free areas as well as areas of low pest or disease prevalence.

Transparency

The Article 7 of the SPS Agreement refers to transparency as an important tool for the effective operation of the Agreement. In accordance with the Annex B of the Agreement, WTO members need to ensure the publication of their regulations, the establishment of Enquiry Points and the adherence to the notification procedures. Information exchange taking place between delegations during the sessions of the SPS Committee also contributes to ensuring transparency.

Technical Assistance

The Article 9 of the SPS Agreement encourages WTO members to facilitate the provision of technical assistance, either directly from a member to another, or through international organizations. Technical assistance should particularly address the need of exporting, especially developing, countries. This important subject will further be discussed in some of the following sections in this paper.

Special and Differential Treatment

Under the Article 10 of the SPS Agreement, WTO members need to take account of the special needs of developing countries, in particular least-developed countries. Longer time-frames for compliance should be accorded to the products of interest to developing countries if phased introduction of measures is possible. The SPS Committee, upon request, can accord specified, time-limited exceptions from obligations, although no member has formally made such a request so far. The same Article also encourages active participation of developing countries in the work of so-called "three sisters" (CAC, IPPC and OIE).

SEATTLE, DOHA AND THEREAFTER

It was foreseen in Article 12:7 of the SPS Agreement that the operation and implementation of the Agreement should be reviewed three years after its entry into force. The SPS Committee commenced the first review process in 1998 and adopted a Report on the Review of the SPS Agreement in March 1999. The Report found that during the first three and a half years of implementation, the SPS Agreement had contributed to improving international trading relationships with respect to sanitary and phytosanitary measures, and that a number of SPS-related trade matters had been resolved following their discussion at formal meetings of the SPS Committee or bilaterally. As part of the Review, the Committee considered ways to improve the operation of the transparency provisions of the Agreement, in particular those related to notifications and the operation of Enquiry Points, and adopted revised Recommended Notification Procedures, annexed to the Report.

A WTO Ministerial Conference was held in Doha in November 2001, after the Seattle Conference failed to deliver a progress towards opening a new round of multilateral negotiations. The Doha Conference adopted a Doha Development Agenda. Its "Implementation Decision" includes, in its Section 3, clauses related to the SPS Agreement. They provided clarification and guidance on a number of points relevant for the implementation of the Agreement.

Longer Time-frame to Comply with New SPS Measures

The Implementation Decision clarified that where a phased introduction was possible, the longer period for developing countries to comply was now understood to mean, normally, at least six months; where phased introduction was not envisaged, but a member government had problems complying, the two sides should consult, "while continuing to achieve the importing member's ALOP".

"Reasonable Interval" between Publication and Entry into Force of a New SPS Measure

The Implementation Decision clarified that "Reasonable Interval" between publication and entry into force of a new SPS measure was now understood to mean, normally, at least six months, subject to certain conditions; but particular circumstances and the actions necessary to implement a measure also had to be taken into account; if the measure contributed to trade liberalization, it should not be delayed unnecessarily.

Equivalence

In the lead-up to Doha Conference, the SPS Committee had settled this implementation issue by deciding on an outline of steps designed to make it easier for all WTO members to make use of the SPS Agreement"s equivalence provisions. In the Implementation Decision, ministers instructed the SPS Committee to develop expeditiously the specific program to further the implementation of these equivalence provisions.

Review of the SPS Agreement

The Implementation Decision instructed the SPS Committee to review the operation of the agreements at least once every four years.

Developing Countries Participation in Setting International SPS Standards

The Implementation Decision noted the actions taken by the WTO to help developing-country members participate more effectively, including efforts to coordinate with the relevant organizations and to identify needs for technical assistance in the field. The ministers went on to urge the WTO Director-General to continue with this, and to give priority to least-developed countries.

Financial and Technical Assistance

The Implementation Decision called for WTO members to provide assistance to least-developed countries so that they can respond adequately to new SPS measures that could obstruct their trade. It also called for assistance to help them implement the Agreement as a whole.

WTO TRADE DISPUTES

WTO enjoys strengthened dispute settlement procedures in comparison to the previous GATT, given, among others, that reports of a Panel or an Appellate Body are adopted by the General Council acting as the Dispute Settlement Body (DSB) and its rulings become formal unless the DSB chooses not to do so by consensus. A number of trade dispute cases have been brought to the WTO dispute settlement mechanisms since the entry into force of the WTO Agreements. Some of them involved conflicts between industrialized and developing countries, while others involved those between two industrialized countries or country groups.

As far as the SPS Agreement is concerned, there have been one or more dispute cases in each of the respective fields of food safety, animal life and health and plant life and health (Table 1). The details of findings and rulings of the Panels and Appellate Bodies can be obtained from the WTO website.

Table 1. Selected SPS-related Trade Dispute Cases Brought to WTO

		Brought by	Date
DS18 Australia	Import Prohibition of Salmon from Canada	Canada	1 Oct. 1995
DS21 Australia	Measures Concerning the Importation of Salmonids	U.S.	23 Nov. 1995
DS26 European Communities	Measures Concerning Meat and Meat Products (hormones)	U.S.	31 Jan. 1996
DS48 European Communities	Measures Affecting Meat and Meat Products (hormones)	Canada	8 July 1996
DS76 Japan	Measures Affecting Agricultural Products	U.S.	9 April 1997
DS245 Japan	Measures Affecting Importation of Apples	U.S.	6 March 2002
DS271 Australia	Certain Measures Affecting the Importation of Fresh Pineapple	Philippines	23 Oct. 2002

PARTICIPATION IN SPS-RELATED MATTERS

As the WTO serves as an international forum for coordination, cooperation and conciliation for promoting trade and resolving problems between members, it is critical that all WTO members participate in the work of the WTO and other relevant international organizations. There are a number of means to enhance a country's participation in the SPS-related matters within the international settings. Many of them provide efficient and less costly ways of participation thus of particular interest to developing countries.

First, the website maintained by the WTO is a valuable and handy source of information (www.wto.org). Unrestricted working documents of the SPS Committee and other WTO organs are available for downloading and/or regular subscription. It also provides information for better understanding WTO mechanisms as well as past and current dispute cases. There are links to other international bodies active in their own technical fields.

Second, various seminars and conferences promoting the knowledge of risk analysis, and particularly risk assessment, are being organized by WTO and other multilateral and bilateral organizations. Participation in these meetings contributes to building a solid base to implement and enhance risk assessment and risk management mechanisms at the country level.

No less important is the participation in the work of international standard setting bodies named explicitly by the SPS Agreement: CAC, IPPC and OIE. It is important that voices and needs of all countries are well reflected in the standards adopted by these bodies.

The most formal and direct way of being engaged in SPS-related dialogues between countries will be to participate in the sessions of the SPS Committee, held normally three times a year in Geneva, on the premises of the WTO. The Committee on Sanitary and Phytosanitary Measures (SPS Committee) has been established under Article 12 of the Agreement to ensure a good implementation of the Agreement by, among others, monitoring the international harmonization process, liaising with other international organizations, and conducting a periodical review of the Agreement. It also serves as a form for information exchange, negotiations and consultations between WTO members. The provisional agenda, working documents and

summaries of the sessions of the SPS Committee can be obtained from the WTO website besides official diplomatic channels between the WTO Secretariat and the members.

The SPS Committee has also a role to play with regard to settling specific trade disputes. When a potential trade problem arises, it is often dealt with between the trade partners at their capitals, or, by their permanent missions in Geneva. If the problem is not solved during preliminary talks, it is then brought to the attention of other countries at a session of the SPS Committee under the agenda item "Specific Trade Concerns". If a solution to the problem is still not found, the issue can be brought to good offices, conciliation and mediation with the WTO Director-General acting in his *ex officio* capacity before a formal panel process commences.

TECHNICAL ASSISTANCE

Provision of technical assistance is a key to the effective participation and involvement of developing countries in the instrument offered by the WTO and its SPS Agreement (Figure 1). Technical assistance should, above all, aim at strengthening the capacity of the recipient country in dealing with SPS matters (Figure 2).

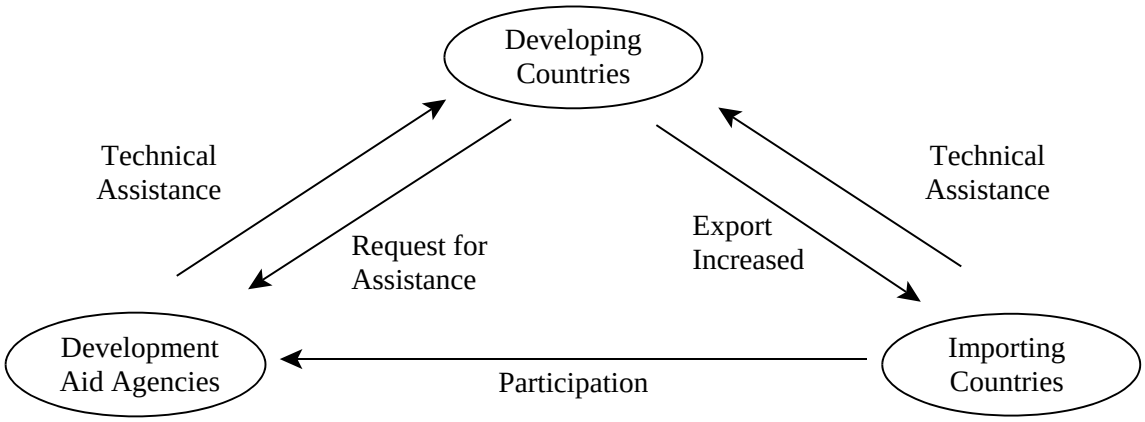

Figure 1. Technical Assistance in the Framework of International Cooperation

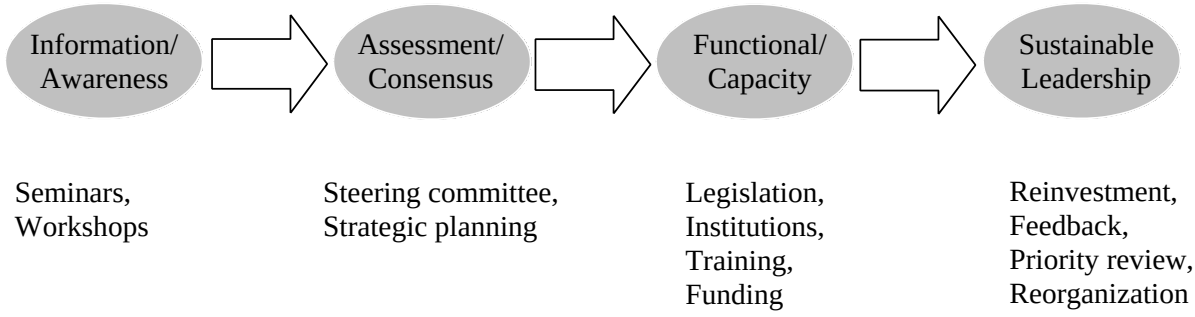

Figure 2. National Capacity Building on SPS-related Matters

Traditionally, a sectorial approach has been employed in addressing risks pertaining to food safety, plant health and animal health. Within one country, authorities responsible for managing these risks are often distinct entities and do not communicate to each other as much as they should. Even worse, the authoritative power for food safety is frequently split between agricultural, trade, health and other administrations. This situation can become an impediment when a country tries to strengthen its SPS capacities.

A new approach to managing these risks is called "Biosecurity" or "Bioprotection" approach. This integrative, multi-sectorial approach uses the concept of risk analysis as its binding principle and is meant to enable the efficient and effective use of available resources. Thus, common infrastructure (legislation and regulation, enforcement tools, laboratory equipment, etc.) can be shared for food safety, plant health and

animal health purposes. Several countries interested in this approach have been remodeling their national administrative structure.

Donor countries are encouraged to provide technical and financial resources to developing countries either directly through bilateral channels or through multilateral instruments such as Standards and Trade Development Facility. The latter was launched in September 2002 jointly by the World Bank and the WTO with the participation of CAC, IPPC, OIE, FAO and WHO, with a view to providing grants and financial support for technical assistance projects helping developing countries to shape and implement international standards on food safety, and plant and animal health.

CONCLUSION

The beneficiaries of the SPS Agreement are not limited to trade partners enjoying the elimination of non-scientific, unjustified border barriers. When implemented in a fully effective manner, the Agreement should benefit developing countries, which are now entitled to challenge sanitary or phytosanitary measures of any importing country if these are considered to be scientifically unjustifiable or not based on international standards. The products from developing countries conforming to international standards have an increased chance to find their access to the international market, thanks to the SPS Agreement. The ultimate beneficiary, however, of the Agreement should be the consumer of all countries, importing or exporting alike, who should see his health better protected through a wider choice of food commodities available in the market place and through the improved compliance of health-related food standards based on sound science and evidence.

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2. CODEX STANDARDS AND FOOD SAFETY*

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ABSTRACT

The Codex Alimentarius Commission is an inter-governmental organization founded in 1962 by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) to implement the Joint FAO/WHO Food Standards Programme. Its primary objective is to protect the health of consumers, to ensure fair practices in international food trade, and to promote coordination of all food standards work undertaken by international governmental and non-governmental organizations; and it is charged with the elaboration of international food standards and other recommendations.

The Codex Alimentarius Commission has met every other year since 1979, alternately in Rome and Geneva, the most recent being held in July 2001 in Geneva. There are several subsidiary bodies; those dealing with issues applicable to all foods, those elaborating standards for individual foods or food groups, and those discussing issues of regional concern.

The Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization states in Article 3.1 that its members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist. In the case of food safety, the Agreement refers specifically to Codex standards and other recommendations. Standards and other recommendations elaborated by the Codex Committees on Food Hygiene, on Food Additives and Contaminants, on Pesticide Residues, and on Residues of Veterinary Drugs in Foods and adopted by the Codex Alimentarius Commission all fall into this category.

Standards and other recommendations relating to food safety are prepared by the relevant Codex committees following an eight-step elaboration procedure and become valid only when the Codex Alimentarius Commission adopts them as Codex final texts. The Codex Alimentarius Commission has been promoting the application and integration of risk analysis in its work in relation to food safety since 1993. In support of this, expert consultations were convened jointly by FAO and WHO to develop a scientific and conceptual framework of risk analysis. The Joint FAO/WHO Expert Committee on Food Additives and the Joint FAO/WHO Meeting on Pesticide Residues, independent from the Codex system, provide scientific and technical advice to the Codex committees dealing with food additives and contaminants, and residues of veterinary drugs and pesticides. Another joint FAO/WHO expert body conducts risk assessment of microbiological hazards in food. These expert committees serve as risk assessors, while the Codex Alimentarius Commission and those committees mentioned above act as risk managers.

INTRODUCTION

The Codex Alimentarius Commission is an inter-governmental organization founded in 1962 by the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) to

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implement the joint FAO/WHO Food Standards Programme. Its primary objective is to protect the health of consumers, to ensure fair practices in international food trade, and to promote coordination of all food standards work undertaken by international governmental and non-governmental organizations. It is charged with the elaboration of international standards and other recommendations, such as codes of practice and guidelines, for foods moving in bulk in international trade. Since the establishment of the World Trade Organization (WTO) on 1 January 1995 as a result of the Uruguay Round negotiations (1986-1994), the Codex Alimentarius Commission and its activities and recommendations have gained more importance and attracted more attention than before 1995. One of the WTO Agreements, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) explicitly refers to Codex standards, and stipulates that member governments of WTO shall base their food safety measures on Codex standards, guidelines or recommendations, where they exist (Article 3.1). In addition, in the area of food safety, the SPS Agreement also urges the member governments of WTO to play a full part, within the limits of their resources, in the Codex Alimentarius Commission and its subsidiary bodies to promote the development and periodic review of standards, guidelines and recommendations with respect to all aspects of sanitary measures (Article 3.4).

PARTICIPATION IN CODEX MEETINGS

Members

Membership is open to all member nations and associate member nations of FAO and WHO. The current membership stands at 168. Each member of the Commission shall have one representative, who may be accompanied by one or more alternate representatives and advisors. Each member is responsible for appointing these representatives, alternates and advisors for representing its country at sessions of the Commission and its subsidiary bodies; and establishing Codex Contact Point to act as a link between the Codex secretariat and related agencies within its territory.

Observers

Any member nation and any associate member of FAO or WHO which is not a member of the Commission but has a special interest in the work of the Commission, may, upon request communicated to the Director-General of FAO or WHO, attend sessions of the Commission and its subsidiary bodies as an observer. Nations which, while not member nations or associate members of FAO or WHO, are members of the United Nations, may, upon their request and subject to the provisions of FAO and WHO relating to the granting of observer status to nations, be invited to attend, in a observer capacity, sessions of the Commission and of its subsidiary bodies. Subject to the approval by FAO or WHO, the Director-General of FAO or WHO may invite intergovernmental and international non-governmental organizations to attend, as observers, sessions of the Commission and of its subsidiary bodies. International non-governmental organizations wishing to obtain an observer status in the Commission shall submit information following instructions in the 'Principles Concerning the Participation of International Non-Governmental Organizations in the Work of the Codex Alimentarius Commission' adopted by the Commission in its 23rd Session in 1999.

Expenses

Expenses incurred in connection with attendance at sessions of the Commission and its subsidiary bodies and travel of delegations of the members of the Commission and of observers shall be borne by the governments or organizations concerned.

Official languages

Currently, English, French, Spanish, Arabic and Chinese are the official languages of the Commission. However, in most of the subsidiary bodies, only English, French and Spanish are used due to financial limitation.

STRUCTURE OF THE CODEX ALIMENTARIUS COMMISSION

The Codex Alimentarius Commission meets every other year, alternately in Rome and Geneva. Its major tasks are: to consider draft Codex standards and related texts for final adoption; to review the

programme of work; to review the budget; and to consider any other matters relevant to its work. Its operations follow the Rules of Procedures of the Codex Alimentarius Commission contained in the *Codex Alimentarius Commission Procedural Manual* (12th edition, FAO, 2001).

The management organs of the Commission are the Executive Committee and the secretariat of the Commission. The Executive Committee consists of 11 members: chair and three vice-chairs of the Commission, and seven elected regional representatives. Six regional coordinators attend as observers. The Executive Committee meets every year and considers the future work for the Commission. It takes decisions on behalf of the Commission when there is no meeting of the Commission in that year. The Codex secretariat, located at the headquarters of FAO in Rome, provides administrative support to the Commission including the preparation of working documents, serves as a link to the Codex Contact Points of member countries, and coordinates work with that of other organizations.

Codex has many subsidiary bodies, as shown in Figure 1: six regional committees, nine general subject committees, eleven commodity committees, and three *ad hoc* intergovernmental task forces. The Codex Committee on Nutrition and Foods for Special Dietary Uses acts as a general subject committee when it considers nutritional issues and as a commodity committee when it elaborates standards and related texts on foods for special dietary uses. Task forces have a limited timeframe: all currently existing task forces were established at the 23rd Session of the Commission in 1999 and are expected to give final reports to the 26th Session of the Commission in 2003.

The 19th Session of the Commission in 1991 agreed to focus on horizontal issues and attach significant importance to general subject committees which consider issues applicable to all foods or a large group of foods.

All sessions of the Commission and its subsidiary bodies, except those of the Executive Committee, are held in public i.e. one may listen to and take note of discussions at a Codex session as a member of the public.

Independent and separate from the Codex Alimentarius Commission, there are joint FAO/WHO meetings of individual experts which give scientific advice to the Commission and member countries of FAO and WHO. The joint FAO/WHO Meeting on Pesticide Residues (JMPR) and Joint FAO/WHO Expert Committee on Food Additives (JECFA) are among such expert groups.

ELABORATION OF CODEX STANDARDS AND OTHER RECOMMENDATIONS

The elaboration of Codex standards and other recommendations follow the eight-step elaboration procedure as stipulated in the 'Procedures for the Elaboration of Codex Standards and Related Texts' contained in the *Procedural Manual*, as shown in Table 1. A decision to initiate the elaboration of a standard can be made only by either the Commission or its Executive Committee on the basis of the 'Criteria for the Establishment of Work Priorities', such as consumer health protection and protection from fraudulent practices, and potential impediments to international trade due to diversification of national legislations. Subsidiary bodies can propose to elaborate a new standard, subject to approval by the Commission or the Executive Committee. In the case of maximum residue limits for pesticides and veterinary drugs, recommendations of JMPR and JECFA are distributed to members and interested international organizations for comments at Step 3 (Table 1).

Subsidiary bodies may propose to the Commission to adopt a proposed draft standard at both Step 5 and Step 8 (Table 1), omitting Steps 6 and 7 when there is consensus in the committee. When elaboration of a Codex standard is a matter of urgency and is not contentious, the proposing committee may propose to follow the five-step accelerated procedure subject to approval by the Commission or the Executive Committee.

The adoption of draft standards and related texts as Codex final texts and the revocation of existing Codex recommendations can be decided only by the Commission itself, while the initiation of work and preliminary adoption can also be done by the Executive Committee.

The revision of existing Codex standards and related texts also follows these elaboration procedures.

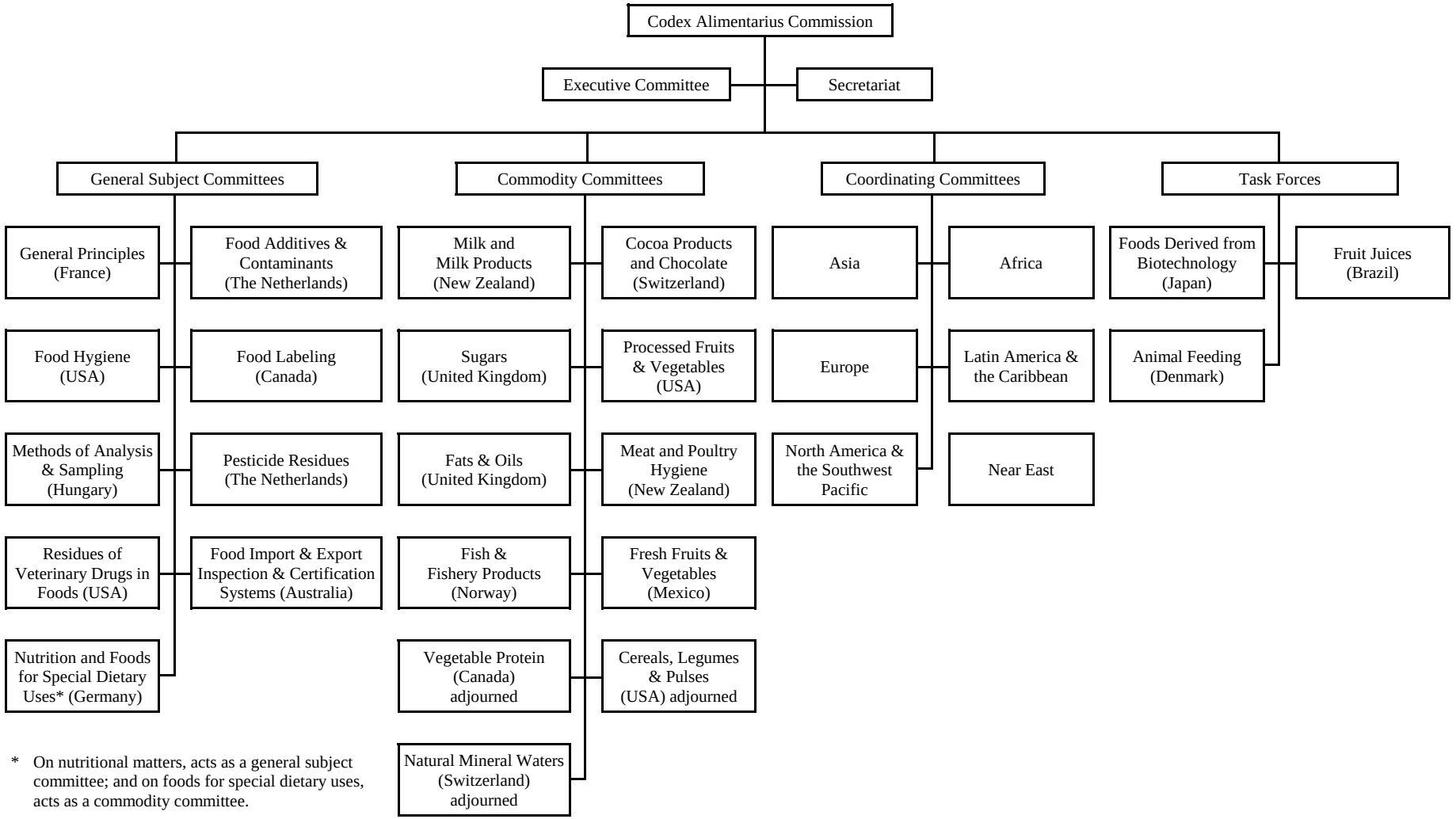

Figure 1. Structure of the Codex Alimentarius Commission

Table 1. Uniform elaboration procedure for Codex standards and related texts

Step	Process
1 2 3	The Commission decides to elaborate a Codex standard; The secretariat arranges for the preparation of proposed draft standard; and The proposed draft standard is sent to members and interested international organizations for comments.
4	The proposed draft standard is considered by the relevant Codex committee, together with comments submitted.
5	The proposed draft standard is again sent to members and interested international organizations for comments. The Commission or the Executive Committee considers the proposed draft standard and comments for preliminary adoption.
6	The preliminary adopted standard (draft standard) is considered by the relevant Codex committee, together with comments submitted.
7	The draft standard is considered by the relevant Codex committee, together with comments submitted.
8	The draft standard is again sent to members and interested international organizations for comments. The Commission considers the draft standard and comments for final adoption.
Thence Codex standards and related texts	

CODEX STANDARDS AND OTHER RECOMMENDATIONS AND THE WORLD TRADE ORGANIZATION (WTO)

Among all agreements of WTO, the Agreement on the Application of Sanitary and Phytosanitary measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement) have implications to Codex work. The SPS Agreement covers human life and health, including food safety, as well as animal and plant life and health, while the TBT Agreement covers aspects not covered by the SPS Agreement.

While the SPS Agreement specifically refers to the Codex Alimentarius Commission, International Office of Epizootics and International Plant Protection Convention as international standard-setting bodies in the area of human, animal and plant health, the TBT Agreement does not name specific standard-setting organizations.

Codex food safety provisions recognized by the SPS Agreement are: maximum residue limits for pesticides and veterinary drugs; maximum levels of food additives in use; maximum levels for contaminants; food hygiene requirements for foods; and methods of analysis and sampling for and labeling of these provisions. Provisions recognized by the TBT Agreement include: food labeling; quality provisions; nutritional requirements; and methods of analysis and sampling for these provisions.

Article 3.1 of the SPS Agreement stipulates that member governments of WTO shall base their sanitary and phytosanitary measures on international standards, guidelines or recommendations established by the three organizations stated above, where they exist. However, Article 3.3 says that members 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 there is a scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a member determines to be appropriate in accordance with the relevant provisions of risk assessment.

FOOD SAFETY

There are many Codex committees dealing mostly or partly with food safety issues. These committees are listed in Table 2. Any recommendations, standards, codes of practice, guidelines, or other types of recommendations elaborated by these committees and adopted by the Commission as Codex final texts are regarded as ‘international standard’ in the SPS Agreement.

Table 2. Codex committees dealing with food safety issues.

Codex committees	Food safety issues considered
Committees whose main responsibilities relate to food safety	
Codex Committee on Food Additives and Contaminants	Maximum levels for the use of food additives Maximum levels for contaminants (mycotoxins, heavy metals, other environmental contaminants such as dioxins and PCBs) Codes of practice for the reduction of contaminants in foods Food additive provisions and contaminant provisions contained in individual food standards
Codex Committee on Food Hygiene	Microbiological risk management Codes of hygienic practice Methods of analysis for pathogenic microorganisms
Codex Committee on Pesticide Residues	Maximum residue limits for pesticides in foods and feeds Methods of analysis and sampling for pesticide residues in foods Extraneous maximum residue limits in foods and feeds
Codex Committee on Residues of Veterinary Drugs in Foods	Maximum residue limits for veterinary drugs in foods of animal origin Methods of analysis and sampling for residues of veterinary drugs in foods
Codex Committee on Meat and Poultry Hygiene	Codes of hygienic practice for meat and poultry
Ad Hoc Intergovernmental Task Force on Animal Feeding	Code of practice for good animal feeding
Ad Hoc Intergovernmental Task Force on Foods Derived from Biotechnology	Guidelines for assessing safety of foods derived from biotechnology
Committees whose responsibilities include food safety issues	
Codex Committee on Methods of Analysis and Sampling	Methods of analysis and sampling for contaminants, such as heavy metals, mycotoxins
Codex Committee on Food Labeling	Labeling of allergens Labeling of foods derived from biotechnology
Codex Committee on General Principles	Working principles for risk analysis

The 21st Commission held in 1995 had an extensive discussion on the role of science in Codex decision-making, especially in developing food safety recommendations. After a lengthy and heated debate, it adopted the 'Statements of Principle Concerning the Role of Science in the Codex Decision-Making Process and the Extent to Which Other Factors Are Taken into Account', which is contained in an appendix of the *Procedural Manual*. The most contentious point of the debate was the meaning of 'other legitimate factors', e.g. Europe wanted to include animal welfare, while other regions were opposed to its inclusion, stating that animal welfare was outside of the Terms of Reference of the Commission. The 24th Commission in 2001 agreed with a decision of the Codex Committee on General Principles and adopted eight 'Criteria for the Consideration of the Other Factors Referred to in the Second Statement of Principle' instead of developing a list of these factors.

The Commission also promotes consumer involvement in relation to food safety standard setting. Member countries have been encouraged to involve consumers both at the national and Codex levels. A number of international consumer organizations have been granted 'observer' status at Codex and have actively participated in many Codex sessions.

Risk analysis

The 19th Commission held in 1991 decided that, in the future, risk analysis should be applied in the elaboration of Codex standards and related texts. FAO and WHO helped the Commission by organizing a number of expert consultations on elements of risk analysis, and provided recommendations to the Commission and member countries of FAO and WHO. The 20th Commission in 1993 considered the first-ever working paper on risk analysis that analyzed the application of risk analysis in the past and contained recommendations to strengthen risk analysis related activities in Codex. The paper also urged those joint FAO/WHO bodies giving scientific advice to the Commission to implement formal risk assessment processes. At the time, there was a general agreement that risk analysis should be applied but there also was a considerable opposition to the paper.

In recent years, risk analysis is on the agendas of many of the Codex committees included in Table 2 and it is now unthinkable that risk assessment aspects and risk management aspects were not considered in setting food safety standard by these committees.

In 1995, the Commission adopted a number of definitions of risk analysis terms related to food safety and the Statements of Principle Relating to the Role of Food Safety Risk Assessment. The Codex Committee on General Principles has been elaborating working principles for risk analysis within the framework of Codex. In the course of the elaboration, a significant amount of time was spent on the discussion on 'precaution'. While most countries agreed that when there were insufficient scientific data, and consequently there was uncertainty in risk assessment, precautionary measures should be taken, there was a sharp split in whether or not to use the term 'precautionary principle' and to what extent precautionary measures could be applied. Since the term 'precautionary principle' has been used within the European Union, European countries wish to include the term in the Codex document. On the other hand, countries of the Americas and Asia, and Australia and New Zealand, were opposed to use of this term. In particular, countries from Latin America showed great concerns that the term 'precautionary principle' might justify unfair trade barriers.

Article 5.1 of the SPS Agreement states that members of WTO shall ensure that their sanitary and phytosanitary measures are based on an assessment of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations. The Codex Committee on General Principles will start considering working principles for risk analysis for member countries in 2003.

In the framework of risk analysis related to food safety, the Codex Alimentarius Commission, including its subsidiary bodies, is regarded as a risk manager, and scientific advisory bodies as risk assessors. These bodies include those dealing with chemicals in foods and others dealing with pathogenic microorganisms in foods. In those dealing with chemicals, such as JECFA and JMPR, the WHO Panels review toxicological data to allocate acceptable daily intakes (ADI; for those chemicals used intentionally in food production) or provisional tolerable daily (weekly) intakes (PTD(W)I; for those chemicals not intentionally used in food production, i.e. contaminants). In the case of pesticides and veterinary drugs, acute reference doses may be allocated to those chemicals showing adverse health effects as a result of one-day ingestion.

For pesticides and veterinary drugs, the FAO Panels review trial data along with other data, such as metabolism, and recommend residue definitions and maximum residue limits which will further be considered by the relevant Codex committees. These FAO Panels also perform exposure assessments. In the case of contaminants, such as heavy metals and mycotoxins, the Codex Committee on Food Additives and Contaminants estimates maximum levels through work offered by certain member countries. However, it asks JECFA to perform exposure assessment.

The relevant Codex committees are responsible for establishing priority lists of chemicals for which maximum residue limits or maximum levels be elaborated and which therefore need to be evaluated by JMPR and JECFA. They are also responsible for elaborating maximum residue limits or maximum levels to be adopted by the Codex Alimentarius Commission. In elaborating these limits and levels, not only scientific and technical issues but also economic issues, and sometimes even cultural issues, may be considered.

Recently, it has become more important to ensure good risk communication between risk managers (Codex committees) and risk assessors (relevant scientific bodies) as well as to establish risk assessment policy for effective and efficient risk analysis.

CONCLUSIONS

As Codex recommendations have gained importance, especially in international trade of food, and as consumer interests and concerns in food safety have increased significantly in the world in recent years, it is important for each Codex member to actively and constructively participate in Codex sessions and to promote its work in its country to obtain as wide a range of opinions as possible from its consumers and the industry.

3. BOVINE SPONGIFORM ENCEPHALOPATHY (BSE) OUTBREAKS AND COMMUTABLE DISEASE CONTROL MEASURES IN JAPAN

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INTRODUCTION

BSE Outbreaks and Prevention and Control Measures in Japan

Following stricter surveillance, a BSE-infected cow was found in September 2001 in Japan, the first of such cases to be detected outside Europe. Fortunately, basic measures such as the provision of BSE tests and elimination of Specified Risk Material (SRM) at slaughterhouses and incineration of meat and bone meal produced from ruminant animals were taken immediately to lower the risk of the spread of the disease.

Although the first outbreak caused serious confusion among the society, the measures taken on time had helped the people to handle the matter relatively calmly. Only five cases of BSE were detected over the last one year. The government intends to further strengthen and improve measures against BSE and implement a wide range of sanitary measures introducing risk analysis methods in response to raising social interest in food safety.

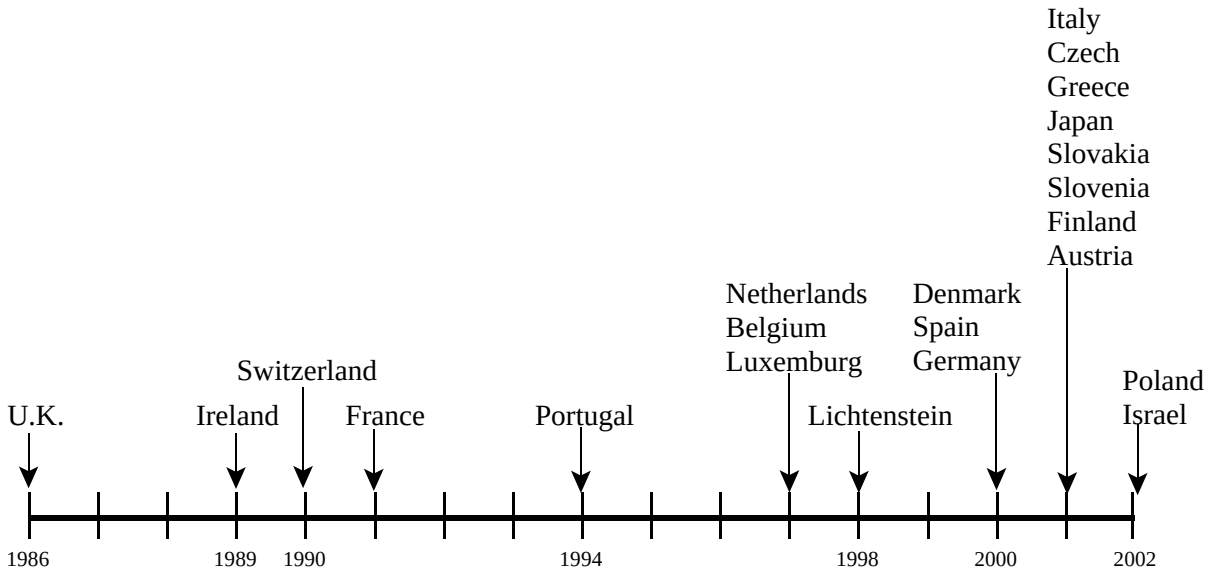

Figure 1. First Case of BSE in Each Country

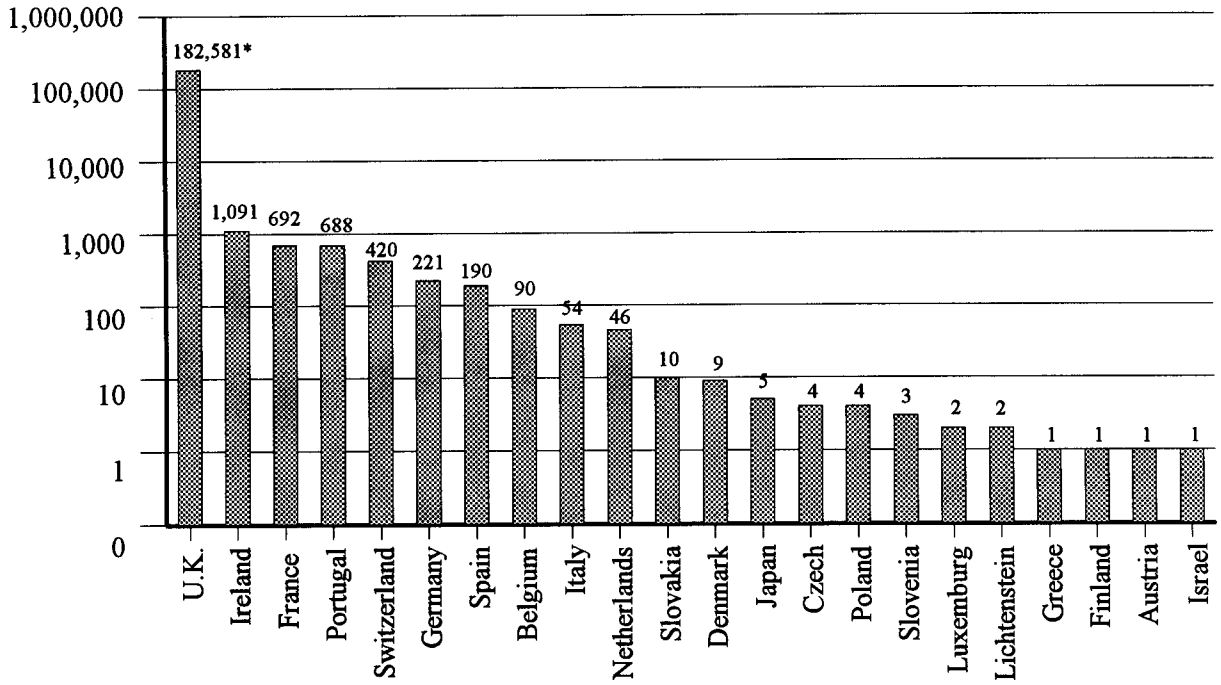

Figure 2. Number of BSE Cases in Each Country

Source: As of 5 November 2002, Office International des Epizooties (OIE).
Note: * Data of U.K. is as of 30 June 2002.

Outbreaks of BSE

1. Shiroi, Chiba Prefecture: 10 September 2001
   46 cows were kept separately at a farm soon after the detection of the first case was found (44 of them were confirmed as cohort animals for destruction). → All the infected cows at the farm were destroyed and BSE tested.
2. Sarufutsumura, Hokkaido: 21 November 2001*
   82 cows were kept separately at a farm when the case was found (62 of them were confirmed as cohort animals for destruction). → 52 cows were destroyed after being tested as of 5 November.
3. Miyagimura, Gunma Prefecture: 2 December 2001
   68 cows were kept at the farm when the case was found (56 of them were confirmed as cohort animals for destruction). → All the cows at the farm were destroyed and tested.
4. Onbetsucho, Hokkaido: 13 May 2002*
   56 cows were kept at the farm when the case was found (44 of them were confirmed as cohort animals for destruction). → 42 cows were destroyed after being tested (as of 5 November)
5. Isehara, Kanagawa Prefecture: 23 August 2002
   47 cows were kept at the farm when the case was found (37 of them were confirmed as cohort animals for destruction). → 41 cows were destroyed after being tested as of 5 November.

Note: * Thirteen cows in the second case and two cows in the fourth case are being raised for research.

Outline of BSE Outbreaks

- 10 September 2001: Nation's first BSE-infected cow was confirmed.
- 18 September: Provision of meat and bone meal to cows was legally prohibited.
- 4 October: Importation, production and shipment of meat and bone meal were totally banned temporarily.
- 18 October: A system to give BSE test to all cows that are to be slaughtered came into force (removal and incineration of SRM).

1. 21 November: Second BSE case was diagnosed.
2. 2 December: Third BSE-infected cow was found.
3. 13 May 2002: Fourth BSE case was detected.
4. 4 July: The Law Concerning Special Measures on BSE went into force.
5. 23 August: Fifth BSE-infected cow was found.

Risks of BSE on Human Beings

* Meats and viscera of cows that have passed BSE test are allowed to be shipped.
* Regardless of BSE infection, SRM is all removed and incinerated.
* Distal part of ileum of intestine to be shipped is removed.
* Beef (muscular tissue) is not infectious.
* Milk and dairy products are not infectious.

Safety of food on dinner table is secured.

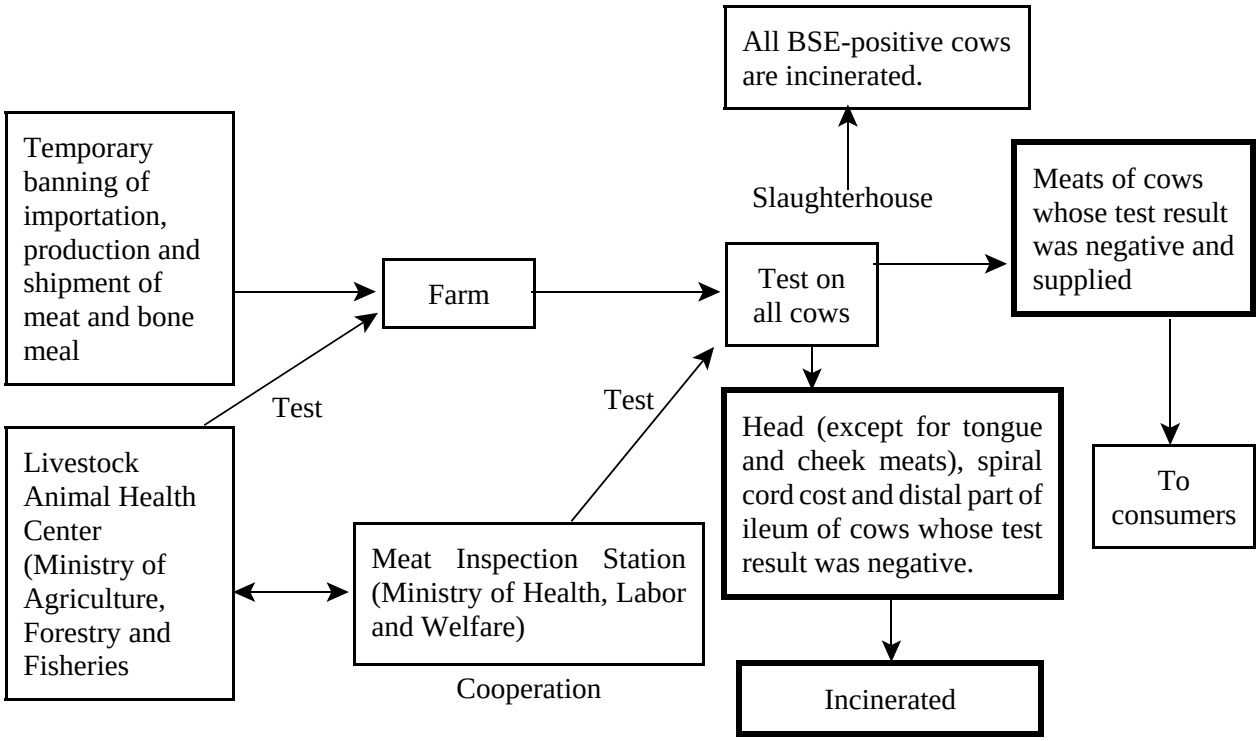

Figure 3. Supply System of Safe Stock Farm Products

	Ministry of Health, Labor and Welfare	Ministry of Agriculture, Forestry and Fisheries
Purpose	Prevention of distribution of meats of BSE-infected cows	Prevention of outbreak of the disease at production stage and prevention of its spread when it surfaces
Subject	All cows to be slaughtered for human consumption	1. Dead cows and cows that are killed not for human consumption 2. Cows that have the symptoms of the disease in their central nervous system 3. Others (cows except for the above 1. and 2. but health officials recognized the need of inspection).
Inspection System	Meat Inspection Station — Quarantine Station (Yokohama, Kobe) National Institute of Infectious Diseases Obihiro University of Agriculture and Veterinary Medicine Screening inspection (ELISA* method) Confirmed diagnosis [Western blotting test Immunohistochemical test]	Livestock Animal Health Center — National Institute of Animal Health Screening inspection (ELIZA method) Confirmed diagnosis [Western blotting test Immunohistochemical test]

Figure 4. BSE Inspection System

Note: Enzyme-linked Immunosorbent Assay.

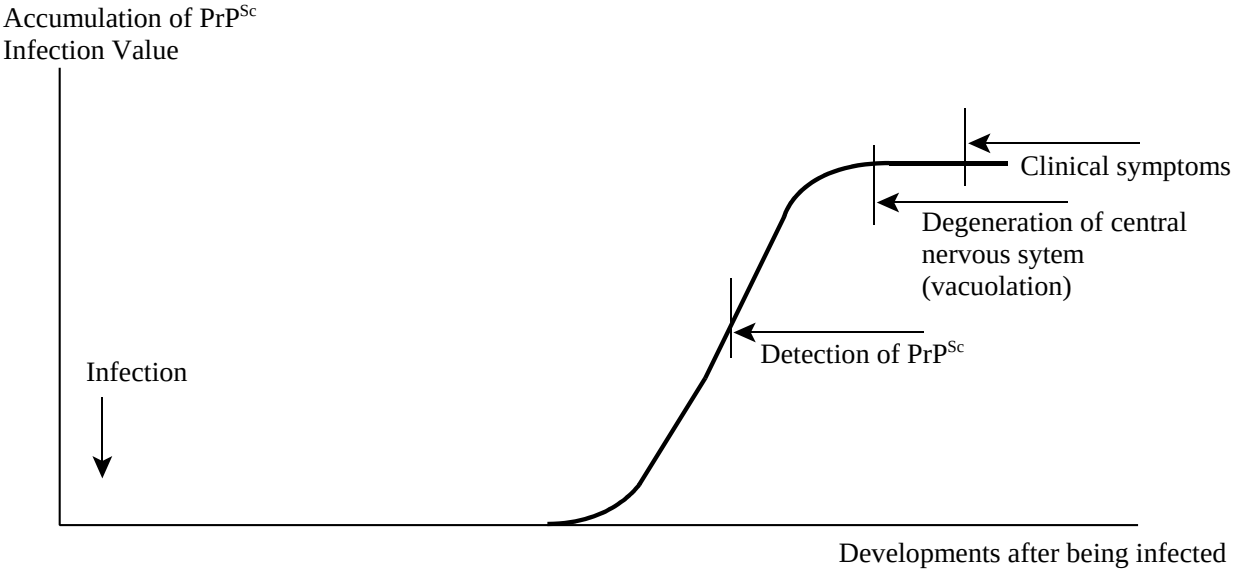

Figure 5. Development after Being Infected and Accumulation of PrP^{Sc}

Improvement of Surveillance at Dairy Farm

Subject of BSE screening are as follows:

* Cows that have symptoms in their central nervous system or suspected of being infected with BSE
* Cows that died after symptoms were found in central nervous system
* Cows that had ataxia or dysstasia and the cause of the conditions cannot be identified
* Four thousand and five hundred cows that died aged 24 months and older annually.

Table 1. Surveillance a of BSE-infected Cows

	Surveillance at Dairy Farms	Surveillance at Slaughterhouse
Number of tested cows	3,020	1,297,820
Number of cows with positive result	1	4
Date	2 April 2001-1 Nov. 2002	18 Oct. 2001-9 Nov. 2002

Under the Law Concerning Special Measures on BSE (Act 70, 2002) that went into force on 4 July 2002, all cows that died aged 24 months and older are required to receive BSE screening from fiscal 2003. Activities are now well underway to devise efficient screening and disposal mechanisms as well as set up necessary facilities that would enable to implement the special measures on BSE.

Treatment of BSE-infected Cows and Cows Confirmed as Cohort Animals

BSE-infected cows and cohort cows are killed, tested and incinerated.

Table 2. Outline of BSE-infected Cows

Date of Detection of BSE	Date of Birth	Age at the Time of Confirmation
10 September 2001	26 March 1996	65-month-old
21 November 2001	4 April 1996	67-month-old
2 December 2001	26 March 1996	68-month-old
13 May 2002	23 March 1996	73-month-old
23 August 2002	5 December 1995	80-month-old

Box 1. Definition of Cohort Cows According to the BSE Inspection Manual

* Cows that were born within 12 months before or after the birth of a BSE-infected cow on a farm where the infected one was born and it cannot be denied that they were fed the same feed as the infected one (birth cohort)
* Cows that had been raised together with a BSE-infected cow on the same farm until they became one year old and it cannot be denied that they were fed the same feed as the infected one (feeding cohort)
* Cows that were borne by a BSE-infected cow within two years before and after the onset of showing clinical symptom.

Source: Basef on the International Animal Health Code of OIE.

Table 3. Outline of Import Ban of Meat and Bone Meal

Date of Implementation	Applied Country
27 March 1996	U.K.
1 January 2001	EU, Switzerland and Liechtenstein
11 June 2001	Czech
4 October 2001	All countries

Table 4. Regulations for Importing Meat and Bone Meal

Conditions for Heat Treatment Japan Requested[a] (after 1990)		EU (1996) and OIE (1997) Standards[b]		WHO Inactivation Method (1991)
136ºC	>	133ºC	<	134-138ºC
30 minutes	>	20 minutes	>	18 minutes
[3 atm]	=	3 atm	=	3 atm

Notes: [a] Regulation adopted by U.K.; and [b] since 1997, they have been applied to the Netherlands, Belgium, Germany and Denmark.

The government has requested exporting countries with outbreaks of BSE in the past to heat treat meat and bone meal with attached official certification before they export it to Japan in accordance with international standards.

At present importation of meat and bone meal from any country is being banned.

Box 2. Result of Investigations into Cause of BSE Outbreaks

* It could not be denied that Italian meat and bone meal imported before June 1998 was not sufficiently been treated.
* The possibility that cow feed was contaminated with meat and bone meal at some feed was contaminated with blend factories cannot be denied completely.
* Animal fat made in the Netherlands that had had outbreaks of BSE was used in milk substitute fed to all the five infected cows

In the Future

Experts will analyze and evaluate the aforementioned causes of infection. Information that can be obtained from inspections of all cows at slaughterhouses and cows that died aged 24 months and older will be analyzed to promote investigations into the cause.

Law Concerning Special Measures on BSE

Objective is aimed at establishing a system providing for the supply of safe beef through the implementation of the Special Measures in place to prevent the surfacing and prevalence of the disease. By doing so, it aims to protect people's health and promote the healthy development of production, processing and distribution businesses related to beef cows, dairy farming and beef as well as restaurants.

1. ***Main Contents***

1) Formulation of basic plan on measures, the national and metropolitan and prefectural governments need to take at an outbreak of BSE (Article 4)
2) Banning the use of feed made of cow meat and bone meal (Article 5)
3) Reporting and inspection of dead cows (Article 6)
4) Making BSE inspection at slaughterhouses (Article 7)
5) Recording information related to cows (Article 8) (Traceability System)
6) Measures to stabilize management of cow producers (Article 9)
7) Prevalence of correct knowledge and reinforcement of investigation and research (Articles 10 to 12).

2. ***Supplementary Provisions of Revisions***

1) "Infectious bovine spongiform encephalopathy" is changed to "communicable bovine spongiform encephalopathy".
2) Extension of storage period of medical record and attestation (three years to eight years), etc.

Basic Plan of BSE Measures

1. Basic policy of measures
2. Period of plan

3. Issues related to measures to prevent prevalence of BSE
4. Issues related to communication of correct information
5. Issues related to cooperation among concerned governmental organizations and local authorities
6. Important issues related to other measures.

Difficulties of BSE Measures

* There is no ante mortem diagnostic technique.
* The incubation period of BSE is long (2-8 years)
* Physiochemical resistance of infection agent is strong.
* Many aspects of such as infection mechanism are yet to be known.

(Response based on precautionary principle.)

BSE-related Research Tasks

* Clarification of description of prion protein
* Clarification of mechanism of infection of prion disease and development of diagnostic techniques
* Analysis of resistance of prion protein in environment and development of inactivation techniques
* Joint international research on BSE
* Establishment of research facility where infections experiment of cows can be carried out (P3 facility).

Image of Individual Cow Recognition System

The individual cow recognition system is a system under which each cow is given an identification number, which is unique to each individual cow and is the only number throughout its life, to identify and manage cows.

Individual 10-digit number

Livestock animal individual recognition center
(nation-wide database)

Report on birth

Individual 10-digit number | Date of birth | Sex | Breed | Place of birth | History of transfer | Date of death

(Effective use of individual information)

- Information on bloodline
- Milk productivity
- Information on dressed carcass
- History of diseases, treatment (medical record), etc.

Understanding the transfer record of all cows
(Quick establishment of livestock animal commutable disease control system
Supply of safe farm animal products)

When and where I was born and where I have traveled can be found out easily.

4. MEASURES FOR ENHANCEMENT OF FOOD SAFETY AND QUALITY ASSURANCE SYSTEMS FOR ENHANCED TRADE

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INTRODUCTION

This document provides general information on the framework and requisites for upgrading the developing countries' capability in setting up and implementing Food Safety and Quality Assurance Systems for enhanced trade.

Attention is given to the Food Safety and Quality Assurance Systems presently applied worldwide; HACCP (Hazard Analysis Critical Control Point), BRC (British Retail Consortium), EUREP-GAP (Euro-Retailer Produce Working Group-Good Agricultural Practice), ISO 9001-2000, SQF (Safe Quality Food) 1000 and 2000.

The HACCP system is discussed thoroughly and special attention is paid in this document to HACCP hygiene guides for the small- and medium-scale enterprises (SMEs). The food safety systems in the food processing enterprises are not stand alone activities. The success of the manufacturing of safe food products is highly dependant on the safety and quality of raw material. In this document, the food safety systems in the primary production are also discussed. To ensure the application of hygienic equipment in the processing, the document tells about the hygienic design of the equipment. Of course, some elements of legislation are also included in this document.

In addition, this document provides information showing which specific steps need to be taken. Also the amount of resources required to set up these systems and other things to be done by the governments to upgrade the food control systems and the private sector to implement food safety systems.

The building block of the food controls systems are discussed: food law and regulations; food control management; inspection and laboratory services and information; education; communication; and training. Attention is paid to a national food control strategy and organizational structures and approaches to meet the objectives.

The FAO and WHO are mentioned frequently as the two main specialized agencies of the United Nations involved in food quality and safety technical cooperation programs with developing countries, but technical assistance can also be provided through bilateral agreements.

Last but not least possible funds are discussed like through the World Bank, other development banks and from bilateral donor agencies.

Some specific country experience is highlighted. Useful websites are added in the relevant subject and at the very end.

HACCP

History of HACCP

The Hazard Analysis Critical Control Point System was introduced in the United States (US) in 1971 by the Pillsbury Company in collaboration with the National Aeronautics and Space Administration (NASA) and the U.S. Army Natick Research and Development Laboratories. These agencies had the initial responsibility of designing and manufacturing food products and hardware which were to provide 100 percent assurance that either the food products would not be contaminated with pathogen, bacteria or viruses that could cause illness or that the function of the equipment with zero defects.

After extensive evaluation, it was decided that the only way to achieve success was by having control over the process and the people as early as possible in the production system. This preventative system was perceived to offer the highest degree of assurance that the manufactured products were safe as it negated the need for any further end-product testing and emphasis was placed on monitoring. The HACCP concept for food safety was developed based on this approach.

Internationalization of HACCP

The HACCP system has become a worldwide recognized system for the management of food safety to all companies involved in the production, transformation, storage and distribution of food for human consumption. It was adopted by the European Union (EU) for all food processors and the Codex Alimentarius Commission as the principal food safety system (EU Directive 93/43/EEC; Codex Alimentarius – Alinorm 93/131, 1993).

The EU Directive mandated the implementation of HACCP in all local legislation as of December 1995. All European companies involved in the food chain from the primary producer to the final consumer are now duty bound to have a HACCP plan or system. The European Directive also advises that all countries which are desirous of exporting food products to the EU must "critically examine their production processes in the same thorough way by making a HACCP plan and/or system of operation".

Some European countries conformed and introduced the necessary legislation within the stipulated deadline. The Netherlands complied and established the requirement for the introduction of HACCP as Article 30 of the "Directive on the Hygiene of Foodstuffs". The Dutch Government also included an additional clause that specifies which records must be maintained. It is as follows: "*The documentation of both the analysis and the actual control has to be complete and easy to access*".

HACCP Concept, Purpose, Implementation and Benefits

The HACCP **concept** involves the identification of specific hazards throughout the entire process involved in the production of a food product. It focuses on the preventative measures for their control to assure the quality and safety of the food. This includes analysis of raw material sources and usage, processing equipment, operating practices, packaging and storage, together with marketing and conditions for intended use. As there is less reliance on the traditional system of end-product testing, food safety is built into the product from conception through design and distribution. The **purpose** of HACCP can thus be summarized as: "to identify potential problems which could occur in an operation, consider each and establish controls to minimize or prevent its occurrence".

Implementation of a HACCP System

The HACCP concept is based on **seven principles** and **14 steps**. The Codex Alimentarius speaks about 12 steps, however **two steps** have been **added** in the European approach:

i. Define the terms of reference and the scope of the plan
ii. Assemble the HACCP team
iii. Describe the product
iv. Identify the intended use
v. Construct flow charts
vi. On-site verification of flow chart
vii. List all hazards associated with each step and list preventive measures
viii. Apply HACCP decision on each hazard
ix. Establish target levels and tolerances for each Critical Control Point (CCP)
x. Establish a monitoring system for each CCP
xi. Establish corrective actions
xii. Verification of the system
xiii. Establish record keeping and documentation
xiv. Review the HACCP plan.

<*Remark*> – Point 7 up to and including 13 are the so-called seven principles of the HACCP process.

Benefits of a HACCP System

Some benefits of the HACCP-concept in general and for food inspection:

– The system is preventive, proactive, systematic, scientific and cost-effective.
– It is a management tool.
– The system is internationally acknowledged (FAO/WHO).
– The system is applicable throughout the food chain.
– The system leads to increased awareness and subsequent higher involvement and commitment of employees.
– The official control based on HACCP programs is more efficient than a traditional inspection or end-product testing alone. Hence, health protection of consumers is enhanced.
– Harmonization of food inspection practices at international level can be achieved.
– Facilitation of regulatory/customer inspection.
– It leads to greater confidence in product safety.
– The system has a preventive approach; reduction of reprocess and losses. Subsequent reduction of production cost is achieved.

Implementation of HACCP in a processing factory will require the commitment of all involved parties and has a deep impact on the entire chain.

New Developments: Integration ISO9001 and HACCP

ISO has developed a new standard: ISO15161:2001, guidelines on the application of ISO9001:2000 for the food and drink industry. Quality and food safety systems are based on ISO9001:2000 and HACCP in an integrated approach.

Certification of HACCP

Eventually the HACCP system can be certified based on the criteria laid down in the document: "Criteria for the Assessment of an Operational HACCP System" compiled by the Dutch National Board of Experts HACCP, September 1998.

The certification will be carried out by a company accredited by the Board of Accreditation. A successful audit will result in a **Certificate.** The certificate is not lifetime. Repeated audits by the same certifying body will be carried out within a period of three years. After this period, companies to be certified will have to start all over again with the procedure of certification. Certification is not a legal requirement; it can be company policy or can be requested by the wholesale company.

Different countries have different criteria to audit and assess implementation of HACCP systems:

– India uses its own standard: Food Hygiene – Hazard Analysis and Critical Control Points (HACCP) System and guidelines for its application: IS15000:1998
– South Africa uses South African Bureau of Standards (SABS)0330: code of practice for the implementation of a HACCP system.
– The FAO and WHO have also published a guideline: Guidance on Regulatory Assessment of HACCP as a result of a joint FAO/WHO Consultation on the Role of Government Agencies in Assessing HACCP in Geneva, June 1998.
– Differences in the criteria lead to differences in the level of HACCP systems.

<Useful Websites>

* Council Directive: 93/43/EEC of 14 June 1993 Hygiene of Foodstuffs: http://europa.eu.int/eur-lex/en/lif/dat/1993/en_393L0043.html
* Information on ISO the International Organization for Standardization: http://www.iso.ch/iso/en

IMPLEMENTATION OF HYGIENE GUIDES OR CODES

The application of HACCP is laid down in the EU Council Directive 93/43/EEC of 14 June 1993 on the hygiene of foodstuffs. In 17 articles the general of hygiene are laid down. Article 3 speaks specifically

about HACCP while Article 5 tells about hygiene guides; “Member states shall encourage the development of guides to Good Hygiene Practices, which may be used voluntarily by food businesses as a guide to compliance with the provisions in Article 3”.

There is not a clear cut between the implementation of a complete HACCP system and a hygiene guideline; the information below, however, gives some more explanation.

Objective of a Hygiene Code

To implement hygiene guides, the first question that may arise is “what is the objective of a hygiene guide?”

There are several reasons for this:

* In general hygiene codes work with a common HACCP system and with predetermined CCPs.
* Hygiene guides are basically, but not exclusively, established for the **SMEs** or even shops like butcheries and bakeries with limited manpower, where the CCPs have been predetermined. A common HACCP system for a group of products or enterprises as mentioned above (branch) is applied whereby the Hazard Analysis and Risk Assessment is developed for that group community and whereby the standard control and preventive measures and corrective actions are laid down in the hygiene guide.
* This hygiene guide can be **directly** applied by the operators of the group or branch.
* Hygiene guides cover in a systematic way those elements which are laid down in the legislation to comply with the basic matters on Hygiene and Good Manufacturing Practices and provide the conditions to ensure the safety of food products.
* Hygiene guides facilitate inspection bodies on their assignment to inspect the relevant items of the implemented system.

Therefore, it is recommended that the standard hygiene guides should at least contain the following aspects, which are actually the so-called prerequisite measures of a HACCP system:

1. ***Aspects of Personnel Hygiene***
   - Clothing
   - Being healthy
   - Jewellery
   - Rules of conduct.
2. ***Requirements to the Elements of Infrastructure of the Building like***
   * aspects on the location and environment
   * requirements for the construction and design of buildings
   * a plan or procedure for cleaning and sanitation
   * a pest control system
   * a procedure for water quality
   * requirements to processing equipment.
3. ***HACCP***
   * Type of hazards (microbiological, physical and chemical)
   * Standard control and preventive measures
   * Predetermined CCPs
   * Monitoring system
   * Registration forms or checklists
   * Standard Operating Procedures (SOPs) like consumer complaints, non-conformities and calibration.
   * Training.

Some Examples of Hygiene Guides from the Netherlands

1) Hygiene Guide for Uncut Fresh Fruit and Vegetables
2) Hygiene Guide for Bread and Pastries
3) Guide for Hygienic Transport, Storage and Distribution of Foodstuffs
4) Hygiene Guide for the Butcher.

Hygiene guides are generally prepared by the stakeholders or branches and are approved by the Ministry of Health prior to implementation.

Hygiene guides used in European countries are laid down in the so-called FLEP (Food Law Enhancement Practitioners) report:

Guides to Hygiene Practice, March 2000
Inspectorate for Health Protection, Commodities and Veterinary Public Health
P.O. Box 16108
2500 BC The Hague
The Netherlands

The Codex Commission on Food Hygiene has prepared a draft Code of Hygienic Practice for Fresh Fruits and Vegetables to be established for growers and handlers, and of course eventually also to be applied by food processors. The code addresses Good Agricultural Practices (GAP) and Good Manufacturing Practices that will help control microbiological, chemical and physical hazards associated with all stages of the production of fresh fruits and vegetables from primary production to packing. The document makes reference to annex: Ready-to-Eat Fresh Precut Fruits and Vegetables and an annex for Sprout Production.

The Code is in a final stage of approval (2003) and will then give worldwide access to recommendations with regard to the prevention and control of hazards in fresh fruits and vegetables.

<*Useful Websites*>

* Council Directive: 93/43/EEC of 14 June 1993, Hygiene of foodstuffs: http://europa.eu.int/eur-lex/en/lif/dat/1993/en_393L0043.html

BRC

Background

The BRC is originated from the United Kingdom. Retailer branded products represent over 50 percent of all food sold in the UK. Under the terms of the Food Safety Act 1990, retailers have an obligation to take all reasonable precautions and exercise all due diligence in the avoidance of failure, whether in the development, manufacture, distribution, advertising or sale of food products to the consumer.

That obligation in the context of retailer-branded products includes the verification of technical performance at food production sites. Until recently, each retailer has undertaken this activity separately, verifying food production site performance against their individual, internally developed standards. In some instances verification is undertaken by the retailers in-house technologists and other instances by third party inspection bodies.

Technical inspection of supplying companies' production premises forms only part of the retailers due diligence system, and the acceptance for a company to supply, rests with the individual retailer. Major retailers, like AHOLD in the Netherlands and METRO in Germany, are in favor to have BRC as an international standard.

The Technical Standard

The BRC has developed the Technical Standard for those companies supplying retailer-branded food products. The Standard has been developed to assist retailers in their fulfilment of legal obligations and protection of the consumer, by providing a common basis for the inspection of companies supplying retailer-branded food products. It has encompassed the fundamental principles of the retailers' current standards and intended to be incorporated into standards used by third party inspection bodies. It is not intended to replace the requirement of any legislation, where this legislation requires a higher standard for a specific industry sector.

The Standard will be reviewed on a regular basis by the BRC membership and revised, where considered appropriate.

The Standard requires:

– the adoption of HACCP;
– a documented Quality Management System;
– control of factory environment standards; and
– control of product, process and personnel standards.

Benefits of the BRC Technical Standard

There are a number of benefits arising from the introduction of the BRC Technical Standard:

– A single standard and associated protocol, allowing inspection to be carried out by inspection bodies, who are accredited against a European standard;
– Single verification commissioned by the supplier, in line with an agreed inspection frequency, will allow suppliers to report upon status to those customers recognizing the Standard;
– The Standard is comprehensive in scope covering all areas of product safety and legality;
– The Standard addresses part of the due diligence requirements of both the supplier and the retailer;
– Within the associated inspection protocol, there is a requirement for ongoing surveillance and confirmation of follow-up of corrective actions on non-conformance; and
– As inspection bodies are accredited against a European standard, there will be future recognition of inspection bodies in countries where product is sourced.

Certification

The certification is based on the criteria laid down in the "Technical Standard and Protocol for Companies Supplying Retailer Branded Food Products" prepared by the BRC of June 2000, issue nr.2.

The Standard provides for a **Certificate of Inspection** to be awarded at one of two levels: Foundation Level and Higher Level.

The Format of the Technical Standard

Each section of the Technical Standard begins with a paragraph, which is the statement of intent that all suppliers must comply with in order to gain a certificate of inspection.

Below the statement of intent, there are three columns of specific criteria:

1. ***Foundation Level***

All criteria specified in column 1 must be complied with to gain a certificate of inspection at the Foundation Level. In addition to these criteria, it is desirable to aspire to those criteria specified in column 2 for the Higher level certificate of inspection and column 3, Recommendations on Good Practice.

2. ***Higher Level***

All requirements for the certificate of inspection at the Foundation Level must be met. In addition, all criteria in column 2 must be complied with to gain a certificate of inspection at the Higher Level. In addition to these criteria, it is desirable to aspire to those criteria specified in column 3, Recommendations on Good Practice.

3. ***Recommendations on Good Practice***

These criteria are recommended to all suppliers as being industry best-practice, to which they should aspire. Where any of these recommendations are not met, it is still a requirement of the scheme that this is recorded within the Inspection Report.

It is envisaged that companies will progress through the two levels of the Standard and ultimately comply with all criteria of the Standard. To this end, it is a requirement of the Standard that the Inspection Report, at both Foundation and Higher Level, will record non-conformity against any criteria in columns 1, 2 or 3. This will identify specific shortfalls, where improvement can be achieved.

The accompanying Inspection Protocol provides the specific requirements for those companies seeking inspection against the Standard.

Certification Audit

The certification audit can be carried out by an inspection body accredited by the Dutch National Board of Experts HACCP. A successful audit will result in a **Certificate of Inspection**. The certificate is not life-

time. Repeat audits will be carried out. The frequency of repeat audits will depend on the level of inspection (Foundation or Higher).

Food safety in the processing industry is not a stand alone activity. Food safety covers the whole chain. In this document, attention is also paid to the international Food safety systems in the primary production.

Source: Technical Standard and Protocol of BRC.

EUREP – EURO-RETAILER PRODUCE WORKING GROUP

Objective and Background Information

The objective of the EUREP, which is made up of leading European food retailers, is to raise standards for the production of fresh fruit and vegetables. In November 1997 they agreed on the first draft protocol for GAP. This represented the first step towards integrated production. In September 1998 the EUREP initiated pilot trial projects to verify the implementation of EUREP-GAP in the field. They were conducted together with advanced producers in Spain (MARTINAVARRO) and Italy (APO).

Scope

The prepared document sets out a framework for GAP on farms, which defines essential elements for the development of best-practice for the global production of horticultural products (e.g., fruits, vegetables, potatoes, salads, cut flowers and nursery stock). It defines the minimum standard acceptable to the leading retail groups in Europe, however, standards for some individual retailers and those adopted by some growers may exceed those described. The document does not set out to provide prescriptive guidance on every method of agricultural production.

EUREP members wish to recognize the significant progress already made by many growers, grower and organizations, local schemes and national schemes in developing and implementing best-practice agricultural systems with the aim of minimizing adverse impact on the environment.

EUREP members also wish to encourage further work to improve growers capability in this area, and in this respect this GAP framework, which defines the key elements of current agricultural best-practice, should be used as a benchmark to assess current practice, and provide guidance for further development.

GAP is a means of incorporating Integrated Pest Management (IPM) and Integrated Crop Management (ICM) practices within the framework of commercial agricultural production. Adoption of IPM/ICM is regarded by EUREP members as essential for the long-term improvement and sustainability of agricultural production.

1. ***HACCP***

EUREP supports the principles of and encourages the use of HACCP.

2. ***Commitment***

It is essential that all organizations involved in the food production chain accept their share of the tasks and responsibilities to ensure that GAP is fully implemented and supported. If consumer confidence in fresh produce is to be maintained, such standards of GAP must be adopted, and examples of poor practice must be eliminated from the industry. All growers must demonstrate their compliance with national or international law.

All growers should be able to demonstrate their commitment to:

a) maintaining consumer confidence in food quality and safety;
b) minimizing detrimental impact on the environment, whilst conserving nature and wildlife;
c) reducing the use of agrochemicals;
d) improving the efficiency of natural resource use; and
e) ensuring a responsible attitude towards workers health and safety.

The EUREP-GAP has the following content with subsequent conditions:

i. Introduction
ii. Record keeping
iii. Varieties and rootstocks
iv. Site history and site management

v. Soil and substrate management
vi. Fertilizer usage
vii. Irrigation
viii. Crop protection
ix. Harvesting
x. Postharvest treatments
xi. Waste and pollution management, recycling and reuse
xii. Worker health, safety and welfare
xiii. Environmental issues.

Certification of EUROP GAP

Growers receive their EUREP-GAP **certificate** through independent auditing from a certification body that is approved by EUREP. The certifications will be based on the criteria laid down in the EUREP-GAP Document "Control Points and Compliance Criteria" from September 2000.

<*Useful website*>: www.eurep.org

SQF

SQF Background

The SQF systems find its origin in Western Australia. Agricultural Western Australia recognized the need for Australia to adopt quality assurance systems as an important means of maintaining and increasing market access.

SQF 2002cm

The SQF 2000cm Quality Code was developed and launched in 1995 in response to the demand for a user-friendly quality assurance system tailored specifically to meet the needs of the food business. All companies and parties within the food sector can use the standard. It is a full quality management system based on HACCP and ISO9000 with both food safety and quality aspects.

SQF 1000cm

The SQF 1000cm Quality Code was developed in 1999 in response to the demand for a simple HACCP-based approved supplier food safety system for primary producers. It was specially developed for the primary sector as a food safety and quality standard.

Agriculture Western Australia had signed an agreement with the SWISS-based SQF institute for the worldwide right to commercialize the SQF quality system. Since 1 July AGWEST 2001 the management and operations of the SQF 1000 and SQF 2000 programs to the SQF institute of international companies and organizations that are committed to the promotion of the SQF quality system globally. According to recent information on their website, this agreement has been cancelled with effective from December 2002.

SQF management systems are:

* to raise standards of food safety and quality across the food chain, from primary produce to consumer though increased awareness understanding and adoption of SQF management systems.
* to continuously improve and deliver high standards of customer service and support to SQF clients
* to continue to pursue increased recognition of SQF management systems by customers and clients in new and existing markets
* to maintain and protect the high level of integrity of SQF Quality Codes.

The SQF Code contents:

* Preface
* Contents
* Introduction

1. Scope
2. References
3. Definitions
4. System requirements
    i. Commitment
    ii. Suppliers
    iii. Control of production
    iv. Verification
    v. Document control and records
    vi. Product identification, trace and recall

Appendix 1 Implementing SQF systems
Appendix 2 Principles and application of HACCP
Appendix 3 Certifying SQF systems
Appendix 4 Certification Trade Mark.

<*Websites*>: http://www.sqf.wa.gov.au and http://www.sqfi.com

EUROPEAN HYGIENIC EQUIPMENT DESIGN GROUP (EHEDG)

The EHEDG is a consortium of equipment manufacturers, food industries, research institutes and public health authorities, founded in 1989 with the aim to promote hygiene during the processing and packing of food products.

European legislation requires that handling, preparation, processing, packaging, etc. of food is done hygienically, with hygienic machinery in hygienic premises (EC Directives 98/37/EC and 93/43/EEC). How to comply with these requirements, however, is left to the industry. To assist in the design of safe and hygienic machinery, the EU has mandated the European Federation of Standardization institutes, the CEN (Comité Européen de Coordination des Normes [European Committee of the Coordination of Standards]), to produce standards. The EHEDG has been providing many data and information during the preparation of these standards. In addition, the EHEDG has developed criteria for hygienic design of equipment and methods to test whether equipment complies with these criteria. Responding to requests from the industry, the EHEDG has also developed guidelines for the use of equipment for processing of food products to render them safe, such as for pasteurization, sterilization and packaging. Being recognized internationally as an organization specialized in producing guidelines for the design of hygienic food plants, the EHEDG also covers subjects such as building design, electrical installations, slaughterhouses, air handling and process water.

As food safety does not end at the borders of Europe, the EHEDG actively promotes global harmonization of guidelines and standards. The US-based organizations such as National Science Foundation (NSF) and 3-A (Sanitary Standards, Inc.) have agreed to cooperate in the development of EHEDG guidelines and in turn, EHEDG cooperates in the development of 3-A and NSF standards. Renowned food research institutes are accredited (by notified bodies) to test the compliance of equipment with hygienic design criteria using the EHEDG test methods.

EHEDG guidelines are produced in English and translations in other languages are available. Extended summaries of the guidelines are published in '*Trends in Food Science and Technology*'.

<*How to Order*>: www.campden.co.uk/publ/pubfiles/ehedg.htm

LEGISLATION

The present EU directive 93/43/EEC of June 1993 on the hygiene of foodstuffs speaks about HACCP in Article 3 and specifically about hygiene guides in Article 5. The 93/43/EEC Council Directive has been adopted into a newly to be developed and introduced Directive: Regulation of the European Parliament and of the Council on the Hygiene of Food Stuffs (2000/0178 COD). This document gives reference to HACCP in Article 5 and speaks about hygiene guidelines in Article 7. Article 12 speaks about imports.

Regulation EC No. 178/2002 of the European parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety.

Intermediate Conclusions

No doubt that the HACCP system is the ultimate system to ensure the safety of the product. Likewise HACCP, the ISO standards are internationally acknowledged and are recommended to follow. To decide whether or not to implement or to achieve certificates of SQF or BRC depends highly on the region and the customer.

The newly to be developed norm: ISO22000 "Food Safety Management Systems/Requirements" lays down the criteria to assess a HACCP system. This standard will further contribute to the standardization and harmonization of systems worldwide. Food safety and quality systems like EUREP-GAP and SQF 1000 are indissolubly connected with the food safety systems in the processing industries.

Hygiene requirements to processing equipment are laid down in the EHEDG guidelines.

ESSENTIAL POLICY FRAMEWORK AND REQUISITES FOR UPGRADING DEVELOPING COUNTRIES' CAPABILITY IN SETTING UP AND IMPLEMENTING FOOD SAFETY AND QUALITY ASSURANCE SYSTEMS FOR ENHANCED TRADE

– Specific Steps to be Taken and Resources Needed to Set Up Such Systems –

Action Needed at 2 Levels

1. The private sector; which will work with at least with one or more of the above mentioned food safety systems.
2. The government; which is expected to have a national food control system.

The Private Sector

Implementation of the food safety systems in the private sector will need to be coordinated through the respective associations like Chambers of Commerce, which might have specific departments for the agro-industries. Product- or commodity boards or other (trade) associations, like for instance in the tea industry a tea association, are the best focal points and the most appropriate organizations to initiate the process of familiarization and awareness with the food safety systems. Beforehand, these associations will need to be informed about the existence of these systems through, for instance, through the APO.

These institutions have a role to play to provide senior management of exporting and potential exporting companies, through seminars, of the necessary information of food safety systems, the benefits and advantages of these systems.

Actual workshops on HACCP will be organized through the associations. A HACCP workshop alone is not sufficient for transfer of knowledge. A complete trajectory of HACCP implementation includes the HACCP workshop, Technical assistance through backstopping missions, a workshop on auditing and to conduct a test audit. Final results should be presented in a seminar. It is recommended to have food inspectors participating in such a trajectory of HACCP implementation to fully expose them to the details of HACCP.

<*Specific steps to be taken*>

Chambers of Commerce, (trade) associations, commodity- or product boards have to be proactive in the implementation of food safety systems. Identification of funds is necessary, which information can be obtained by the associations at the embassies and UN organizations. Through bilateral agreements, between the developing and developed countries, these funds might be available. For example, the Dutch Government provides subsidy (up to 50 percent) through the FMO (the Netherlands Development Finance Company) organization for the so-called IPTA (Investment Promotion and Technical Assistance) program for trajectories in training and technical assistance to the private sector of a large number of developing countries. This kind of subsidy is specifically designated for the private sector. UNIDO and FAO are UN organizations which offer technical assistance to the private sector in HACCP implementation. Appropriate project proposals need to be written according to the criteria as laid down by the subsidizing agent, country or organization.

The Government

The government is expected to have a national food control system.

1. ***Elements of a National Food Control System***

a) *Objectives*

The principal objectives of National Food Control Systems are:

* protect public health by reducing the risk of food-borne diseases;
* protect consumers from un-sanitary, un-wholesome, mislabelled or adulterated food; and
* contribute to economic development by maintaining consumer confidence in the food system and providing a sound regulatory foundation for domestic and international trade in food.

b) *Activities*

Regardless of its organizational structure, a national food control system should be capable of performing the following core activities:

* Formulation of a national food safety policy
* Provision of a science-based foundation using risk analysis
* Development, updating and effective enforcement of food legislation, regulations and standards
* Coordination of food control activities and adequate surveillance, monitoring and audit
* Planning and implementation of food inspection
* Development of education, training and research.

2. ***Building Blocks***

Regulatory food control systems will typically consist of the following basic components:

a) *Food Laws and Regulations*

Being regulatory in nature, a food control system is based on an appropriate law giving power to the designated authority (or authorities) to enforce its provisions. Traditionally, food control systems have consisted of legal definitions for unsafe or adulterated food; requirements ensuring that only safe food, free from adulteration is placed on the market; and prescriptive tools for enforcement, i.e., removing or confiscating unsafe food from the market and punishing offenders for infringement by way of fines or imprisonment. Usually, there is an enabling legislation giving powers to the concerned minister(s) to prepare detailed regulations prescribing food standards and carry out inspection and sampling as well as other necessary operations. The law may provide for an advisory or consultative body to assist the authority (the minister) concerned in its implementation. The law and accompanying regulations form a basic and essential element of the food control system.

<Action to be taken>

The FAO and WHO are the two main specialized agencies of the UN to provide technical assistance to the developing countries to establish the necessary institutional framework and infrastructure to improve the safety and quality of food products and adapt the legislation to comply with the Codex Alimentarius standards and guidelines. Assistance through bilateral agreements is also a possibility. The technical assistance should be based on the joint FAO/WHO publication "*Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems*".

HACCP should be included in the law, likewise codes of practice for primary production attention should be paid to the usage of hygiene guidelines or generic documents, for instance, for SMEs. The law must foresee in the general hygiene requirements applying to all food operators.

A transition period is required before enforcement can come in for both the industry to implement the HACCP system and food inspectors to be brought up to speed. Food inspectors must have detailed knowledge of HACCP systems and not simply judge that a HACCP system is present or not.

b) *Management*

Effective food control systems require policy and operational coordination at national level. While the nature and extent of these policy and operational coordination depends on the organizational structure of the food control system, it is important that the structure provides for a leadership or coordinating function performed by a central management entity. Adequate administrative structures with clearly defined accountability should be responsible for carrying out the activities enumerated in the previous section. The core responsibility for effective implementation of mandatory regulatory measures normally rests with the management.

<Action to be taken>

In many developing countries the control of food is fragmented; various ministries like the Ministry of Health, Ministry of Agriculture, Bureau of Standards and Municipalities are involved in food control. The prime task of such a Food Safety Council is to lay down a strategy for food control. The council needs to be supported by WHO and uses the regional food safety strategies (like the 10 points strategy of SEARO) as a reference. Another task will be to assess the present food control system on its merits and that recommendations need to be made based on the developed strategy.

<Structure for food safety implementation>

This food safety council is established from a multi-sector group involving sectors such as for instance health, agriculture, food processors, tourism, commerce, education, consumers.

Finally, one national food safety authority or single agency is expected to be established as the overarching body for all food safety, quality and nutrition issues to be represented by government officials.

c) *Inspection services*

Administration and implementation of the food law and its regulations require a qualified and trained food inspection service. The service carries out inspections of food premises; collects food samples for analysis; and undertakes other activities that are necessary to determine compliance with regulations. The service provides the eyes and ears of the system. A food inspector is a key functionary who has day-to-day contact with food industry and food traders, as well as the public. The reputation and integrity of the food control system, depends on the integrity and skill of the inspection service to a large extent.

Proper training of food inspectors is a prerequisite for an efficient food control system. As current food systems are quite complex, the food inspector must be trained in food science and technology to understand the industrial processes, identify potential quality and safety problems, and have the skill and experience to inspect the premises, collect food samples and carry out an overall evaluation. The inspector must have a good understanding of the relevant laws and regulations, their powers under the law, and the obligations such law impose on the food sector. They should also be conversant with procedures for collecting evidence, writing inspection reports, collecting samples and sending them to a laboratory for analysis. With gradual introduction of HACCP systems in the food industry, the inspector should be trained to handle HACCP audit responsibilities. Clearly, there is a continuing need for training and upgrading the skills of existing staff and having policy for human resource development.

<Action to be taken>

Food inspectors need to be thoroughly trained on the principles of HACCP through an integrated approach. A workshop only is not sufficient to have food inspectors thoroughly trained on HACCP.

A complete trajectory of HACCP implementation includes the HACCP workshop, technical assistance through backstopping missions, a workshop on auditing and conduct test audit or inspections. It is recommended to have food inspectors to be included and participating in such a trajectory of HACCP implementation to fully expose them to the details of HACCP.

d) *Laboratory Services*

Laboratories play a vital role in the enforcement of regulatory food control measures and are an essential and highly technical component of the system. They are engaged in the physical, microbiological and chemical analysis of food samples sent by the inspector to determine whether there is non-compliance with food standards. They may judge a food to be unsafe and injurious to health. The evidence laboratories provide in this respect is crucial to prosecution of offenders in a court of law. The utmost care is necessary to ensure the efficient and effective performance of the laboratory.

<Action to be taken>

Developing countries need to have the necessary national capacity to have their products examined. Certificates of analyses need to be issued by accredited laboratories. A country receiving goods must be able to rely on the results of such a certificate.

e) *Information, Education, Communication and Training Center*

An increasingly important role for food control systems is the delivery of information, education and advice to stakeholders across the farm-to-table continuum.

Capacity building and technical assistance to developing countries is one of the top priority areas of work in food safety, and WHO is promoting the "leap-forward" approach. This approach will promote the efficient and effective development of food safety systems, incorporating preventive, risk-based approaches, comprising surveillance, risk assessment and implementation of risk management strategies. In the same press release of the WHO "Capacity building in food safety systems" speaks about: "*In light of the WHO Agreement on the Application of Sanitary and Phyto-sanitary Measures (SPS), cooperation with the WTO will be also be emphasized. The establishment of an inter-agency mechanism to promote capacity building programs in developing countries could be considered*".
<Action to be taken>
The countries need to establish an information, education, communication and training center.

Intermediate Conclusions

For all the individual building blocks technical assistance can be provided by the FAO and WHO. To improve the national food control system (all the blocks) again the FAO and WHO are the two main specialized agencies of the UN involved in food quality and safety technical cooperation programs with the developing countries.

Technical and financial assistance in the food control area may also be obtained through the World Bank, other development banks and from bilateral donor agencies. Access to such funds is dependant upon countries attaching a high priority to strengthening their food control systems, and in context of a development plan elaborated by the country.

SOME SPECIFIC COUNTRY EXPERIENCE IS HIGHLIGHTED

Implementation of Food Safety Systems and Food Control Systems

* Implementation of HACCP in the Netherlands and the past and present structure of food control.
* Bilateral projects between the Dutch Government and Eastern European countries and other EU projects:

These are pilot pre-accession projects to prepare the countries to join the EU:

* Development of good hygiene practices in the Slovak SME food industry.
* Strengthening of the official food control and inspection system of the Ministry of Health in Turkey.
* A dairy demonstration project in Slovenia.

1. ***Other EU Projects***

* Quality management support and technical assistance in a cereal processing company in Ethiopia.
* Training program for the Food Harmonization Program in Rumania.
* Support for the food industry in assurance of food safety and quality in Poland.

2. ***Lessons Learned***

HACCP implementation projects are recommended to have the following parts:

* Seminars for senior management and key government officials for the process of familiarization and dissemination;
* For the staff: a HACCP workshop followed by 4-5 backstopping missions to provide advisory services;
* Towards the end of the trajectory, conduct a workshop on auditing followed by test audits or inspections; and
* Finalize with a closing seminar for all stakeholders to present the results of the project.

Food Inspectors are recommended to participate in the complete trajectory of HACCP implementation. The projects must have clear objectives and measurable outputs. The necessary stakeholders have to be involved and at least the private and public sector are recommended to work together on the issue of food safety in pilot demonstration projects.

OVERALL CONCLUSIONS AND RECOMMENDATIONS

Food safety systems like HACCP and quality assurance systems are existing for more than 10 years. Hands on experience have been gained with implementation of these systems especially in the developed

countries. In many countries national food control systems have been upgraded to higher levels by which a lot of experience has been gained. The FAO and WHO are the main specialized UN agencies involved in technical cooperation programs for the public sector. Funds are available through the World Bank, other development banks and bilateral agreements.

Governments and associations representing the private sector in the developing countries have to take the initiative to have appropriate project proposals written to be submitted to funding agencies to respectively upgrade food control and implement food safety systems.

LITERATURE AND REFERENCES

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5. RIGHTS AND OBLIGATIONS UNDER THE SPS AGREEMENT: RESPONSES OF GOVERNMENT, JAPAN'S CASE

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INTRODUCTION

The WTO System and the Origin of the Sanitary and Phytosanitary (SPS) Agreement

The World Trade Organization (WTO) was established by the Marrakesh Agreement. This Agreement comprises of the General Agreement on Tariffs and Trade (GATT) 1994 and other agreements including the Agreement on Agriculture, Technical Barriers to Trade (TBT) and the SPS Agreement. The SPS Agreement is given the same status as other agreements and legal texts.

To avoid ambiguity and overlapping among mutually related agreements, bridging provisions are inserted as considered necessary. In the case of SPS, the bridging provisions are found in the Agreement of Agriculture and the TBT Agreement. The scope and responsibility of SPS Agreement and other agreements are clearly defined with the said provisions. Article 14 of Agreement of Agriculture states "*Members agree to give effect to the Agreement on the Application of Sanitary and Phytosanitary Measures*". And Article 1.5 of TBT Agreement spells out "*The provisions of this Agreement do not apply to sanitary and phytosanitary measures as defined in Annex A of the Agreement on the Application of Sanitary and Phytosanitary Measures*" (according to this provision, packing and labeling requirements directly related to food safety are coverage of SPS).

Additionally, the provision of Articles XXII and XXIII of GATT 1994 as elaborated and applied by the Understanding on Rules and Procedures Governing the Settlement of Disputes (in short DSU) apply to consultations and the settlement of disputes under the SPS Agreement.

According to the Article XX (b) of GATT 1947 which is the main body of GATT 1994, subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in the Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures necessary to protect human, animal or plant life or health.

Before Uruguay Round, there was the TBT Agreement (so-called the GATT Standard Code or the 1979 TBT Agreement) that was agreed in Tokyo Round (1973), but this Agreement provided only regulations on the labeling for food safety and hygiene.

The SPS Agreement was negotiated as a part of negotiation for agriculture in the Uruguay Round, and the SPS Agreement refers to the application of the provision of the Article XX (b) of GATT 1994.

The purpose of the SPS Agreement was to establish a multilateral framework of rules and disciplines to guide the development, adoption and enforcement of SPS measures in order to minimize their negative effects on trade.

According to the Article 14 of the SPS Agreement, the least-developed country members may delay the application of provision of the SPS Agreement for a period of five years following the date of entry into force of the WTO Agreement.

SALIENT PROVISIONS OF SPS AGREEMENT

What Are the Sanitary or Phytosanitary Measures?

The definition of SPS measures is stipulated in Annex A. According to this definition, SPS measures include inspection, approval procedures, risk assessment, regulations and labeling.

Packing and labeling requirements directly related to food safety are covered by the SPS Agreement not the TBT Agreement.

According to my understanding, this agreement regulates the decision procedure of appropriate level of sanitary or phytosanitary protection and the measure at the water's edge. So some measures which was included in Annex A have not regulated its detail.

(**Reference materials**)

Annex A

Sanitary and Phytosanitary Measure – Any measure applied:

a) to protect animal or plant life or 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 feedstuffs;
c) to protect human life or 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.

Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including inspection, certification, and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packing and labeling requirements directly related to food safety.

FRAMEWORK OF SPS AGREEMENT

Rights and Obligation

Members have to ensure that any SPS 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 sufficient scientific evidence (Article 2.2).

Harmonization

To harmonize SPS measures on as wide a basis as possible, members are required to base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist (Article 3.1).

Transparency

Members have to notify changes in their sanitary or phytosanitary measures and shall provide information on their SPS measures, to keep transparency (Article7).

Dispute Settlement

As seen before, the provisions of Articles XXII and XXIII of GATT 1994 apply to consultations and the settlement of disputes under SPS Agreement (Article 11).

The Panel report or the Appellate Body report adopted by the Dispute Settlement Body (DSB) has its effect on only the dispute in question. But if another Panel will be established for the similar dispute, these reports are invoked. In this way the dispute settlement system gradually consolidates understanding and interpretation of the specific provision of the WTO Agreements.

It used to be very difficult and confusing for member countries to select the Panelists, because they were often stakeholders of the dispute. The Article 8.7 of the DSU states: "*If there is no agreement on the Panelists within 20 days after the date of the establishment of a Panel, at the request of either party, the Director-General ... shall determine the composition of the Panelist... The Chairman of DSB shall inform the members ... no later than 10 days after the date the Chairman receives such a request*".

Within one week after the selection of the Panelists, organizational meeting will be held, and the time table for the Panel process shall be fixed in accordance with the Article 12.3 of the DSU.

In accordance with the Article 12.9, in no case should the period from the establishment of the Panel to the circulation of the report to the members exceed nine months, but in many cases this timeframe is not satisfied.

Disputes among the SPS Agreement are a technical issue, so the Article 11.2 of the SPS Agreement states: "*In a dispute under this Agreement involving scientific or technical issues, a Panel seeks advice from experts chosen by the Panel in consultation with the parties to the dispute. To this end, the Panel may, when it deems it appropriate, establish an advisory technical experts group, or consult the relevant international organizations, at the request of either party to the dispute or on its own initiative*".

The following basic rights and obligations are spelled out in order to satisfy two objectives which often conflict each other. One is to minimize the negative effect of the SPS measures on trade, and the other is to protect human, animal or plant life or health.

Members have the right to take SPS measures necessary for the protection of human, animal or plant life or health, but they have to ensure that SPS measures are applied only to the extent necessary and are based on scientific principles.

Members have to ensure that their SPS measures do not arbitrarily or unjustifiably discriminate between members and not be applied in a manner which would constitute a disguised restriction on international trade.

Important Elements of the SPS Agreement

The SPS Agreement has introduced a few important concepts/procedures in its framework which include:

* appropriate level of protection
* equivalency
* risk assessment
* SPS measures
* international standards
* enquiry points
* notification procedure.

Appropriate Level of Protection (ALOP)

In the light of the objectives of the SPS Agreement, it is important that SPS measures applied by the member are 'appropriate' to the circumstances (Article 5).

Annex A of the SPS Agreement defines ALOP as the "level of protection deemed appropriate by the member establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory. Many Members otherwise refer to this concept as the 'acceptable level of risk'".

ALOP is decided by importing members as a sovereign right but when a member decides its ALOP, the member has to consider following:

* It was not arbitrarily or unjustifiably discriminate
* It is based on risk assessment with scientific evidence, etc.
* It is appropriate to protect human, animal and plant health.

SPS measures should be designed only as necessary to achieve the ALOP, and reasonable relationship should exist between the applied measures and the level of protection. For the risk assessment, the member is asked to prove the probability or likelihood of the risk but not necessarily in quantitative term.

Equivalence

Equivalence is the concept allowing technical alternatives. If there are several measures that can meet an ALOP, the importing member can accept these measures (or approaches) as equivalent even though they are not the same as the measure applied by importing member (Article 4).

Most typical example of equivalence is the sterilization treatment of milk. The effect of sterilization for *Bacillus tuberculosis* is the same (or duplication) between sterilization treatment for 30 minutes by 63ºC and sterilization treatment for 4 seconds by 100ºC. Both treatments are regarded as 'equivalent' for the members even if a member country applies only one of them.

Equivalence is discussed in the SPS Committee as a subject of Special and Differential (S&D) Treatment and implementation issue. Some members seem to take the equivalence issue only as a subject of market access and that will entail the reduction of ALOP. But equivalence should be discussed in consideration of scientific principles under the SPS Agreement. It does not require the change of the ALOP of importing country member. Members are requested to report their experience of equivalence to the Committee, but only a few reports have been submitted to the Committee. Before Doha "Decision on the Implementation of Article 4 of the agreement on the Application of SPS Measures" was agreed. The special meeting of the SPS Committee was held last September. The legal section of WTO explained that the text has no legal binding under the WTO Agreement. After the said explanation discussion was put off politically and the details (for example, the determination of "historical trade") were not discussed.

Now the SPS Committee is continuing its task according to the work program decided in last March (G/SPS/20).

I personally think there are two reasons why the recognition of equivalence is not wide enough.

The first is cost. It is necessary to reduce the cost of SPS measures to enhance exports, and the choice of method/approach is limited by these economic considerations.

The second is demonstration. The exporting member has to objectively demonstrate to the importing member that its measures achieve the importing member's ALOP of SPS protection.

Risk Assessment

The definition of Risk Assessment is stated in Annex A as follows: "*The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing member according to the sanitary or phytosanitary measures which might be applied; and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs*".

In assessment of the risk, the member has to take into consideration the following points (Article 5.2):

* Available scientific evidence
* Processes and production methods
* Relevant inspection
* Sampling and testing methods
* Prevalence of specific disease or pests
* Existence of pest- or disease-free area
* Relevant ecological and environmental conditions
* Quarantine or other treatment.

According to the report of the Appellate Body on "HORMONES", following points may be important:

* Paragraph 186: SPS Agreement does not require quantitative assessment.
* Paragraph 193: Rational relationship should exist between the measure and the risk assessment.

After the SPS Agreement was put into force, government agencies of importing members have been critically watched not only by exporting countries but also domestic producers and consumers, whether the risk was appropriately assessed or not. It takes time before completing the risk assessment of SPS measures, because of these new developments.

International Standards, Guidelines and Recommendations

The definition of international standards, guidelines and recommendations is given in Annex A. The standards of the Codex Alimentarius Commission are for food safety, the standards of the International Office of Epizootics are for animal health and zoonoses and the standards of the International Plant Protection Convention are for plant health.

On the other hand, Article 3.2 of SPS Agreement ("safe harbor" provisions) acknowledges that sanitary or phytosanitary measures which conform to the international standards, guidelines or recommendations are deemed to be necessary to protect human, animal or plant life or health.

As the objective of the SPS Agreement is to minimize the negative effect of the SPS measures on trade, harmonization of such measures of members is important. But the SPS Committee does not have a mandate to set the international standards, guideline and recommendations. These tasks are delegated to other specialized international bodies having standard-setting capacity. The Codex Alimentarius Commission, the International Office of Epizootics and the International Plant Protection Convention are considered the central bodies in this respect. They are called as "the 3 Sisters", and are provided with the permanent observer status in the said Committee.

If the standards set by the 3 Sisters do not have legal obligation, the SPS Agreement can provide *de facto* legal obligations for members, because Article 3.3 of the SPS Agreement requests that a member who wishes to introduce or maintain a higher level of protection than that are achieved by the international standards should provide scientific justifications.

As many developing countries have difficulty in participating in the activity of international standard-setting bodies, the General Council of the WTO asked, before the Ministerial Declaration in Doha, the Secretary-General of the said bodies to consider participation of the developing countries as "implementation issue".

Determination of SPS Measures

SPS measures are designed to achieve an ALOP. The procedures are strictly regulated by the Agreement in each case as follows:

* Where there are relevant international standards, guidelines or recommendations, members have to base their sanitary or phytosanitary measures on international standards (Article 3.1). Members may introduce SPS measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, if there is a scientific justification (Article 3.3).
* Where there is no relevant international standard, guideline or recommendation, members are asked to ensure that their SPS measures are based on an assessment of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations (Article5.1).
* Where relevant scientific evidences are insufficient, members may provisionally adopt SPS measures on the basis of available pertinent information, including that from the relevant international organizations as well as from SPS measures applied by other members (Article 5.7).

Enquiry Points

Each member has to ensure that one enquiry point exists which is responsible for the provision of answers to questions from interested members as well as for the provision of relevant documents regarding:

a) any sanitary or phytosanitary regulations;
b) any control and inspection procedures, production and quarantine treatment, pesticide tolerance and food additive approval procedures;

c) risk assessment procedures as well as the determination of the ALOP; and
d) the membership and participation of the member in international and regional SPS organizations and systems.

Members have to notify other members of the products to be covered by the domestic regulation together with a brief indication of the objective and rationale of the proposed regulation. Members allow reasonable time (normally 60 days) for other members to comment, and take the comments and the result of the discussions into account.

These processes not only provide the period for exporters to prepare, but also provide the opportunity for both parties to discuss to avoid dispute.

Each member ensures that one enquiry point exists which is responsible for the provision of answers to all reasonable questions from interested members as well as for the provision of relevant documents.

If some country establishes more than one enquiry point, this will confuse other members because it is difficult to know which enquiry point has to respond to their requests or questions.

The Japanese enquiry point is established in the First International Organizations Division, Economic Affairs Bureau, Ministry of Foreign Affairs and its e-mail address is "enquiry@mofa.go.jp".

The notifications of SPS are provided for public reading through the Website of the WTO. The standard manual for publishing WTO documents has been established, so many WTO documents will be published according to this standard in the near future. The address of the WTO Website is: http://www.wto.org

Notification Procedures

Details of practice were determined in "RECOMMENDED PROCEDURES FOR IMPLEMENTING THE TRANSPARENCY OBLIGATIONS OF THE SPS AGREEMENT (ARTICLE7)" (G/SPS/7/Rev.2).

This new recommendation was in operation from May 2002. But there was an indication from one member during the discussion of the said recommendation, that the number of notifications has been increasing recently and only a few notifications have appropriate texts. But we had to move forward because we have to answer for the General Council as a homework on implementation issue for SPS Committee.

Notification Procedures **(Reference materials)**

5. Whenever an international standard does not exist or the content of a proposed regulation is not substantially the same as the content of an international standard, members have to:

   a) publish a notice at an early stage;
   b) notify other members of the products to be covered by the regulation together with a brief indication of the objective and rationale of the proposed regulation;
   c) provide upon request to other members copies of the proposed regulation and, whenever possible, identify the parts which in substance deviate from international standards; and
   d) without discrimination, allow reasonable time for other members to make comments in writing.

6. However, where urgent problems of health protection arise or threaten to arise for a member, that member may omit such of the steps enumerated in Paragraph 5 of this Annex as it finds necessary.

Committee on SPS Measures

The SPS Committee is established to provide a regular forum for consultation and usually holds three regular meetings in Geneva each year (March, June and October).

The delegation of members varies according to each member, but generally the delegation of developing country members do not always include officials from their capital.

The SPS Committee has several functions such as:

* to encourage consultations among members on specific issues;
* to encourage harmonization;
* to secure the best available scientific and technical advice; and
* to review the operation and implementation of SPS Agreement.

Members can raise bilateral issues in the SPS Committee. If a member raises specific issues in the Committee, the measure in question is subject to close observation by members. This function will accelerate solving specific issues without resorting to formal dispute settlement. Developing country members should make use of this function more effectively, because disputes need funds and time until settled.

(Reference materials)

1. **Review**

In its discussion of issues concerning the operation and/or implementation of the Agreement, the Committee focused especially on the provisions relating to transparency of SPS measures (Annex B), including the notification procedures; special and differential treatment of developing country members (Article 10); and technical assistance (Article 9). The Committee also discussed international harmonization (Article 3); equivalence (Article 4); adoption to regional conditions (Article 6); and dispute resolution (Article 11 and 12.2).

2. **Recommendation on Notifications**

After the first recommendation in June 1996, it was revised to include the use of e-mails and notification of addendum and corrigendum of measure.

3. **Guideline of Article 5.5 (G/SPS/15)**

This guideline is set to provide assistance to members in the practical implementation of the provision of Article 5.5. This does not add or detract from existing rights and obligations of members under SPS.

The outline of this guideline suggests: 1) each member determines its ALOP and there is no obligation for a member to harmonize its level of protection with that of other members. But comparison with international guideline of ALOP determined by other member will be helpful; and 2) the determination of whether arbitrary or unjustifiable differences in levels of protection established by a member in different situations do in fact result in discrimination or a disguised restriction on trade should be examined in the context of the circumstances of each case, including the potential effects on international trade.

4. **The Decision on Article 4**

This decision was discussed as an “implementation issue” before Doha. In this decision, both exporting and importing members are required to make efforts to facilitating the implementation of Article 4, and the importance of efforts to be made by the 3 Sisters are confirmed. This decision was decided according to Article 12 of SPS, but this text has no legal binding, as already seen before.

Hot Spots

1. ***Genetically Modified Organisms (GMOs)***

There is significant divergence among members concerning the measures taken or notified regarding the GMOs.

One group suggests that measures should be taken based on the scientific evidences, but another insists that measures to satisfy consumer’s requirements should be considered. The gap has not been narrowed as a result of the arguments in TBT Committee and Codex Alimentarius Commission.

2. ***Bovine Spongiform Encephalopathy (BSE)***

There are arguments according to the geographical evaluation made by the European Community. Especially, the United States has concerns because they finished their own risk assessment supported by Harvard University and the result indicates their risk is very low.

And the United States is concerned that some members recognize the result of geographical evaluation assessed by European Community just like international standards.

Special and Differential Treatment (S&D)

Members have to take into account the S&D treatment for the developing countries according to Article 10.

In the preparation and application of SPS measures, members are required to take account of the special needs of developing country members, and in particular of the least-developed country members.

For appropriate level of SPS protection longer time-frames for compliance should be accorded on products of interest to developing country members.

The Committee can grant to developing members specified, time-limited exceptions from obligations of the Agreement.

Members are asked to encourage and facilitate the active participation of developing country members in the relevant international organizations.

However application of S&D treatment on all SPS measures may not be easy, particularly, since the measures are related to the protection of human health or life. In the discussion on the implementation issues, developing country members requested for one year as the longer time-frame period, but finally the said period was decided at six months.

In the SPS Committee meeting, developing members requested technical assistance which are tailor-maid and/or directly related to market access. But the real need of developing countries was not clearly known. The SPS Committee provided a questionnaire to developing members to determine their real needs, but only few members have responded so far. It is necessary to receive enough information from developing country members to operationalize S&D.

Technical assistance is a useful tool of S&D. With the fund and human resources of developed countries being limited, however, developing member should also make efforts to make use of technical assistances effectively.

Ministerial Declaration in Doha

There was no mention of the negotiation for SPS Measures in the Ministerial Declaration in Doha.

Significant differences exist between Doha Round and Uruguay Round, one of which is the increasing voice of developing member become. “Implementation issues” also has become a symbol of the said changes.

BENEFIT FROM THE IMPLEMENTATION OF THE SPS AGREEMENT

For Consumers

The SPS Agreement helps ensure, and in many cases, enhance the safety of their food as it encourages the systematic use of scientific information in this regard, thus reduces the scope for arbitrary and unjustified decisions. The elimination of unnecessary trade barriers allows consumers to benefit from greater choice of safe foods and from healthy international competition among producers.

For Developing Countries

Developing countries can be provided enough information, especially the measures applied on a bilateral basis between trading countries. Developing country can avoid disadvantages by the unjustified trade restrictions.

For Exporters (Including Producers in Exporting Country)

The SPS Agreement reduces uncertainty about the conditions for selling to a specific market. Efforts to produce safe food for another market should not be thwarted by regulations imposed for protectionist purpose under the guise of health measures.

For Importers

The basis for SPS measures which restrict trade are made clearer by the SPS Agreement, as well as the basis for challenging requirements which may be unjustified. This also benefits the many processors in exporting countries and commercial users of imported food, animal or plant products.

For Domestic Producers

The SPS Agreement allows for the protection of domestic producers from the invasion or spread of disease from foreign countries or areas.

CONCLUSION

The SPS Agreement seeks to achieve a proper balance between two objectives. One is enhancing trade and the other is protecting health and life.

From the viewpoint of the exporting country, especially developing country members, SPS Agreement may appear to allow importing countries high level of protection and restrict trade. But at the same time SPS Agreement offers mechanisms and measures to check importing countries from taking disguised protection measures.

From another viewpoint, protection of human, animal and plant health and life is essential for developing countries to enhance the quality of domestic products and contribute to human health. Enhanced level of animal and plant health will provide opportunity to export to new markets.

6. ENHANCEMENT OF PHYTOSANITARY MEASURES FOR TRADING OF PLANTS AND PLANT PRODUCTS

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INTRODUCTION

Modern trading practices have led to increase global movements of plants and plant products. Natural and national borders that were barriers to the introduction and unwanted spread of pests are now under pressure from the volumes and speed of international traffic.

The global community has developed cooperative mechanisms to protect plants and the environment from these hazards. The intergovernmental mechanism for international cooperation to protect plant health is the International Plant Protection Convention (IPPC). It is also responsible for standards affecting international trade of plants and plant products.

The standards, International Standards for Phytosanitary Measures (ISPMs), developed under the IPPC, are:

* guidelines and reference documents;
* guidelines to avoid disputes;
* designed to protect the environment whilst facilitating international trade;
* designed to be transparent and to harmonize regulations for trade, to remove artificial trade barriers; and
* developed on the basis of best scientific knowledge at the time.

This paper describes the IPPC, the ISPMs developed under the IPPC, and their role in the safe trade of plants and plant products. It also describes the role of the IPPC in international cooperation for plant protection and national phytosanitary capacity building.

THE ROLE OF PHYTOSANITARY MEASURES IN THE SAFE TRADE OF PLANTS AND PLANT PRODUCTS

The International Plant Protection Convention

The IPPC is a multilateral treaty deposited with the Director General of FAO. It is administered through the IPPC Secretariat located in the Plant Protection Service of the Food and Agriculture Organisation of the United Nations (FAO) in cooperation with regional and national plant protection organizations. There are currently 120 Contracting Parties to the IPPC.

The purpose of the enacting of the Convention is to enhance “international cooperation in controlling pests of plants and plant products and in preventing their international spread, and especially their introduction into endangered areas” (IPPC Preamble).

The IPPC has clear applications to the regulation of trade but the Convention is not limited in this respect. Many forms of international cooperation fall within its scope. Likewise, plants are not limited to cultivated plants and protection is not limited to direct damage from pests. Therefore, the scope of the

Convention extends to the protection of both cultivated and natural flora and includes both direct and indirect damage by pests.

The Convention was adopted by FAO in 1951 and came into force in 1952. It was amended once in 1979 and again in 1997. The recent revision was done primarily to reflect the role of the IPPC in relation to the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement), arising from the Uruguay Round of multilateral trade negotiations under the General Agreement on Tariffs and Trade. The SPS Agreement identifies the organizations operating within the framework of the IPPC as being responsible for providing international standards to aid harmonization of phytosanitary measures and to help ensure that these measures are not used as unjustified non-tariff barriers to trade.

The 1997 Amendment to the Convention is currently awaiting acceptance by member countries. It will come into force 30 days after acceptance by two-thirds of the Contracting Parties. Forty-three Contracting Parties have accepted the 1997 Convention to date. Unless otherwise specified, this paper discusses the 1997 revision and references to numbered Articles in the Convention also refer to the latest revised text.

Key obligations for Contracting Parties to the IPPC include the establishment of an official National Plant Protection Organization (NPPO), the certification of exports, regulation of imports and international cooperation. NPPOs have responsibility for phytosanitary certification, surveillance, inspection, treatments, conducting pest risk analyses (PRAs), distribution of official phytosanitary information and training.

The Relationship between the IPPC and the SPS

The relationship of the IPPC to the SPS Agreement is created by reference in the SPS Agreement to the IPPC as the organization responsible for standard setting and the harmonization of phytosanitary measures affecting international trade. Both Agreements are distinct in their scope, purpose, and membership. Neither Agreement is "covered" by the other. Instead, they are complementary in the areas where their objectives overlap. The SPS Agreement makes provision for plant protection in a trade agreement while the IPPC makes complementary provision for trade in a plant protection agreement.

The SPS Agreement has as its core several important principles. These include the principles of sovereignty, necessity, harmonization, transparency, equivalence, and non-discrimination. The same principles are reflected in the New Revised Text (1997) of the IPPC and particularly in ISPMs. These principles provide the foundation for the elaboration of "standards, guidelines and recommendations" noted in the SPS Agreement as the basis for the international harmonization of SPS measures. The IPPC complements the SPS Agreement by providing international standards that help to ensure that phytosanitary measures have a scientific basis for their imposition and operation and are not used as unjustified barriers to international trade.

Implementation of the IPPC and Interactions with other Regulatory Bodies

From 1951 until 1992, the IPPC existed as an international agreement administered by FAO and implemented through the cooperation of Regional Plant Protection Organisations (RPPOs) and NPPOs. In anticipation of the position that the IPPC was to hold in the SPS Agreement, FAO established a Secretariat for the IPPC in 1992. To promote the full implementation of the objectives of the Convention, the revised Convention includes provisions for a Commission on Phytosanitary Measures (CPM).

1. ***The Interim Commission on Phytosanitary Measures (ICPM)***

Until the 1997 revision comes into force, the ICPM has preceded the proposed CPM. Currently, the ICPM is open to all FAO members and Contracting Parties. When the revised Convention comes into force, however, the Commission's membership will be open only to Contracting Parties to the IPPC.

The ICPM meets annually to implement the objectives of the Convention. Special sessions can be convened if requested by at least one-third of the Contracting Parties. Contracting Parties try to reach agreement by consensus on matters under discussion. As a last resort, decisions can be taken by a two-thirds majority of the Contracting Parties present and voting.

As its main tasks, the ICPM:

* reviews global plant protection needs;
* develops and adopts ISPMs;
* establishes procedures for the resolution of disputes;

* promotes the provision of technical assistance to develop the phytosanitary capacity of Contracting Parties; and
* cooperates with RPPOs and other relevant international organizations on matters relating to the Convention.

The IPPC Secretariat serves the ICPM. The Bureau, an executive body comprising the Chairman and the two Vice-Chairmen of the ICPM, facilitates the executive process.

The establishment of the ICPM is a major development for the Convention. It provides a global forum for discussion of phytosanitary issues and allows a wide representation of Contracting Parties in work programs and in strategic planning. Countries mainly through the FAO budget currently provide basic funding and resources for the work program of the Commission. Additional funds have been provided by Contracting Parties to support a particular meeting or program. As part of the Convention's technical assistance, representatives from countries requiring assistance use some of these funds to allow attendance at meetings.

In addition to the annual session of the ICPM, working groups deal with international standards at various stages of preparation.

2. ***The IPPC Secretariat***

Under the IPPC, the Secretariat is charged with coordination of the work program for global harmonization of phytosanitary measures.

The IPPC Secretariat performs the following tasks:

* Implements the policies and activities of the ICPM;
* Publishes information relating to the IPPC;
* Facilitates information exchange between Contracting Parties to the IPPC; and
* Coordinates with the technical cooperation programs of FAO to provide technical support on matters relating to the IPPC, particularly to least developed nations.

The IPPC Secretariat is the key body for administration and coordination of the work of the international phytosanitary community. By facilitating information exchange between parties and publishing relevant information, the Secretariat helps ensure that the Convention's principle of transparency is put into practice. The dissemination of dependable and timely information is a significant task and calls for close cooperation between the IPPC Secretariat and the NPPOs and RPPOs.

The contact details for the IPPC Secretariat are published on the official website, the International Phytosanitary Portal (IPP): www.ippc.int

3. ***Regional Plant Protection Organizations***

The Convention makes provision for the establishment of RPPOs, which are intergovernmental organizations providing coordination on a regional level for the activities and objectives of the IPPC. Not all Contracting Parties to the IPPC are members of RPPOs, nor are all members of RPPOs Contracting Parties to the IPPC. Moreover, certain Contracting Parties to the IPPC belong to more than one RPPO. Currently there are nine RPPOs and their contact details are given on the IPP.

4. ***Liaison with other Regulatory Bodies***

The IPPC Secretariat is an active observer in the SPS Committee and routinely interacts with the two other standard setting organizations identified in the SPS Agreement: the Codex Alimentarius Commission for food safety, and the Office International des Epizooties (OIE) for animal health. Each organization is recognized as distinct and independent in scope, objectives, function, and membership. The IPPC is the only one of the three whose mandate is based on an international convention.

In recent decades, there has been a growing concern worldwide for the protection of the environment. Because the scope of the IPPC extends to protection of wild flora, the ICPM has initiated collaboration with environmental programs to ensure that its activities take account of relevant aspects of intergovernmental environmental agreements and that those working within environmental frameworks understand the role of the IPPC.

The Convention on Biological Diversity (CBD), which entered into force in 1993, calls on its Contracting Parties to develop national strategies, plans or programs for the conservation and sustainable use of biological diversity. Article 8 (h) of the CBD says that Contracting Parties shall prevent the introduction of, control or eradicate those alien species that threaten ecosystems, habitats or species. The CBD and the

various international agencies fostering its implementation have created a heightened awareness of environmental issues arising from agricultural practices and international trade.

Many of the IPPC's principles and the framework for its phytosanitary measures are applicable to the measures for conservation and sustainable use described in the CBD. Thus, cooperation and information exchange between environmental organizations and the ICPM and IPPC Secretariat strengthen the implementation of their respective mandates. The liaison between the IPPC and CBD has resulted in:

* the drafting of a Memorandum of Understanding between the two Secretariats;
* inclusion of environmental experts on IPPC working groups, e.g., a working group on PRA of living modified organisms and the Glossary working group; and
* drafting of supplements to standards in order to take account of environmental issues.

THE APPLICATION OF ISPMs – PRESENT SITUATION

Status of ISPMs

The SPS Agreement encourages countries to base their phytosanitary measures on IPPC standards, guidelines or recommendations in order to promote, to the greatest extent possible, the global harmonization of phytosanitary measures in trade. To this end, WTO members have an obligation under the SPS Agreement to play a full and active part in the IPPC to promote the development and review of these standards, guidelines and recommendations.

The Standard Development Process in IPPC

The process for developing an ISPM comprises three stages: a draft stage, consultation stage and approval stage. The process may take from one to several years depending on the complexity of the topic and the level of agreement among technical experts and governments.

A Standards Committee (SC) oversees the standard-setting process and assists in the development of ISPMs by agreeing on the specification for each draft standard and checking the drafts before and after the consultation stage. The SC comprises 20 members drawn from the seven FAO regions and selects from within its members a subgroup of seven experts, the SC Working Group (SC-7), to undertake detailed work on draft standards. The IPPC Secretariat provides administrative and technical support for the SC and SC-7 and prepares records and reports of the standard-setting process.

Standards are usually drafted by an invited group of experts in the relevant phytosanitary field (expert working groups), but drafts may also be submitted by NPPOs, RPPOs or the SC. Draft standards are submitted to the IPPC Secretariat and then passed on to the SC-7, where they are reviewed and may be amended. The SC-7 will either recommend that the draft standards are submitted to governments for technical comment (the consultation stage) or that a technical working group or a consultant modifies the draft(s).

In the consultation stage, individual member countries and RPPOs are allowed 120 days for review and comment on the draft standards. The input from Contracting Parties and RPPOs is considered by the SC-7 and the SC, which determine the nature and extent of changes to be made to the drafts. Acceptance of a redrafted standard by the SC results in submission of the standard to the ICPM for adoption.

The standard is considered by the ICPM, amended if necessary, and adopted. It is then published and distributed by the IPPC Secretariat.

Current ISPMs and Priorities for New Standards

IPPC standards fall into three categories:

1) Reference Standards, such as ISPM No. 5: Glossary of phytosanitary terms;
2) Concept Standards, such as ISPM No. 2: Guidelines for PRA; and
3) Specific Standards, such as surveillance for citrus canker (in draft).

ISPMs have focused on reference and concept standards to establish the foundation for specific standards that follow. The first ISPM was adopted in 1995 and, to date, 17 ISPMs have been published (ISPM No. 15 on wood packaging is currently suspended) and they are available from the Secretariat and on the IPP.

The number and frequency of standards under development has a direct relationship to the resources available to the Secretariat and the technical complexity of the issues being addressed.

Suggestions for topics for new ISPMs are made by NPPOs, RPPOs, the IPPC Secretariat or the WTO-SPS Committees make suggestions for topics for new ISPMs. The ICPM Chairman has recently made a request for suggestions for new standards to all members of FAO. Other organizations, such as the CBD, SPS Committee, industry groups or individuals may submit proposals through the IPPC Secretariat. Requests for submission of new topics are also made at the country consultation stage of the standard setting process.

Priority to be given to proposals is determined according to certain criteria. These include the level of trade that is affected by the lack of a standard, the feasibility of applying an international standard at a global level and applying and implementing it within a reasonable time, its relevance to developing countries, and the availability of expertise to develop the standard. Topics are considered as priorities if they are:

a) urgent issues;
b) foundation standards (fundamental concepts);
c) concerns of developing countries; and
d) reviews and updates of current standards.

Priorities for dealing with proposed standards are decided by the ICPM based on the recommendations of both the Informal Working Group on Strategic Planning and Technical Assistance and the SC.

The standard setting process within IPPC is designed to be transparent and to provide opportunities for Contracting Parties to contribute to the standard setting process. Specifications produced for each new standard, and draft standards are sent to countries for comment at the country consultation stage. In addition, drafts are discussed by the ICPM prior to adoption. The IPPC funds experts from developing countries to the expert working groups convened at the standard development stage.

The SPS Committee may invite the IPPC or its subsidiary bodies to examine specific matters with respect to a particular standard, guideline or recommendation (Article 12.6 of the SPS Agreement) and the SPS Committee may recommend areas where IPPC standards are needed. In response to such a recommendation, in 2001 the ICPM adopted a supplement to the Glossary on the term “official control”, which provides guidance on the concept of official control for regulated pests.

The Convention is a legally binding agreement, but standards developed and adopted by the IPPC, as well as those by Codex and OIE, are not legally binding, except that in relation to trade issues, measures based on international standards do not require supporting justification for WTO members. Measures that deviate from, or exist in the absence of, international standards must be based on scientific principles and evidence and this information must be made available upon request. Emergency measures may be taken without complete analyses, but must be reviewed for their scientific justification and modified accordingly to be legitimately maintained.

Two draft standards and two supplements have been approved for submission to the ICPM in April 2003. They are:

* Guidelines for regulated pest lists;
* Guidelines for the use of irradiation as a phytosanitary measure;
* Supplement No. 2 to the Glossary: Guidelines on the understanding of potential economic importance and related terms including reference to environmental considerations; and
* Supplement to ISPM No. 11: Analysis of environmental risks.

Enhancement of National Capability and International Cooperation for the Protection of Plant Life and Health

1. ***International Cooperation***

International cooperation is an important underlying principle of the Convention (Article VIII of the IPPC), promoting the application of other principles such as transparency and risk analysis. Specifically, Contracting Parties are encouraged to exchange information on the occurrence, outbreak or spread of plant pests and to participate in special campaigns to combat serious pests where international action is needed.

Contracting Parties are directed to cooperate as far as practicable in providing the information necessary for PRA. This acknowledges both the growing need for technical justification of phytosanitary measures through risk analysis and the costs and complexities of undertaking such PRAs.

There are many opportunities for technical cooperation. For example, phytosanitary agencies in developed countries may offer assistance in less developed countries, such as provision of research data, publications or specialist training. Providing funds to enable representatives from other countries to attend relevant meetings is another form of such assistance.

Countries can also benefit from the sharing of resources and information at the regional and sub-regional level. For this reason, the IPPC places great emphasis on encouraging and supporting the activities of RPPOs. Regional and other organizations cannot, however, represent individual governments in the ICPM or SC. Therefore, each country should ensure that it is represented and active in the ICPM. In this way, every country has an equal voice and developing countries can ensure that their unique concerns are addressed.

Technical consultations of representatives of RPPOs are convened regularly to promote the development, adoption and harmonization of phytosanitary measures. In these consultations, countries can work together on plant protection issues to achieve the aims of the IPPC.

2. ***Information Exchange***

Although the IPPC has major implications for international trade, its focus is international cooperation for plant protection. Publication and dissemination of relevant information is part of this cooperative action. Provision of official information, such as information on pests, control measures, surveillance and emergency programs, is essential to the principle of transparency. It is acknowledged that it is often difficult and costly to assemble and administer such information and to ensure that it is accurate, timely and appropriate.

The Convention sets out various requirements for information sharing, including cooperation with trading partners and prompt publication of changes to phytosanitary measures and deviations in the regulations. The responsibility for making information available lies with each Contracting Party. The IPPC Secretariat facilitates the sharing of information by Contracting Parties.

Each Contracting Party is also obliged to provide an official contact point for the exchange of information connected with the implementation of the Convention. The network of official contact points is essential for effective and rapid exchange of reliable official information and aids communication, information sharing and transparency between countries.

The Secretariat provides international standards, documents and reports in the official languages of FAO. In addition to providing printed material or distributing official documentation provided by others, it maintains the IPP at www.ippc.int, which provides information on contact details and the activities of the ICPM, the Secretariat, NPPOs and RPPOs. There are links to other relevant organizations and to pest information databases.

3. ***Phytosanitary Capacity Building and Technical Assistance***

A growing number of trade opportunities and challenges have served to heighten awareness among governments about the adequacy of their systems for plant protection. This is particularly true with regulatory systems where poor designs and implementations have resulted in trade difficulties. The IPPC is aware of an urgent need for many countries to update their policies, authority and organizational arrangements to be able to profit more fully from free, fair, and safe trade.

Contracting Parties to the IPPC agree to promote provision of technical assistance to other parties to aid the implementation of the Convention. In particular, the Convention encourages support for developing countries.

The IPPC Secretariat has arranged programs to facilitate technical assistance by providing support to the phytosanitary initiatives of three different groups: the WTO (e.g., SPS workshops); FAO's Technical Cooperation Programs (TCPs); and other multidisciplinary and multinational partners. In particular, it works to promote understanding and implementation of trade-related principles of plant protection under the IPPC.

The Secretariat also works to promote the harmonization of phytosanitary measures under the SPS Agreement by:

* providing input in training programs;
* coordinating assistance between governments or between organizations and governments; and
* collaborating in capacity building programs executed by other relevant organizations (such as WTO, World Bank, and bilateral aid agencies).

The Secretariat also supports FAO's TCPs and FAO-executed projects financed by other donors. It works with developing countries to:

* evaluate phytosanitary capacity (e.g., using the Phytosanitary Capacity Evaluation (PCE), assist in strategic planning and subsequent strengthening of plant protection infrastructures;
* update legislation;
* develop emergency programs; and
* avoid disputes.

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1. BANGLADESH

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INTRODUCTION

The Sanitary and Phytosanitary (SPS) Measures Agreement deals with risks to human, animal and plant health and the requirements on products that were declared by the Technical Barriers to Trade (TBT) Agreement. There are three intergovernmental mechanisms of setting the standards by which the health of people, animals and plants are protected. These are:

* Codex Alimentarius Commissions (CAC), which sets sanitary and technical standards for food safety including: food standards for commodities; codes of hygienic or technological practice; limits for pesticide residues in foods; and standards for contaminants and food additives.
* Office International des Epizooties (OIE), which deals with animal health and zoonosis and sets sanitary standards for the international movement of animals and animal products.
* International Plant Protection Convention (IPPC), which provides phytosanitary standards on how to prevent the spread and introduction of pests of plants and plant products.

Bangladesh became a signatory to FAO, International Plant Protection Commission with the commitment of formulating rules and regulations to prevent the spread of destructive plant pests and diseases. The SPS Agreement dealt with all aspects of phytosanitary measures that may directly or indirectly affect trade. The IPPC should cover at least the same issues as the SPS Agreement. As trade is global it was considered essential that standards are international rather than regional. The Uruguay Round Agreement recognizes the right of the member countries to adopt measure to protect human, animal or plant life. In Bangladesh, numerous harmful organisms threaten plant production. It is important to combat all plant disorders already present in the country. SPS measures include all relevant laws, decrees, regulation requirements and procedures, *inter alia*, and product criteria processes and production method, testing, inspection, certification, and approval procedures, treatments and methods or risk assessment.

SPS MEASURES IN BANGLADESH

SPS measures include all relevant laws, decrees, regulations and requirements associated with the transport of animals or plants. In Bangladesh, Ministry of Agriculture (MoA), Ministry of Fisheries and Livestock (MoFL), Ministry of Food (MoF), Ministry of Health and Family Planning (MoHFP) and Bangladesh Standard and Testing Institution (BSTI) deals with the SPS measures. Bangladesh considers SPS measures both for import and export of agricultural products. We import many items including food grains, agricultural plants and plant products, veterinary drugs, additives, pesticides, etc. The activities and present status regarding SPS measures of relevant sectors of Bangladesh are interpreted below in brief.

AGRICULTURE SECTOR

Bangladesh being an agricultural country has to import a huge quantity of seeds and other plant and plant products. Annually on an average 1.5 million mt of plants and plant products are imported for which

plant quarantine inspection are needed. Sometimes to ensure phytosanitary measure plant quarantine treatment are adopted. Similarly, different types of plants and plant products are also exported to other countries of the world. Annually, on an average 3.5 million mt of agricultural commodities, mainly raw jute and jute products, handicrafts, vegetables, fruits are inspected for the purpose of export for which Phytosanitary Certificates are issued. Basically plant quarantine is a preventive measure; it is a front of defense against the introduction of plants pests destructive to agricultural crops.

Bangladesh became a signatory to IPPC in 1974. It also became a member of the Asia and Pacific Plant Protection Commission in 1978. Bangladesh is committed to strengthen plant quarantine services and enhance regional cooperation among other member countries in the field of plant quarantine. The existing plant quarantine legislation known as "**Destructive Insects and Pest Rules, 1966 (Plant Quarantine)**" amended in July 1989.

SPS-related Services at National Level

The MoA is responsible for execution and implementation of the national and international plant quarantine legislations and agreements. At present sixteen "plant quarantine stations" are functioning in different entry points of the country. Important plant quarantine stations are at Headquarter, Zia International Airport, Shah Amanat Airport, Chittagong Seaport, Mongla Seaport, Benapole Lnad Check Posts.

Method Practiced in Bangladesh to Issue Phytosanitary Certificate for Export

A Phytosanitary Certificate of Exportation must accompany plants and plants products. Certification is made as follows:

a. An exporter of plant and plant products submits application in prescribed form to the Director or Plant Quarantine Officer concerned. The application is submitted at least a day before exportation for perishable items and 15 days before the date of the exportation for nonperishable items for proper inspection and treatment (if required) and certification.
b. If the plant or plant product is found, upon inspection to be free from injurious insect and plants diseases, a Phytosanitary Certificate is issued by the Director or Plant Quarantine Officer.
c. No Phytosanitary Certificate is issued for any plant or plant products mixed with other plants or plant products, which are infested or infected.
d. No Phytosanitary Certificate is issued for any plant or plant products, intended for shipment to a country in which its entrance is absolutely prohibited.
e. All risks or damages of any kind associated with, or resulting from fumigation or other treatment are borne by the exporter.

Perishable items leave national territory within 24 hours of the time issue of the Phytosanitary Certificate and nonperishable item must have left national territory within 15 days of the time issue of the Phytosanitary Certificate.

Phytosanitary Certificate for Imported Plant and Plant Products

A Phytosanitary Certificate shall accompany all plants and plat products from the country of origin. Persons who import any plant or plant products shall submit the Phytosanitary Certificate to the Plant Quarantine Officer for his perusal and record.

FISHERIES SECTOR

Impact of Bangladesh Export by Ban Imposed by EC and Its Cause

From Early 1994, EU and US Food and Drug Administration (FDA) emphasizes on implement Hazard Analysis and Critical Control Point (HACCP) system. But due to noncompliance of the HACCP regulation and hygiene regulation EU imposed ban considering the following objections.

1. Use of unskilled workers with unhygienic habits;
2. Unhygienic transportation and preservation;

3. Untimely procurement of shrimp; and
4. Corruption practices for making excessive profit.

Fish processing plants were subsequently developed as per EU requirements. At present the number of EU-approved fish processing plants are 48 and a few are in pipeline of approval.

Status of HACCP and SPS Measures Implementation in Bangladesh Seafood Industry

Department of Fisheries under the MoFL is the only agency responsible for controlling food safety standards of fish and fishery products intended for export. Realizing the importance of quality and safety of fish and fishery products, the Department of Fisheries has set a policy related to the following issues:

1. To improve quality of raw material through monitoring and motivational work on postharvest handling and transportation.
2. To provide reasonable assurance that fish/shrimp used as raw materials are free from chemical contaminants, environmental contaminants and toxin through frequent monitoring.
3. To apply necessary measures for quality assurance by implementing quality management program based on HACCP principles.
4. Emphasis on plant and process inspection as tools to control and assure quality and safety of end-products.
5. To provide certificate for export consignment after physical, organoleptic and microbiological test of the products following International Commission on Microbiological Specifications for Foods (ICMSF) standards and Codex guidelines.
6. To achieve and maintain a high degree of standard and quality in all steps of the work in the plants, laboratories and field.

The present seafood quality and safety program is based on good manufacturing practices (GMP), Sanitation Standard Operating Procedures (SSOP) and HACCP principles.

Step Taken for Implementation of HACCP and SPS Measures

The government has extended assistance for renovation of the processing plants and testing laboratories. Eventually it created a momentum for quick implementation of HACCP in this sector. Moreover, government has undertaken the following program to assure the quality and safety of the fishery products.

1. Fish Inspection and Quality Rules, 1989 have been amended and updated in December 1997 following the EU directives and USFDA-HACCP regulations.
2. The Fish Inspection and Quality Control (FIQC) Division of Department of Fisheries had provided microbiologists of different establishments with training on microbiological works.
3. Raw material supplies to the processing plants have been brought under compulsory registration.
4. The FIQC personnel in collaboration with International Fertilizer Development Center (IFDC)/ Agro-based Industries and Technology Development Project (ATDP) have trained 90 raw material suppliers and depot holders.
5. Follow-up training programs are arranged for the personnel of fish processing plants on HACCP and SPS measures.
6. Quality of water and ice of fish processing plants have been standardized.
7. Infrastructure of fish processing plants have been renovated and modified as per HACCP concept.
8. Government has established 21 raw material landing centers as a model for further expansion of processing facilities.
9. Import of high quality packing materials is allowed for fish processing industries to ensure hygienic packing of the products.
10. To fulfill the HACCP requirements government has allowed to import duty-free plants machineries, refrigerated vans and other accessories.
11. In 1996-97 training was provided to the personnel working in this sector. Personnel from Department of Fisheries and staff from processing plants were trained on HACCP system. FIQC

personnel have also been trained home and abroad on FIQC especially in microbiology, technology, HACCP validation and verification.

12. In Bangladesh practice of beheading of shrimp outside the factory in unhygienic condition was the major source of contamination. To overcome this problem receipt of "**head-on**" shrimp has been made mandatory for the fish processing plants.
13. It is mandatory that FIQC Division of the Department of Fisheries must certify exportable fish and fishery products for its safety and quality. Only the lot that passes inspection and laboratory tests complying with ICMSF/ISO is certified for export.

Plant Inspection

FIQC carries out routine inspection of hygiene and sanitation of plant premises, related documents, records and processing activities. These standards are based on the Codex guidelines and directives of EU, USFDA, HACCP regulations and requirements of other importing countries.

FIQC Wing insures introduction and implementation of HACCP in the fish processing industry. FIQC provides the following assistances:

1. Training for the development of technically skilled manpower on HACCP and phytosanitary system.
2. Review of HACCP manual for the plants.
3. Verification and auditing of HACCP as and when required.
4. Technical assistance for implementing HACCP systems in the plants.
5. HACCP certification for fish processing establishments.

It is further pointed out that BSTI has the codes of practice on fish and fishery products as per present world requirements. SPS measures to be taken are clearly mentioned in FIQC Rules/97. The people engaged in fish culture, harvesting, transportation, distribution and processing are strictly follow the regulations. Ensuring sanitary measures, Bangladesh exports fish and fish products.

LIVESTOCK SECTOR

The Agreement on SPS measures came in force as WTO began operation in January 1995. Now, agricultural imports and exports are free from tariff barriers. The SPS measures are the only regulations to regulate international agricultural trade.

Adaptation of Laws, Rules and Standards to the Terms of the SPS Agreement

Laws, rules and regulations virtually do not exist in the veterinary trade-related field in Bangladesh. However, Animal Quarantine Act and Animal Disease Control Act are waiting for enactment. The standards must be set on the basis of standard risk analysis studies.

Reinforcement of Import Inspection and Quarantine Procedures

Bangladesh import live animals, animal products and byproducts, animal foods and feed ingredients, veterinary drugs, reagents, etc. The only law regulating such imports is Animal Importation Act 1898. In case of importing live animals Department of Livestock Services (DLS) gives import permit if competent veterinarian or veterinary service certifies the importing animal as disease-free. In case of veterinary products a technical committee gives permission to those products to be used against diseases prevailing in the country. Permission of importing other animal-origin food is generally sought from DLS. Animal Quarantine Act and Animal Disease Control Act is awaiting enactment which will help in maintaining SPS standards.

Strengthening the Information, Surveillance and Alert Service

DLS has taken some steps for strengthening of livestock information services. They are planning arrange various publications. Livestock sector, particularly poultry sector, is emerging as a potential for export diversification. Recently government has launched a National Goat Development Program primarily with the objective of poverty reduction and export of goat meat. SPS measures are essential for switching

over to international market from local market. Unfortunately we are yet to set appropriate SPS standards in this regard. We must ensure it because we have decided to export beef shortly. On the other hand BSTI adopted standards (BDS 1704: 2002), Specification for Dressed Chicken, which has been approved by the Agricultural and Food Products Divisional Committee. This standard is being formulated to provide guidelines to ensure safe quality for local and international trade. This standard contains a clause that calls for an agreement between the purchaser and the supplier. This standard there has a provision for grading dressed chicken as Grade-1 and Grade-2.

Recommendation of Department of Livestock Services Regarding SPS

DLS recommended that the following steps should be taken by government for application of SPS measures.

* A national level committee should be constituted to formulate a program for application of SPS measures.
* The proposed Animal Quarantine Act and Animal Disease Control Act should be placed before parliament as early as possible for enactment.
* Animal Slaughter Act to be revised for ensuring safe animal food to consumers. Modern slaughterhouses and poultry meat processing units should be established.
* Standards for antibiotic, herbicide, anthelmentic, hormone, heavy metal residue and residues for other agents and standards for microbial analysis and contamination should be set up on the basis of risk analysis.
* Notification of disease, declaration of disease-free or low pest zone on the basis of disease surveillance should be practiced.
* Laboratory services should be modernized. Support from international agencies is needed.

Cooperation among neighboring countries is needed for implementation of SPS measures.

FOOD SECTOR

MoF deals with policies regarding the food grains required for the people of the country. Directorate General of Food (DGF) is an operational body that implements the policy-oriented task prescribed by MoF. Ensuring of food security for all is one of the major challenges that Bangladesh faces today. Despite significant achievements in food grain production, food security at national, household and individual levels remains a matter of major concern for the government. Although net aggregate production at present surpasses theoretically aggregate demand assuming per head per day requirement of food grain as 454 gm, there is still lack in wheat production in comparison to wheat demand. MoF and DGF manage the Public Food Distribution System (PFDS). A part of SPS Agreement phytosanitary is mandatory. Imported food grains (both purchased and aided) are received from ships only with clearance of Quarantine Officer. A cargo damaged to contact of water or any other reason is not received. A damaged cargo is disposed of as per quarantine rules and the necessary cost belongs to shipping agent or supplier of the cargo. DGF builds up a security stock. In a tropical country like Bangladesh it is hard to keep the food grains free from pests. It is easy to maintain quality of wheat stored in silos because of its mechanism. But local storage depots (LSDs)/ central storage depots (CSDs) (locally called go-downs) are not safe from pests. These pests are controlled by application of contact pesticide (e.g., Actelic EC 50). In case of severe infestation fumigation with aluminum phosphide is done.

Ensuring Safe and Quality Food Supply

Bangladesh is a member of FAO and WHO and takes initiative on food standards (e.g., Codex Alimentarius) to ensure supply of safe food. The Government of Bangladesh is firmly committed to achieve food security for all as declared by World Food Summit 1996. Our existing Pure Food Rules, 1967 and Pure Food Ordinance, 1959 are to be amended to cope with Codex standards and SPS measures.

Inspection of the Imported Food Grain

The shipping agent of a ship-carrying food grains shall supply the shipping manifest to the Plant Quarantine Officer at least 14 days before the arrival of the ship. Plant Quarantine Officer shall accompany the berthing team as a member of the Berthing Committee and shall, on the basis of the shipping manifest, examine the food grains and shall adopt such measures as may be deemed appropriate to stop spread or dissemination of pests from the ships. Generally a cargo is not found infested with pests. Sometimes some damaged in the ship is disposed properly. A damaged cargo is not accepted by DGF.

HEALTH SECTOR

Institute of Public Health(IPH) of MoHFP is working for the quality of food available in Bangladesh. Public Health Laboratory (PHL) is fully responsible to check the quality of food in order to protect the consumer from unsafe, adulterated, or contaminated food as per **Pure Food Ordinance, 1959** and **Pure Food Rules, 1967**. Pure Food Ordinance, 1959 and Pure Food Rules, 1967 contains 107 items of notified food. They are specified in: (1) milk and milk products; (2) edible oils and oils products; (3) sweetening agents; (4) cereals and their products; (5) starchy foods; (6) nonalcoholic beverages; (7) spices; (8) fruits, vegetables and miscellaneous products; (9) tea and coffee; (10) bakery and confectionery products; (11) iodized salt; and (12) canned food.

The food samples received from Sanitary Inspectors of different fields are sent to the PHL of IPH test as per above-mentioned available rules/laws. Necessary actions are taken by the government as per rule and test results. If the samples indicate adulteration, public analyst of PHL reports it to the Civil Surgeon for legal action against the owner of the food samples as per “Section 44 of Pure Food Ordinance, 1959”.

Bangladesh Standards and Testing Institution

Bangladesh is a member country of the CAC. BSTI deal with Codex matters. BSTI has adopted guidelines for application of HACCP system. BSTI also works to adopt ISO 9000, ISO 14000 and HACCP standards. Many companies in Bangladesh have got ISO certificate and many are coming to get ISO certificate to overcome the SPS barrier for entering into the international market. Till now BSTI formulated more than 1,700 national standards including over 300 standards for food and agricultural products and services. Among them 46 standards are mandatory. In Bangladesh by the year 2000, BSTI has already adopted 22 Codex standards.

Codex Food Safety (Sanitary) Standards and Bangladesh

CAC has eight subsidiary bodies, six of which deal with sanitary (i.e., food safety) requirements for foods and as such, are directly related to the SPS Agreement. These committees are responsible for the elaboration of standards and guidelines for the safety and quality of foods. Bangladesh Government has formed a high level committee for adaptation of Codex standards as national standards. BSTI, the responsible government body is controlling the activities of the committee. The committee has already adopted 22 Codex standards as national standards and would adopt all the Codex standards as national standards by the year 2004.

Integrated Pest Management System

The Department of Agricultural Extension (DAE) has formulated project for Integrated Pest Management (IPM) system in rice and vegetables with the objectives: (1) to develop the capacity DAE and among selected NGOs to undertake effective IPM training and to establish a national IPM program; (2) to develop a national IPM policy to facilitate expansion and coordination of all IPM activities. IPM is a broad ecological approach to pest control using various management tactics in a compatible manner. IPM provides a long-term strategy for minimizing crop losses caused by pests with least possible cost to the farmers and without adverse environmental impact. IPM aims to enabling the farmers to grow a healthy crops, increase the farm outputs and income. DAE has completed the first phase of this project. It makes the farmer reduce use of pesticide by 80 percent and also increase production in significant scale.

Effect of Groundwater Arsenic in Bangladesh

Consumption of arsenic is harmful for human life. So, arsenic contaminated food and food products are not suitable for international trade. The presence of arsenic in groundwater has serious implications for Bangladesh. To produce more rice to feed large population we lift more groundwater for irrigation. The presence of arsenic in groundwater and use of this arsenic contaminated water for irrigation has become a new headache of our authority. Many organizations and researchers (national and international, government or non-government) are working to find out the level and effect of arsenic. As a part of my M.Sc. Engineering (Environment) thesis I am also working in this regard.

CONCLUSION

The new trading environment created by the World Trade Agreements on SPS measures calls for greater use of science as the main basis for food safety and arbitrary, unjustified measures do no longer exist as a disguised non-tariff barrier to trade. The Agreements, however, recognize the right of every country to set up its own appropriate level of protection. If such a level differs from internationally agreed one, the country must provide the necessary justification to its trading partners. The Uruguay Round Agreement on SPS measures developed in order to facilitate international trade in agriculture commodities. Bangladesh being a signatory to the Uruguay Round Multilateral Trade Agreements with the express commitment to develop, adopt and execute an efficient **SPS Systems** can adequately take care of the health of her people, animal, plants and plant products. The development, adoption and implementation of the SPS measures are something, which involves costs, impose burden. But at the same time, absence of SPS measures or lack of their proper execution/implementation is not something we can ignore in the modern international trade-dominated world. So we are trying to adopt standards suitable for SPS measures. In this regard Bangladesh has made some progress but the progress is not sufficient enough to compete in the world market. We are, however, determined to adopt Codex standards by 2004. But adopting Codex standard is not an easy task for us because there still remains lack of modern laboratory facilities and expert technical persons. BSTI, the standardizing body in Bangladesh, is in poor condition. Main problem of this Institution is absence of experts together with budgetary constraints. Similarly, other relevant organizations are more or less in the same condition regarding expert personnel as well as logistic supports. Major administrative policy reform is necessary for remedy to this problem. There is also need of effective training and logistic supports from the developed countries as well as international organizations like APO, WTO, and FAO, etc. in this regard. Bangladesh is desirous of playing an honorable role in the arena of world trade. She is sincerely trying to comply with the requirements of SPS systems.

2. REPUBLIC OF CHINA (1)

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INTRODUCTION

Based on the current trends of liberalization and globalization, to accommodate the growing import and export of agricultural products, the Republic of China (ROC) has adopted appropriate Sanitary and Phytosanitary (SPS) measures necessary to protect human, animal or plant life or health in a manner that does not make barriers to international trade. To manage the increasing threats of introduction of pests or diseases into the territory of the ROC, several government agencies are given responsibilities for minimizing the threats. On issues related to animals and plants, the Bureau of Animal and Plant Health Inspection and Quarantine (BAPHIQ), the Council of Agriculture (COA), is in charge of pest control and quarantine matters. On food safety issues, the Department of Health (DOH) is responsible for implementing relevant laws, regulations, and sanitary requirements, and commissioned by the DOH, the Bureau of Standards, Metrology and Inspection (BSMI), Ministry of Economic Affairs (MOEA) takes responsibilities in examining food or agricultural products to be imported or exported.

As the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures (WTO/SPS Agreement) requires its members to adopt the SPS measures in a justifiable, scientific, transparent and least trade-restrictive manner, to comply with the WTO/SPS Agreement. In this respect, the ROC has strengthened its capabilities to implement the SPS measures and is currently focusing on issues related to transparency, risk assessment, recognition of pest- or disease-free status and participation in international activities and cooperation. This paper describes the current status of application and implementation on animal- and plant-related SPS measures in the ROC.

AGENCIES RESPONSIBLE FOR SPS MEASURES IN THE ROC

Bureau of Animal and Plant Health Inspection and Quarantine

On 1 August 1998, the BAPHIQ of the COA was established in order to consolidate administration mechanisms in the execution of policies and regulations of animal and plant health inspection and quarantine as well as related affairs. Under the Bureau, four branch offices at Keelung, Hsinchu, Taichung and Kaohsiung, where international airports or harbors are located, were set up, and 13 inspection stations at various counties were also established under the supervision of the branch offices. The Bureau takes responsibilities for animal and plant health inspection and quarantine services, prevention and control of important animal and plant diseases and pests, veterinary drug administration, and meat hygiene and inspection. It is in charge of the establishment and execution of related policies, laws and regulations, planning, implementation and supervision of related programs and projects; promotion of scientific and technological research and development operations; provision of technical services; administration and supervision of import/export inspection and quarantine operations; and management of international affairs including technical consultations and negotiations with foreign countries, participation in international organizations, promotion of international technical cooperation and information exchanges.

Animal Health Inspection Department

The Department is responsible for the administration of animal health inspection, disease prevention, veterinarian registration and veterinary drug management.

Animal Quarantine Department

The Department handles inspection and quarantine for the import and export of animals and animal products, as well as the establishment and revision of quarantine laws, regulations and related measures. It also assists in the promotion of international markets for animal products.

Plant Protection Department

The Department is responsible for the administration of programs designed for plant disease and pest prevention and eradication, programs for disease and pest management, and inspection of designated diseases and pests of propagated planting materials.

Plant Quarantine Department

The Department handles inspection and quarantine for the import and export of plants and plant products, as well as the establishment and revision of quarantine laws, regulations, and related measures. It also assists in the promotion of international markets for plant products.

Planning Department

The Department takes charge of planning and development of animal and plant pest control and quarantine policies, conducts disease and pest diagnosis for imported and exported agricultural products, and coordinates international affairs and cooperation.

Meat Inspection Department

The Department is responsible for ensuring that requirements pertaining to human and animal health and animal welfare are fulfilled in the meat establishments.

Branch Offices of the BAPHIQ

Four branch offices of the BAPHIQ, each affiliated with several inspection stations, execute the inspection and treatment of imported animals, plants and their processed products at ports of entry to prevent the introduction of exotic pests or diseases. They also provide inspection, treatment, and certification services for exported animals, plants and their products to comply with SPS regulations of importing countries. In addition, they collect and report local animal, plant disease and pest status and support local agricultural authorities in animal and plant disease, pest monitoring and control programs.

OTHER AGENCIES AND ORGANIZATIONS

Several agencies and organizations collaborate with the BAPHIQ in detection, monitoring and management of pests or diseases in the ROC.

Identification Centers for Plant Pest

In order to obtain accurate and early identification of invasive plant pests, five identification centers financially supported by the BAPHIQ are set up at the Taiwan Agriculture Research Institute (TARI), the National Taiwan University, the National Chung Hsing University, the National Chiayi University and the National Pingtung University of Science and Technology. Specimens collected or isolated by Plant Protection Officers serving at district agricultural improvement stations or other related agencies are sent to the centers for confirmatory identification. Once an invasive species is identified, the report will be sent to the BAPHIQ and appropriate phytosanitary actions will be taken.

Crop Pest Diagnosis Service Centers

Twenty-eight crop pest diagnosis centers are set up at plant protection-related departments of universities and at various agricultural organizations under the COA. These include: the Taiwan Agricultural

Chemicals and Toxic Substances Research Institute (TACTRI), the Taiwan Forestry Research Institute, the Taiwan Banana Research Institute, the Taiwan Tea Experiment Station, and district agricultural improvement stations. These centers provide farmers and the general public with plant disorder diagnosis services and recommend solutions to the problems affecting plant health. Through the services, exotic plant pests may be detected before they become widespread. The diagnosis cases are immediately reported to the BAPHIQ through electronic networks. In the year 2001, a total of 2,200 cases were dealt by all the diagnosis centers.

Regional Pest Monitoring Centers

In order to keep track of the status of key plant pests in different areas in the ROC, eight regional pest monitoring centers were established at eight district agricultural improvement stations. Plant Protection Specialists, at these centers, periodically conduct surveys to determine the population fluctuation of designated insect pests and the severity of certain major crop diseases. Data are immediately sent through electronic network to the information center located at TACTRI and then distributed to related agencies and organizations. The control center, located at the BAPHIQ, is responsible for analyzing the data and taking appropriate actions. Although the Plant Pest Monitoring System was initially established for the control of existing pests, it has also been found very useful in reporting promptly of exotic pest outbreaks.

Local Pest Information Centers

All local governments have established plant pest information centers, responsible for delivery of pest notifications or pest alerts and of information relating to plant pests' management to local farmers. In case of emergency of plant pests alert or outbreak, they are able to coordinate their tasks with the relevant authorities to implement relevant measures and tasks of emergency control.

Agencies for Identification and Surveillance of Animal Diseases

At the local level, each local government (except Hsinchu city, Chiayi city and Lien Chang prefecture) has a Livestock Disease Control Center (LDCC) to implement the animal diseases surveillance and eradication programs planned by the BAPHIQ and will carry out field works including epidemiological survey, disease prevention, diagnosis, vaccination, and animal movement control.

The National Institute for Animal Health (NIAH) supervised by the COA is responsible to perform research on topics in association with animal disease prevention, diagnosis, control, treatment, and vaccine development, and provides technical support for the LDCCs. Moreover, the NIAH is the only place equipped with a negative-pressurized laboratory to conduct foot-and-mouth disease (FMD) diagnosis as well as research works related to live FMD viruses.

ACCOMPLISHMENTS OF IMPLEMENTATION ON SPS MEASURES

Accession Notification

On the accession to the WTO, the ROC has submitted to the Secretariat its relevant laws, decrees, regulations and administrative rulings of general application relating to SPS measures, including product coverage and relevant international standards, guidelines and recommendations. These include Veterinary Drugs Control Act, Animal Industry Act (translation), Plant Protection and Quarantine Act, Statute for Prevention and Control of Infectious Animal Disease, Veterinarians' Law and their enforcement rules and requirements.

Notification Since Accession to the WTO

In order to ensure the transparency policy, when a trade-related SPS regulation is promulgated or amended, it will be notified to the relevant associations and trading partners as well as the WTO Secretariat. The notifications of SPS regulations or measures from the ROC since its accession to the WTO in 2002 are shown in Annex. Meanwhile, for animal diseases, according to the *International Animal Health Code* of Office International des Epizooties (OIE), the BAPHIQ also reports its animal health status regularly to the OIE.

Enquiry Point

Being the WTO/SPS Enquiry Point of the ROC, the BAPHIQ shall make available SPS-related information concerned or requested by other WTO members to enhance the transparency of its SPS measures.

Harmonization

To harmonize SPS measures with international standards, guidelines and recommendations, the BAPHIQ has established and amended its SPS measures and regulations in accordance with the three standard setting bodies, namely; Codex, International Plant Protection Convention (IPPC) and OIE, except where considerations of security, animal and plant health, or differences in environment, climate, geography or important technology would require deviations from international standards.

Scientific Evidence

The ROC has enforced its SPS measures based on accepted scientific principles and an assessment of risks involved. In addition, routine or *ad hoc* pest or disease surveillance, monitoring and official control programs implemented by the ROC for years have provided the basic scientific information and the justifiable evidences for its adoption of reasonable SPS measures within its territory.

Risk Assessment

Plant Pest Risk Assessment Task Force and Animal Disease Risk Assessment Task Force under the BAPHIQ are responsible for plant and animal diseases and pests risk assessment, respectively. In accordance with the WTO/SPS Agreement, International Standards for Phytosanitary Measures, International Animal Health Code and relevant international standards, those Risk Assessment Task Forces constituting of officials of the BAPHIQ and experts from academy and relevant research institutes, will conduct objective and impartial assessment, taking into account of all information available including biological, social and economic impacts. The results of assessment will be submitted to Plant Protection and Quarantine Consultative Committee and Animal Health Inspection and Quarantine Evaluation Committee of the BAPHIQ for reviewing and evaluating; and then an objective suggestion will be offered to the BAPHIQ for final decision.

In 2002, the BAPHIQ has conducted relevant commodity-initiated risk assessments requested by Australia, Canada, Finland, Hungary, New Zealand, Nicaragua, Peru, Philippines, and the U.S.A. for the import of their products.

SURVEILLANCE/INFORMATION COMMUNICATION SYSTEM

Island-wide Detection Survey Program on Exotic Insect Pest

The island-wide program is an early warning system to identify the invasion of quarantine exotic insect pests with high likelihood of introduction such as Mediterranean fruit fly, fruit fly, codling moth, western flower trip and some nonspecific species. For early a detection and prompt response, the BAPHIQ developed an island-wide network composed of 550 trapping sites that are located in high-risk areas such as ports of entry, places of production, essential passages, and markets of agricultural products. All the data are recorded and compiled in the Plant Pest Monitoring System.

Detection Survey on Exotic Pathogens/Insect Pests/Weeds

Several quarantine pathogens, insect pests, and weeds such as pierces disease, Asian longhorn beetle, mango, seed weevil and plum pox virus that pose high risk are also under detection survey initiated by the BAPHIQ and conducted by different research institutions. The methods used are extensive sampling of suspicious host plant materials or medium cultivation followed by detection, examination, or identification depending on the traits of target pests.

Monitoring Survey on Key Crop Pests

Routine surveillance of four existing key crop pests; oriental fruit fly, melon flies, tobacco cutworm and beet army worms, is conducted by TARI. Besides, some other 47 plant pathogens and insect pests, such as the causal agents of rice blast, rice bacterial leaf blight, grape downy mildew, late blight of tomato and

potato, brown leaf hopper, rice water weevil, etc. are also put under surveillance program. The population dynamics of each pest have been posted on the Plant Pest Monitoring System every 10-30 days and alert to farmers is issued in case the severity of diseases or insect population is over the threshold.

Plant Pest Monitoring System

The Plant Pest Monitoring System is composed of seven functional units including the Control Center, which is the BAPHIQ, an information center, eight regional pest monitoring centers, 28 crop pest diagnosis service centers, 25 local government pest information centers and the Fast Dissemination of Crop Pest Warning Center (Figure 1). Through thorough investigating, monitoring, technical supporting, reporting, and controlling, the system coordinates all stages involved from central to local governments, providing comprehensive management for plant health.

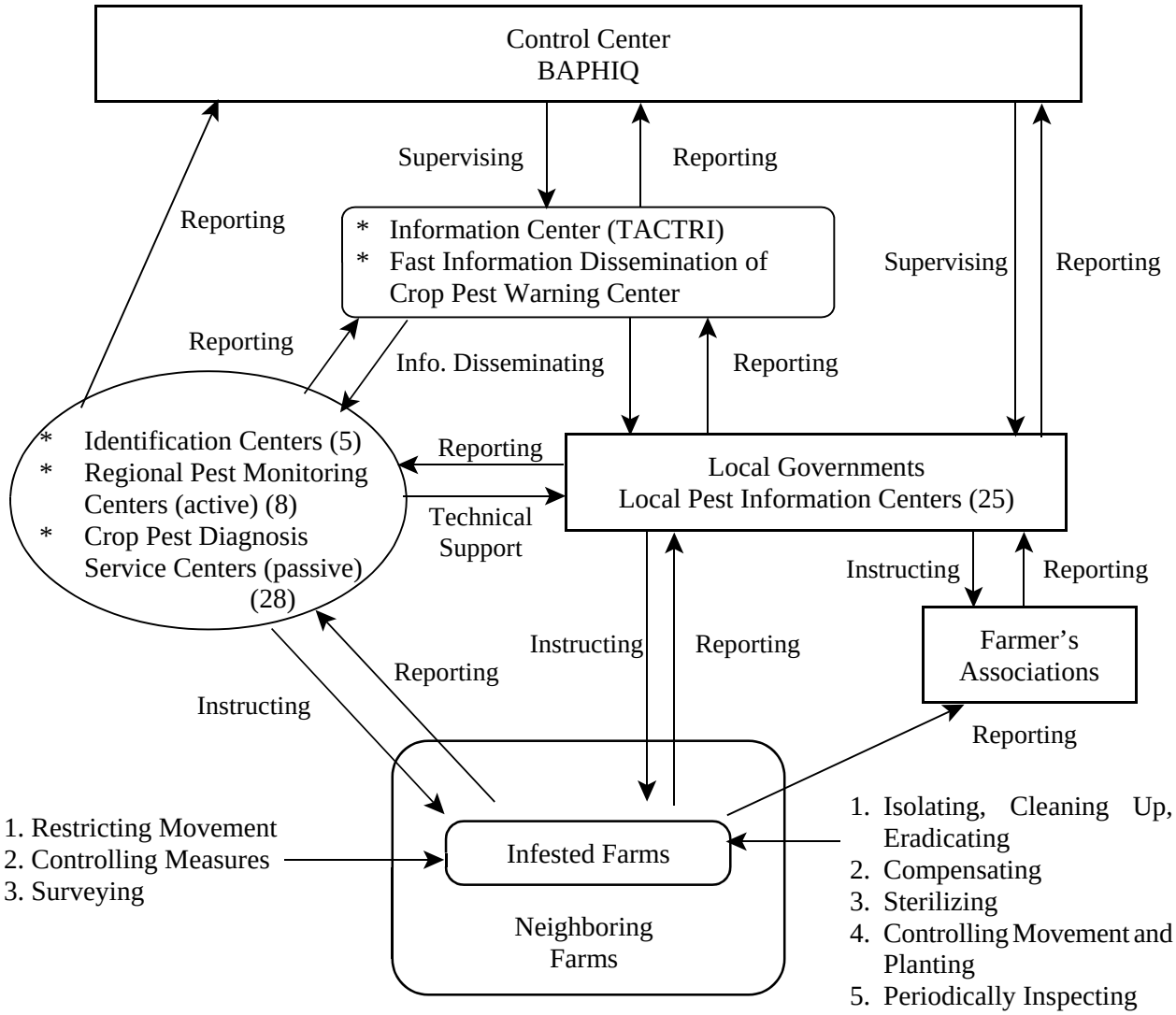

Figure 1. Plant Pest Monitoring System

Surveillance on Important Animal Diseases

For maintaining the free status of several important exotic animal diseases and preventing some zoonoses animal diseases which may cause great economic impacts or threats to human health from entering or spreading, the BAPHIQ has established surveillance and control systems focusing on some priority diseases as below:

* Foot-and-Mouth Disease
* Classical Swine Fever
* Highly Pathogenic Avian Influenza
* Rinderpest
* Rabies
* Bovine Brucellosis
* Bovine Tuberculosis
* Bovine Spongiform Encephalopathy (BSE).

Through continuous pathology, serology, and advanced biotech examination on spotted animals, the surveillances provides scientific evidences of the freedom status and early warning of any outbreak or spread of these animal diseases for the BAPHIQ to adopt appropriate measures.

Animal Disease Reporting System

The reporting from the farm/village to the Central Veterinary Authority is laid down in the system of Animal Health Inspection in the ROC (Figure 2).

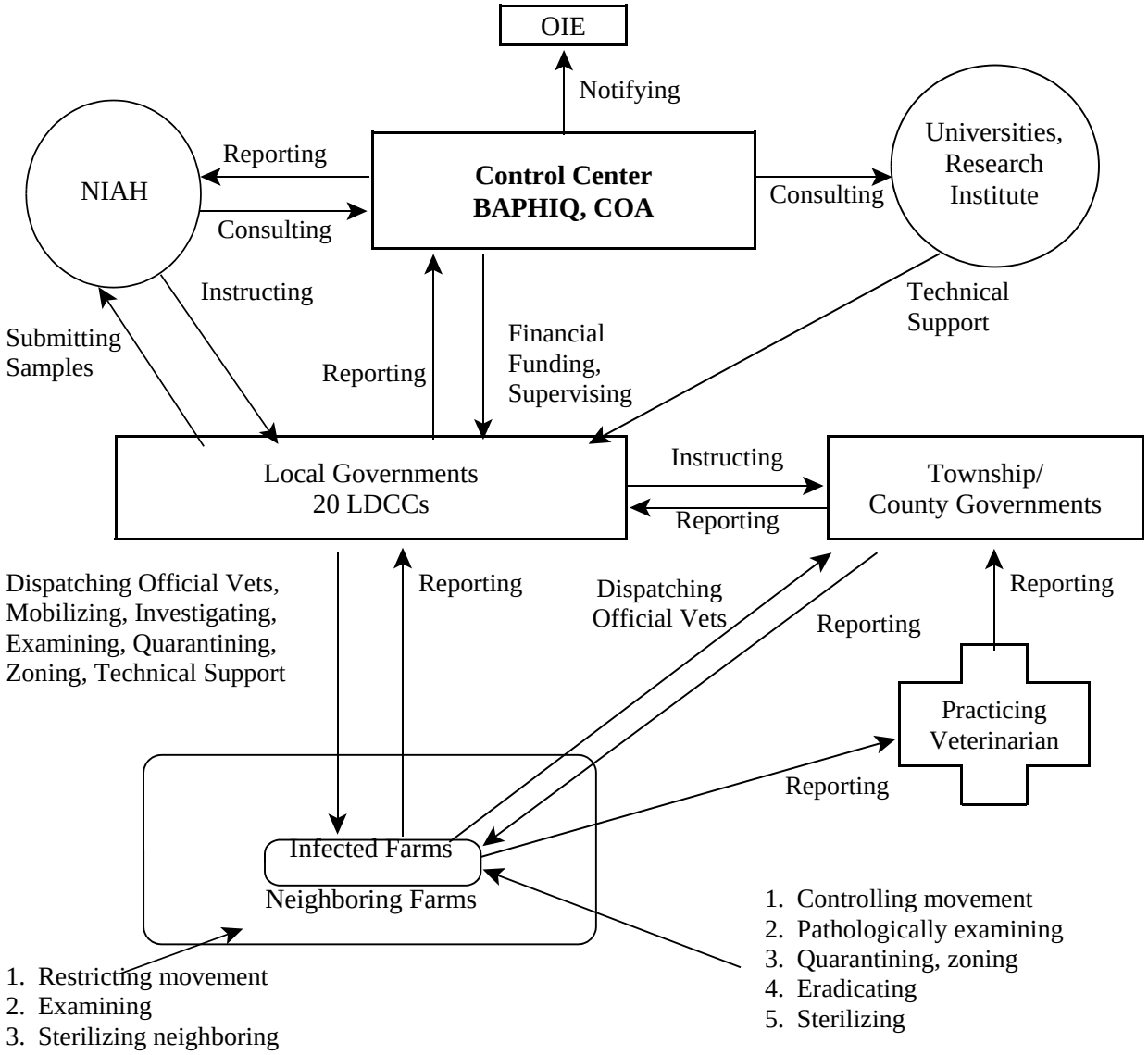

Figure 2. The System of Animal Health Inspection in the ROC

OFFICIAL CONTROL PROGRAM

Emergency Control of Plant Pest or Disease

As soon as receiving the notification of pest invasion, the BAPHIQ dispatches experienced officers along with experts and local officers to investigate the pest status. An emergency program, usually conducted collaboratively by related research institutions, is initiated to identify the cause of infestation, assess the pest risk, and finally choose the most appropriate measures to contain or eradicate the invasive pests based on the conclusion of PRA. Pear decline and invasive rodent emergency control programs conducted by the BAPHIQ are the examples for emergency control currently.

Foot-and-Mouth Disease Eradication Program

The ROC had been free of FMD for over 68 years until the first case occurred in pigs in March 1997. At the very early stage, the ROC adopted the policies of stamping out and providing vaccination to stop the spread. In order to regain FMD-free status, a strategic eradication plan was established including a comprehensive disease diagnosis, a computerized disease reporting system, a bio-security measures both on the farms and at livestock markets, a massive compulsory vaccination and monitoring and surveillance on cloven-hoofed animals. The last case of FMD was reported on 25 February 2001. Because of vaccination and the efforts made in implementing the strategic eradication program, the ROC is now in a very good shape in regaining FMD-free status.

Emergency Control Maneuver

The BAPHIQ also conducts Emergency Control Maneuver with local governments, relevant organizations and farmers to prevent important invasive pests or diseases from entering or establishing their existence via import. Through roles playing and scenarios simulating, the BAPHIQ has performed several emergency control maneuvers of important pathogens, diseases or pests such as Nipah virus, Hanta virus, rabies virus, African swine fever and Mediterranean fruit fly, to strengthen the linkages and the capabilities of information communication and implementation of emergency measures at each executive level which is responsible.

PEST- OR DISEASE-FREE AREA

Delimiting/Zoning Survey for Disease or Pest

Once a target exotic pest or disease is detected, the BAPHIQ initiates a delimiting/zoning survey program to establish the boundaries of an area considered to be infested, infected by or free from the pest or disease if the infestation/infection exists. The investigation densities and the range to be surveyed vary depending on the traits of the pest or disease. To arouse awareness of farmers, industries and local plant protection officers, the BAPHIQ also issued a pest alert introducing the diagnostic symptoms of infestation as well as guides for sampling and reporting.

Maintaining Pest- or Disease-free Area

Through continuous surveillance, monitoring and official control, pest- or disease-free status is being maintained in the ROC. For instance, the ROC is still a free country from codling moth, Mediterranean fruit fly, BSE and rabies.

Recognizing Pest- or Disease-free Status

Pursuant to the concept and agreement of pest- or disease-free area of WTO/SPS, the BAPHIQ has established the official procedures for trading partners to apply in the recognition of freedom of pest or disease. The following are the relevant regulations:

* Procedure for the Recognition of Disease-free Status of a Foreign Country (Zones) – animal diseases
* Procedures for Recognition of Pest-free Areas – plant diseases and pests.

PARTICIPATION IN INTERNATIONAL ACTIVITIES

Bilateral Consultations

Following an abundant flow of agricultural goods between the ROC and its trade partners many SPS concerns have been brought up and efforts were to solve them. To deal with such issues, the BAPHIQ has held or participated in consultations with many trading partners on technical aspects and has sought for mutual interests. Through intensive discussions and efforts in bilateral consultations, the BAPHIQ in 2002 has communicated with Australia, Canada, the Netherlands, New Zealand, the Philippines, South Africa, Vietnam and the U.S.A. resolving some of the SPS issues, exchanging pest or disease information, recognizing SPS measures and treatment technology for export products, helping the agricultural trade flow between the ROC and its trading partners.

WTO/SPS Committee

Being a new member of the WTO this year, the BAPHIQ has actively participated in the WTO/SPS Committee meetings held in Geneva to exchange information and communicate with other members. In the future, the BAPHIQ will continue its participation and, in addition it will offer services or assistances in its capacities to WTO members, which are in need getting same.

International Cooperation

The ROC is an APEC member economy, and in 2002 has hosted a symposium on invasive pest in Taipei with the support provided to it by all the participants. “APEC Symposium on Detection, Monitoring and Management of Invasive Pests” was held in September 2002, with 18 member economies attending. This Symposium aimed at:

* enhancing the comprehension of invasive plant pests;
* improving the techniques and implementation of detection, monitoring and management for invasive plant pests; and
* encouraging cooperation among APEC member economies to develop regional strategies for preventing the introduction and spread of invasive plant pests.

The Symposium has reached on some meaningful conclusions and achievements including:

* strengthening of communication and exchange of information among APEC member economies to mitigate potential impacts of invasive plant pests;
* development of a website to facilitate information sharing; and
* development of a pest alert system for the region by 2004, and a workshop to be held in 2003 to discuss the feasibility of using Lucid software to develop diagnostic tools for the APEC region.

The Perspectives of Implementation on SPS Measures in the ROC

With the small geographic size, scarcity of natural resources and the increase of agricultural imports, the BAPHIQ is to establish a sound Animal and Plant Health Inspection and Quarantine System, building up an Animal and Plant Product Sanitation and Safety Inspection System, control important animal and plant diseases and pests, prevent the entry of foreign diseases and pests in order to ensure the safety of agricultural production, and protect the ROC’s ecosystem and the health of animals, plants and humans. The following are some key missions of the BAPHIQ’s emphasis in the future.

Prevention of Exotic Pests or Diseases

To prevent exotic pests and diseases from entering through agricultural imports, the BAPHIQ will strengthen the implementation of quarantine at ports of entry, reinforce risk assessment on potentially dangerous diseases or pests in order to adopt appropriate SPS measures. Meanwhile, the monitoring on exotic diseases and pests and establishing computer data information as well as communication system of important quarantine diseases and pests will also be conducted continuously in order to provide early warning for their

invasion and outbreak. In addition, the BAPHIQ will continue to conduct on-site inspection and verification of pest or disease status, SPS measures, quarantine facilities and operations in exporting countries.

Strengthening Domestic Animal Health Inspection and Plant Protection

To protect domestic animal and plant, the surveillance and notification system, detection and investigation of diseases or pests, and monitoring of their outbreak and prevalence in order to adopt appropriate control measures, will be implemented continuously by the BAPHIQ, and certain disease- or pest-free status will be maintained. Meanwhile, the BAPHIQ will reinforce the emergency control and collective control of important diseases and pests to reduce economic losses.

To facilitate the circulation of pest alert, the BAPHIQ is setting up a server with a database in which enormous contact information is compiled. Pest alert and related information will be promptly sent from the server to farmers, agricultural agencies, or organizations by fax, e-mail and mobile phone message. This express alert system will become effective in 2003.

Developing New Technology for Pest or Disease Management

Being aware of the significance of scientific evidence for any SPS measure adopted, the BAPHIQ is developing new technology for surveillance, control, detection, diagnosis and identification for diseases and pests so to provide accurate and immediate information for adoption of SPS measures necessary to prevent their incursion from abroad. The development of Geographic Information System (GIS) incorporated in the current surveillance and communication system will also help locating and controlling the spread of pests or diseases at their early stage.

Promoting International Cooperation and Participating in International Activities

The promotion of information sharing and technical cooperation with other countries and working in close collaboration shall be stressed to help preventing the spread of threatening pests or diseases in the Asian and other regions. In addition the BAPHIQ is willing to actively participate in relevant international activities on equal terms to voice its positions, share its experiences, exchange information, and fulfill its obligations in international organizations including WTO and APEC, etc. in the years to come.

Annex

Notifications of SPS Regulations or Measures from the ROC since Its accession to the WTO in 2002

1. Draft of Scope and Application Standards of Food Additives (DOH, G/SPS/N/TPKM/1, 4 April 2002)
2. Draft of Pesticide Residue Limits in Foods (DOH, G/SPS/N/TPKM/2, 8 April 2002)
3. Draft of Scope and Application Standards of Food Additives and Draft of Specification Standards of Food Additives (DOH, G/SPS/N/TPKM/3, 18 April 2002)
4. Proposed Amendment to the Quarantine Requirements for the Importation of Animals and Animal Products into the Republic of China and its Appendix 19: Quarantine Requirements for the Importation of Carcasses, Offals, and Other Products Derived From Poultry (BAPHIQ, G/SPS/N/TPKM/4, 1 July 2002)
5. Draft of Scope and Application Standards of Food Additives (DOH, G/SPS/N/TPKM/5, 8 July 2002)
6. Draft of Pesticide Residue Limits in Foods (DOH, G/SPS/N/TPKM/6, 5 August 2002)
7. Suspension of Live Cervids, Cervid Semen and Embryos/Ova Importation into the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu from the United States of America and Canada, Nung-Shou-Fang-Tzu-Ti 0911478507 Hao, 17 July 2002 (BAPHIQ, G/SPS/N/TPKM/7, 19 August 2002)
8. Proposed draft of Quarantine Requirements for the Importation of Dry Animal Products into the Republic of China (BAPHIQ, G/SPS/N/TPKM/8, 18 September 2002)
9. Draft of Scope and Application Standards of Food Additives: Lutein (08132, 09033), and Draft of Specification Standards of Food Additives: Lutein (08132, 09033) (DOH, G/SPS/N/TPKM/9, 23 September 2002).

3. REPUBLIC OF CHINA (2)

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INTRODUCTION

The World Trade Organization (WTO)

The WTO is a global international organization dealing with the rules of trade among nations. It was established on 1 January 1995 at the Uruguay Round negotiations, and has its Headquarters in Geneva, Switzerland. Its goal is to help producers of goods and services, exporters, and importers conduct their businesses with international regulations set for this purpose. Its functions include administering WTO trade agreements, forum for trade negotiations, handling trade disputes, monitoring national trade policies, providing technical assistance and training for developing countries, and cooperation with other international organizations. The implementation of the WTO agreements comes with the benefits of promoting peace, handling disputes constructively, making life easier for all, cutting the costs of living, providing more choice of products and qualities, raising incomes, stimulating economic growth, making life more efficient, being shielded from lobbing, and encouraging good governance.

Sanitary and Phytosanitary (SPS) Measures

Any measure applied is primarily aimed to protect human life or health within the territory of the member states from risks arising due to additives, pesticides, drug, extraneous matter, toxins, or disease-causing organism in foods, beverages or feedstuffs. Sanitary 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; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labeling requirements directly related to food safety.

The Agreement on the Application of Sanitary and Phytosanitary Measures

The objectives of the Agreements on SPS are to protect the health of consumers and to ensure fair practices in the food trade. The relevant standard-setting organizations for the SPS Agreement are the FAO/WHO Codex Alimentarius Commission (CAC) for food, the International Animal Health Organization for animal health, and the FAO's Secretariat of the International Plant Protection Convention for plant health. The Agreement on the Application of Sanitary and Phytosanitary Measures provides the rules and disciplines to protect the human health from food additives, toxins, contaminants, and pathogens in foods. According to the Agreement, the governments are requested to harmonize their measures with or to base them on international standards, guidelines, and recommendations set by the FAO/WHO.

FAO/WHO Codex Alimentarius Commission

The FAO/WHO CAC which implements the joint FAO/WHO Food Standards Program is the body responsible for compiling the food standards, codes of practice, guidelines and recommendations that constitute the Codes Alimentarius and for facilitating the harmonization of food standards.

Office International des Epizooties (OIE)

The FAO/WHO OIE was created in 1924 in Paris. Within its mandate under SPS the WTO Agreement, is made to safeguard world trade by publishing health standards for international trade in animals and animal products.

AGENCIES DEALING WITH SPS MEASURES IN TAIWAN

Department of Health (DOH)

The DOH is the highest health policymaking body in Taiwan. The "Law Governing Food Sanitation" was promulgated in 1975, and was amended in 1983, 1997, 2000, and 2002. This Law was enacted for controlling food sanitation, safety and quality to help protect the health of citizens. The DOH conducts the monitoring of veterinary drug residues in foods of animal origin sold on the local market. The National Laboratories of Foods and Drugs (NLFD) of the DOH sets up testing rules based on ISO/IEC 17025 – general requirements for the competence of testing and calibrating of laboratories. Testing methods are based on standard analytical methods published by the DOH, Chinese National Standards (CNS) analytical methods, or internationally recognized methods adopted by the Association of Analytical Communities (AOAC), the U.S. Department of Agriculture (USDA), the U.S. Food and Drug Administration (USFDA), and the European Union (EU). The laboratories also regularly take part in international proficiency testing activities such as proficiency testing held by the Asia Pacific Laboratory Accreditation Cooperation (APLAC). The analyses held in NLFD all follow the NLFD quality assurance manual based on ISO/IEC 17025.

Bureau of Standards, Metrology and Inspection (BSMI), Ministry of Economic Affairs (MOEA)

The BSMI, under the MOEA, is established as the highest national agency for standards, metrology and inspection. BSMI is responsible for establishing and promoting National Standards and conducting food import and export inspection and certification in the control system. The main duties of the BSMI include conducting commodity inspections to ensure the protection of consumer interests and establishing and promoting standards. The CNS is established by consensus and approved by MOEA, which provides for common and repeated use, rules, guidelines or characteristics for products, processes and services. The CNS is implemented on a voluntary basis as given in the Standards Law. The laboratories of BSMI conduct the inspection of imported food based on "Regulations of Inspection of Food Imports" issued by DOH. Each laboratory of BSMI conducting food testing also uses the quality manuals based on ISO/IEC 17025. The testing methods used include the CNS and the DOH methods or internationally recognized methods.

Industrial Development Bureau of the Ministry of Economic Affairs (IDBMEA)

The IDBMEA is to enforce Good Manufacturing Practice (GMP) system based on GMP designated by USFDA for the food industry. The objectives of promoting food GMP are:

* to enhance food quality and hygiene safety;
* to guarantee the rights between customers and manufactures;
* to establish management systems for food manufactures; and
* to contribute to the development of a sound food industry.

The four managing ingredients of food GMP are:

1) Labor: to be manufactured and managed by the right person
2) Material: to be manufactured and managed by the right person
3) Machine: to use standard factories and machines
4) Method: to manufacture with the most appropriate method.

Foods and Agriculture Department, Council of Agriculture (COA)

The COA is to plan and promote the Chinese Agriculture Standard (CAS) high-quality food mark system. Beside the COA, the Food Industry Research and Development Institute (FIRDI), National Animal Industry Foundation, and the Chinese Frozen Food Institute share the CAS executive and promotional affairs. Pesticides implementation for agricultural products in the field and the monitoring programs on pesticide residues are planned and conducted by the COA Food and Agriculture Department.

Bureau of Animal and Plant Health Inspection and Quarantine (BAPHIQ)

The BAPHIQ, under the COA, is responsible for the registration and licensing of veterinary drugs. The municipal and prefectural governments are responsible for the inspection of veterinary drugs on the market and for taking disciplinary action. This is according to the Veterinary Drug Control Act. The entire veterinary drug for the treatment or prevention of animal diseases is registered.

The Fisheries Administration (FA)

The FA under the COA is responsible for all fisheries businesses. The FA's major missions include:

1. drawing up and supervision for the fisheries policy, laws and regulation;
2. conducting the research for the fisheries science;
3. operating and coordinating for the fisheries surveillance;
4. supervising and coordinating the distribution and processing of the fisheries products;
5. making plans for the international fisheries cooperation, promoting and coordinating for the foreign affair and port site; and
6. making plans, promoting, monitoring and coordinating the fisheries resource conservation and cultivate management, survey and research, evaluation and aquaculture fisheries.

Many inspection institutions under the supervision of the FA conduct monitoring programs on residual drugs in pre-marketed aquacultural products.

ACCOMPLISHMENTS ON IMPLEMENTATION OF SPS MEASURES

Under the WTO Agreement on the Application of SPS Measures, each member country of the WTO is required to publish all SPS measures and notify changes made on such SPS measures. Relevant laws, decrees, regulations, guidelines, and administrative rules of general application relating to food sanitary measures issued by DOH are listed in Table 1.

Table 1. Laws, Decrees, Regulations, Guidelines, and Rules Issued by the Department of Health

No.	Date of Promulgation	Laws/Regulations/Guidelines/Rules
1.	30 January 2002	Law Governing Food Sanitation
2.	12 June 2002	Enforcement Rules of the Law Governing Food Sanitation
3.		Scope and Application Standards of Food Additives
4.		Food Sanitary Standards
5.	23 May 2002	Pesticide Residue Limits
6.	14 January 2000	Food Recall Guidelines
7.	22 February 2001	Biotechnology
8.		Guidelines on Registration of imported Foods in Tablet or Capsule Forms
9.		The Regulation on Registration of Special Dietary Food
10.		Guidelines on Registration of Food Additives
11.		Regulation on Nutrition Labeling for Packaged Food
12.	30 January 2002	Health Food Control Act
13.	1 August 1999	Enforcement Rules of the Health Food Control Act
14.	21 June 1999	Health Food Sanitary Standards
15.	21 May 1999	Regulations for Application of Health Food Permit

Table 2. Scope and Application Standards of Food Additives issued by the Department of Health

1. Food additives
2. Preservatives
3. Sanitizing agents
4. Antioxidants
5. Bleaching agents
6. Color fasting agents
7. Leavening agents
8. Food quality improvement, fermentation and food processing agents
9. Nutritional additives
10. Colors
11. Flavoring agents
12. Seasoning agents
13. Pasting agents
14. Coagulating agents
15. Chemicals for food
16. Solvents
17. Emulsifiers
18. Others

Two questionnaires relating to the meat inspection are published by BAPHIQ in addition to the Veterinary Drugs Control Act.

Questionnaire: Information on Meat Inspection Issues from Countries Intending to Export Meat and Meat Products Derived from Cloven Hoofed Livestock to the Republic of China.
Questionnaire: Information on Meat Inspection Issues from Countries Intending to Export Meat and Poultry Meat Products to the Republic of China.

In implementing the Agreement, member countries of WTO are required to identify a single central government authority to work as the notification authority and are responsible for the notification. Also, these countries are required to establish an enquiry point responsible for answering questions from other countries about SPS measures and related issues. The identified national notification authority and enquiry point of ROC is BAPHIQ. The notifications made by DOH since 2002 are listed in Table 3.

Table 3. Notification Since 2002 by DOH

No.	Symbol	Date of Issue	Title
1.	G/SPS/N/TPKM/1	4 April 2002	Draft of Scope and Application Standards of Food Additives
2.	G/SPS/N/TPKM/2	8 April 2002	Draft of Pesticide Residue Limits in Foods
3.	G/SPS/N/TPKM/3	18 April 2002	Draft of Scope and Application Standards of Food Additives and Draft of Specification Standards of Food Additives
4.	G/SPS/N/TPKM/5	8 July 2002	Draft of Scope and Application Standards of Food Additives
5.	G/SPS/N/TPKM/6	5 August 2002	Draft of Pesticide Residue Limits in Foods
6.	G/SPS/N/TPKM/9	23 September 2002	Draft of Scope and Application Standards of Food Additives: Lutein (08132, 09033), and Draft of Specification Standards of Food Additives: Lutein (08132, 09033)
7.	G/SPS/N/TPKM/10	30 October 2002	Draft Amendment of the Regulations Governing Quarantine at International Ports

Harmonization

The SPS Agreement encourages governments to establish national SPS measures consistent with international standards, guidelines and recommendations. However, the WTO itself does not develop such standards. With respect to food safety, CAC develops such standards relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of

hygienic practice. Leading scientists in the field and governmental experts on health protection develops the Codex standards. The National Food Safety Standards of the ROC are mostly established based on the standards developed by the CAC. For example, the recommendations set for food additives; pesticide and veterinary drug residues are mostly adopted by the ROC National Food Safety Standards. And these standards are applied to domestically produced food and food products as well as to those coming from other countries.

Scientific Evidence

If the national standards are not based on the international standards, the scientific determination and/or the risk assessment of effects on human health of pesticides, contaminants or additives in food need to be taken into account. Food safety risk assessment are concerned with the potential for adverse effect on human or animal health from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs. The overall risk analysis process includes risk identification, risk assessment, risk management and risk communication. Risk assessment consists of four defined stages: hazard identification, hazard characterization, exposure assessment and risk characteristics. In evaluating the risk to human health or life, the available scientific evidence, relevant processes and production methods, and relevant inspection, sampling and testing methods need to be taken into account. The DOH performs the surveillance systems for genetically modified soybean, genetically modified corn, health foods, and imported foods in tablet or capsule forms. However, the monitoring program on pesticide residues as well as drug residues in animal products and control programs on drug residues in aquaculture products are implemented and conducted under the supervision of governmental agencies of COA.

Control, Inspection and Approved Procedures

According to CAC, the principles applied to the food control systems include fitness for purpose, risk assessment, non-discrimination, efficiency, harmonization, equivalence, transparency, special and differential treatment, control and inspection procedures, and certification validity. And the elements of the control program should be formally documented. The DOH has been entrusting the BSMI with the imported food inspection in accordance with the provisions of Article 24 of the Low Governing Food Sanitation. The BSMI operates the inspection based on “the Regulation of Inspection of Food Imports”. The inspecting methods are batch-by-batch inspection, batch-by-batch certification, selective batch inspection, written certification, monitoring examination, and certifying registration.

THE PERSPECTIVE IN THE IMPLEMENTATION OF SPS MEASURES

As a member country of WTO, the issue of ensuring supply of the consumers inside the island as well as friends outside the country with safe foods and further facilitating the international food trade have become more urgent and have attracted more attention. Attending the international related meetings and activities, reviewing recent developments and major issues emerging from the application of SPS measures in fellow WTO member countries, and discovering the issues and the important factors that should be considered in implementing the SPS measures will help to understand better conducting of risk analysis in food production and food trade and thus help ensure the safety and security in foods and food products.

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4. FIJI

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INTRODUCTION

Adequate, safe, wholesome food is an essential element for the achievement of adequate standards of living that has been proclaimed as basic human rights.

Fiji's food trade, like that of many other nations, is greatly dependant on food products from other countries to satisfy the national nutritional requirements. In terms of micro-nutrients, 57 percent of calories, 62 percent of protein and 65 percent of fat were imported into the country in 1995. Over the past two decades, food imports have been expanded by more than 350 percent amounting to a value of about $60 million in 1996. Contributing factors are the increasing dependence on processed food that goes hand in hand with urbanization, dietary substitution, processes and monetarization of the food economy. These trends have been further accelerated by deregulation measures initiated in the early 1990s.

Food control and inspection systems are essential items into today's global trade environment, in which Fiji is actively engaged as an importer and exporter. The confidence of consumers in the quality of their food supply depends partially on their perception of the effectiveness of food control measures.

As a member of WTO, Fiji is therefore bound to all the agreements, including those on Sanitary and Phytosanitary (SPS) measures (SPS) and also on Technical Barriers to Trade (TBT). This in particular is challenging for Fiji whose food control system needs to be strengthened, especially through the revision and updating of food regulation and standards. It is in the interest of countries such as ours to strengthen and harmonize national food regulation with international standards developed by Codex Alimentarius and establish import and export food inspection and certification procedures to ensure conformity with SPS and TBT requirements.

GENERAL ADMINISTRATIVE STRUCTURE AND MECHANISMS FOR IMPLEMENTING THE SPS AGREEMENT

In Fiji, the Ministry of Foreign Affairs is responsible for issues concerning WTO and a mission in Brussels, which handles meetings of the SPS Committee along with all other WTO Agreements.

The Ministry of Agriculture, Sugar and Land Resettlement (MASLR) is the contact point for Codex in Fiji and therefore is responsible for the implementations of the Codex Alimentarius (International Food Standard). The Ministry of Health administrates the Pure Food Act and its subsidiary regulations while the Ministry of Commerce, Business Development and Investment is mandated to prepare standards for goods and services (including foods).

A national trade facilitation committee has been established with four sub-committees:

1. ***Quarantine/Bio-security and Health Sub-committee***

Areas of consideration shall include:

* quarantine procedures, time lines and costs
* timeliness and effectiveness of responses to quarantine threats
* quarantine delays in international markets
* dissemination of quarantine information
* international cooperation among quarantine authorities

* quarantine human resources, management structure and relevant information and communication technologies
* development of export standards/certification and export licence issue protocol
* best practice quarantine legislation with WTO/SPS compliance.

2. ***Standard Sub-committee***

Areas of consideration are as follows:

* Accreditation and certification system
* Safety, quality, labeling and information standards
* Management structure and human resources of Trade Standards Advisory Council (TSAC)
* Best practice legislation
* Information dissemination on standards
* Participation on ISO
* Regional and international standards harmonization.

The members include:

* MASLR – Quarantine Division
* Ministry of Fisheries and Forests
* Fiji Island Trade and Investment Bureau
* Ministry of Health
* Department of Environment
* Relevant private sector.

National Codex Committee in Fiji

The National Codex Committee (NCC) in Fiji was established on 10 June 1999. It supports the work of the Contact Point and ensures that all ministries, NGOs, consumer and industries would have ample opportunity to present their views on issues of Codex matters including aspects related to food control matters. The Committee should also advise the government on the implication of various food standards and food control issues, which have arisen and are related to the work of the Codex Alimentarius Commission.

The composition of the NCC includes relevant government ministries, food industries, trading sector, consumer groups and scientific organizations. Specifically, these members are Ministry of Health, MASLR, Industry Development; International Trade; Consumer Protection; Science and Technology, Foreign Affairs and Economic Planning; Food Research Development Organizations.

Representatives research from various sectorial interests with the overall food industry like fish sector, processed fruits and vegetables sector, dairy sector, food importers and exports and the consumers.

The main activities of the NCC to date are: dissemination of Codex papers to stakeholders' coordinate with the National Foods Standard Committee; food inspection procedures workshop and promote awareness of key players in food safety standards and food control on the role functions; and activities of the Codex Alimentarius Commission.

IMPACT OF SANITARY AND PHYTOSANITARY STANDARDS

This Agreement recognizes the sovereign right of governments to adopt SPS measures to protect human, animal and plant life and health (e.g., quarantine treatments). Phytosanitary measures must be scientifically-based, and should be applied only to the extent necessary to achieve the required level of safety.

Most of Fiji's horticultural export markets were closed with the loss of the chemical ethylene dibromide (EDB) as a quarantine treatment in 1990. Fiji was proactive in addressing these technological constraints. An ambitious project to acquire High Temperature Forced Air (HTFA) quarantine treatment technology was embarked on with USAID assistance.

Today, Fiji has viable industry-operated quarantine treatment facility and thriving industry in the export of fruit fly host commodities. Unfortunately, Fiji's initiative in adopting the necessary technology to facilitate exports has not been matched by the regulatory authorities in the importing countries.

Compliance with SPS Agreement

Fiji has already adopted international standards, including Codex Alimentarius, Office International des Epizooties (OIE) and the International Plant Protection Convention (IPPC) as the basis of national requirements through the assistance of the Secretariat for the Pacific Community (SPC) and the Pacific Plant Protection Organisation (PPPO) in the development of standards and addressing their needs.

Presently, more than 30 companies, including food manufacturing plants have obtained accreditation and certification for their operation using ISO 9000 series and Hazard Analysis and Critical Control Point (HACCP) to remove any TBT.

Organizations such as FAO, OIE and WHO have assisted Fiji to develop programs regarding food safety, animal and plant health issues including extensive bilateral programs with other WTO members.

New Challenges to SPS

According to the Agreement, national governments are required to develop and implement International Standards for Phytosanitary Measures (ISPMs) which provides guidance in the preparation of nation standards to cover area of operations. These developments are forcing change that no country or regional plant protection organization can afford to ignore them even though the country lacks the technical expertise and financial resources to implement such international guidelines. We need to be part of this global agreement, as we cannot afford to be isolated from the rest.

Training of staff, functional equipment, reviewed and effective legislation (harmonized whenever possible), pest survey, pest database and operation manuals should be considered to have effective plant quarantine operations.

Fiji is confident in making useful contributions to those changes and to the global standard-setting body. The increase in the volume of exports depends on the ability to deliver high quality products that comply with the importing countries quarantine treatment requirements.

Work has begun in Fiji to meet the challenges of the SPS Agreement. For example:

* Fiji recently reviewed its plant/animal quarantine policies and procedures (Macfarlane, 1998) and subsequently its plant and animal quarantine legislation (Landos, 1998) with support from FAO Sub-regional Office for the Pacific Islands (SAPA).
* Review of Food Safety Acts.

There are also constraints in regards to staff training and equipment.

Effects of Changes of Sanitary and Phytosanitary Standards

It was anticipated that the harmonization (Article 3) and equivalence (Article 4) provisions would result in the opening up of markets for fruit fly host products. In two areas in particular it was anticipated that the SPS Agreement would apply.

* The broad adoption of the New Zealand methodology is to determine if a product is not a fruit fly host.
* The acceptance of HTFA quarantine treatment by Australia and U.S.A.

In both areas this expectation is yet to be released.

The New Zealand Non-fruit Fly Host Commodity

Based on an experimental procedure, sampling of large quantities of fruit is not required, as is the case with “probit 9” sampling methodology required by US Department of Agriculture (USDA). The number of fruit required to meet the sampling standard make it prohibitive for a small export industry.

Using the New Zealand experimental methodology, it has been shown that a range of fruits are non-fruit fly host in Fiji. As a consequence, Bilateral Quarantine Agreements (BQA) have been negotiated for the export of certain varieties of chilies and cucurbits to New Zealand without quarantine requirements. However, Australia and the U.S.A. are yet to accept the New Zealand methodology. The grounds would be harmonization (Article 3) and equivalence (Article 4). After all, New Zealand is a country that has no fruit flies and horticulture is the major export industry. Australia is yet to approve HTFA treatment for Fiji papaya, despite this being a likely violation of SPS Agreement (harmonization and equivalence). Fiji is unlikely to have the expertise or resources to amount a successful WTO challenge against Australia especially after the

May 2000 Coup, Fiji is in a weak position to mount such a challenge. Fortunately, the issue seems to be moving towards satisfactorily resolution without having to resort to international law. In 2001, an Australian Quarantine Inspection Service (AQIS) officer finally visited Fiji and draft protocol has now been prepared for final submission to the stakeholders for their comments.

USDA, surprisingly, has also not yet accepted HTFA treatment for fruit transhipped through Hawaii to Canada. Some 100 mt of Fiji's papaya were exported to Canada prior to USDA's ban on transhipment in 1992. HTFA is a US technology, developed originally for papaya, which was transferred to Fiji under USAID program. In June 1999, USDA-APHIS (Animal and Plant Inspection Service) sent a team to Fiji that inspected the HTFA facility. Approval is yet to be given.

New Zealand has also introduced new and more complex pest risk assessment procedures in recent years that have created market access problem. In case of Australia, this access has been made even more arduous by the lack of clear guidelines on requirements. For example, New Zealand now requires a complete and up-to-date pest lists for a commodity before a BQA can be negotiated. One such product is cut-flower dendrobium orchids. South Australia potentially offers a sizable market for Fiji ginger.

However, these imports are not permitted on quarantine grounds. Such restrictions are difficult to understand given that Fiji exports fresh ginger to Hawaii, which in turn is a major distributor of fresh ginger to North America.

The agonizingly show progress of the Australian, US and New Zealand quarantine approval process for Fiji products can in part be explained by the fact that these are minor products from a small politically weak country. They are given low priority when it comes to allocating scarce resources to pest risk assessments. Fiji has taken on the commitments implied by the SPS Agreement, without the supporting changes in human resources and institutional structures.

The Permanent Secretary of Agriculture stresses the disadvantage faced by small countries like Fiji in applying the SPS Agreement.

"The WTO places the onus on all member countries to provide scientific justification for SPS measures used to block trade, through the Agreement on Sanitary and Phytosanitary Measures. Yet proving whether quarantine restrictions are actually being used as a barrier to trade is very difficult. Fiji is yet to make use of the WTO dispute settlement procedures, although it appears to have good ground to do so. Fiji is currently requesting technical assistance from New Zealand authorities, with funding from various donors. However, for successful quarantine agreements to be reached there needs to be good will and cooperation between all sides. Fiji's experience has been that this cooperation is sadly not always forthcoming (Kunatuba, 1998).

During the 1980s and early 1990s kava exports steady growth for beverage and pharmaceutical markets in Germany. The value of kava exports rise from $2 million in 1994 to $36 million in 1998. Kava performance in 1998 raised hope that a diversification crop that might approach the importance of sugar had been found.

However, by early 1999, there was a substantial decline in export prices and in 2001 Germany banned kava imports. The ban has been based on claims that capsules containing kava lactones might cause liver cancer. Even if clinical tests do not substantiate these claims, the market damage has already been done. Such was the case with coconut oil two decades ago in the face of claims by the soybean industry.

Noni (*kura*) juices face similar barriers to entry. In the EU, noni juice is considered as a food and as such is subjected to Novel Food Regulation of 1997. Under this Regulation any food first imported into the EU after 1997 has to show that it is not deleterious to health.

The roller coaster experience of the kava industry is not related to the Agreement on Agriculture (AoA). However, it does show the vulnerability of small island exporters to adverse health claims made by competing industries in developed countries. These small countries do not have the financial and technical resources to depend themselves against these assertions. Irrevocable damage can be done in eyes of consumers, even if claims can subsequently be refuted. Any future AoA needs to provide some protection and resources to level the playing field for small developing countries in addressing the health claims of industrial countries.

CONCLUSIONS AND RECOMMENDATIONS

* SPS measures should not be used as a means of arbitrary discrimination or as a disguised restriction to trade.

* To develop a mechanism for coordination, consultation and exchange of information as regards notification and application of proposed SPS measures, whenever these measures might affect the interests of either the least developed countries or the developing countries.
* To secure support for capacity building initiatives for the least developed countries so that they can meet the SPS measures of the developing countries which are increasingly becoming stringent.
* To take appropriate measures so as to minimize the extra costs placed on producers and exporters to comply with SPS measures.

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5. INDIA (1)

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I. INTRODUCTION

With the increase in world food trade, especially over the few decades, the implementation of food safety and quality standards have become imperative. The concern for food quality and safety has been increasing since there has been a marked shift in the type of food traded from mainly bulk raw materials to semi-processed and ready-to-eat food (value-added) products. Safety and quality aspects include micro-biological contamination, hazard control, pesticide and drug residue in food, genetically modified content, export certification and international standard certification/individual country approval (like EU-specific standards). Since mere physical inspection is not enough to detect potential hazards in food, the world trade in food products is largely guided by certification of both product and process. These standards ensure the safety of food products (e.g., chemical or genetic composition within permissible limits) and minimize the health hazard by ensuring the processing units to operate under hygienic conditions (to reduce microbial contamination).

The certification of processes and products in the country of origin to ensure food quality in world trade, have in effect moved costs towards developing countries, and certification often comprises a significant proportion of the total cost of production for exporters in these countries. Some food safety and quality regulations implemented by industrialized countries are also perceived as potential entry barriers, especially when the importing country-specific stipulations are more stringent than those of international standard-setting bodies. There have been several instances, rejections at port of food export consignments from developing countries were encountered since the products failed to demonstrate adequate labeling, production process guidelines, etc.

Consequently, institutional and structural changes are evident within the food exporting developing countries. National governments as well as industry operations have been impacted, with food processing units undertaking process-certification and domestic governments harmonizing national food safety standards with international norms and endorsing food consignments before exports. Developing countries like India have been upgrading quality standards in the face of stringent regulations abroad since food exports are important foreign exchange earners.

The food quality and health standards are legal in global trade under the provision of the WTO Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures. The conformity assessment procedures, quality certifications and labeling requirements for food consignments (and also facilities/ manufacturers) are legal under the provisions of the WTO Agreement Technical Barriers to Trade (TBT) since 1995. The SPS and TBT Agreements were meant to make national regulations transparent and consistent with international norms and prevent the use of standards/regulations as non-tariff barriers, however, they do allow countries to set more stringent regulations than the international benchmark. While the SPS Agreement is meant to encourage the harmonization of health and safety standards with international standards in food by referring to those set by the Codex Alimentarius Commission (hereafter Codex), its *precautionary principle* (under Article 5.7 even when scientific conclusions are opaque) allows departures from Codex standards, i.e., countries have the right to set their own standards on say, permissible pesticide residues (if stricter than international norms under the Codex) based on their own risk perception, acceptability and analysis.

The departures from international standards by industrialized countries, fragment export markets for developing countries and thus become costly for the exporters in developing countries. For example, an ochratoxin limit on the import of coffee enforced in the EU resulted in Indian coffee being rejected by one EU member and then taken at a discount into another, causing loss of foreign exchange and time in the process. Similarly, when the EU banned the import of shrimps from India in August 1997, the exporters were able to recoup some of their losses by redirecting consignments to the US and Japan markets where the products were acceptable according to their standards.

Disparity in food safety guidelines across OECD countries is also evident in trade in food containing genetically modified organisms (GMO). While the effects of products containing GMO are still not completely understood by the scientific community, differences persist in risk perceptions in Western Europe versus North America. India has been facing GMO-based trade restrictions on a range of fruits (like bananas, mangoes, and grapes), vegetables, and rice and dairy products in Western Europe. The EU requires labeling of all foodstuffs, additives and flavors containing 1 percent or more genetically engineered material under Regulations 1139/98 and 49/2000. On the other hand, the US Food and Drug Administration (FDA) does not distinguish between foods produced from genetically modified crops and food produced from crops developed by other technologies, and hence no labeling is required of genetic modification!

Since India is mainly a food exporting country, this paper focuses on the challenges from SPS measures in world trade. Section III briefly reviews the Indian response to food safety and quality issues. Section IV examines India's role in harmonizing SPS measures at the WTO, and Section V is presented as a concluding remark.

II. INSTITUTIONAL CHALLENGES OF SPS MEASURES IN DEVELOPING COUNTRIES

The compliance of food safety standards typically require upgradation of infrastructure, and processing techniques related to risk management, for example, using Hazard Analysis Critical Control Point (HACCP) principles as promulgated by the Codex, and certification of processes and/or products raise the costs of production for firms. Since a large number of exporters in developing countries operate with small-medium enterprises, upgradation and certification as required by the SPS measures for the food processing industry as a whole in these countries are relatively more expensive (than industrialized countries) and small units may finally need to shut shops. Of course, this phenomenon is not unique to developing countries, and even in the U.S., the implementation of HACCP in the meat/poultry slaughter and processing industry imposed higher costs on small firms than on larger firms (Cato, 1998). The problem, however, is more significant in developing countries since the food industry largely consists of small-scale operators.

Besides the limit on the ability to comply with the requirements, developing countries are also limited in their ability to demonstrate compliance! Some of the major inhibiting factors include the lack of infrastructure and testing facilities, and limited technology choices (Department for International Development [DFID], 2000). For instance, the EU Regulation 104/2000 article 4, effective January 2002, allows the marketing of fishery products only if they have a clear label indicating the commercial identification of the species, the production method and the catch area (FAO, 2001). Besides increasing costs, the new tractability systems and corresponding labeling can become potential trade barriers since tracing production along a supply chain of scattered small facilities is difficult.

Challenges for the Indian Export Sector

In India, in particular exports of agricultural and allied products (particularly marine products, rice, tea, spices, cashew, meat, coffee, processed fruits and vegetables) continue to play an important role. The export value of agricultural and allied products in India increased from US$3.2 billion in 1991-92 to US$5.9 billion in 2000-01 (Department of Commerce [DOC], 2002). While the significance of this sector has been declining as a proportion of total commodity exports (share of manufactured exports in India has grown from 75 percent in 1991-92 to 83 percent in 2000-01), specific food products like marine products continue to be a high foreign exchange earner. Indeed, seafood exports constitute more than 3 percent of total Indian commodity exports and are categorized by the DOC as high export-share products with potential for growth (*ibid*). Marine products constituted almost one-fifth of the total exports of agricultural and allied products during 1990-2000, followed by rice (Table 1). Other significant food export products include tea, coffee, spices,

processed foods, meat, and fruits and vegetables. Indeed food products like processed fruits and vegetables have been identified as sectors with untapped export potential (Export and Import Bank [EXIM] Bank Study, 2002). Thus implementation of food safety and quality standards are significant to maintain and expand global food markets for India.

Table 1. Indian Exports of Agricultural and Allied Products during 1990-2000

Commodity	Total Export (US$ million)	Percent Share in Total
1. Marine products	9,230.1	18.78
2. Rice	7,075.3	14.39
3. Oil meals	6,010.4	12.23
4. Tea	4,170.9	8.48
5. Cashew including cashew nut shell liquid	3,580.1	7.28
6. Coffee	2,963.8	6.03
7. Spices	2,544.6	5.18
8. Tobacco	1,740.2	3.54
9. Cotton raw including waste	1,703.2	3.46
10. Processed items including fruits, juices, etc.	1,592.6	3.24
11. Meat and meat preparations	1,479.4	3.01
12. Fruits and vegetables	1,395.8	2.84
13. Sugar and molasses	822.1	1.67
14. Others	4,851.1	9.87
Total	49,159.6	100.00

Source: Calculated from data in Table 117: Exports of Principal Commodities in *Handbook of Statistics on Indian Economy 2001*, Reserve Bank of India.

Fishery products have emerged as the most important food item in value terms during the 1990s. Marine products now dominate Indian food exports, and in 2000-01 earned export revenue of US$1.4 billion, accounting for more than one-fifth of the total exports of agricultural and allied products. In the 1960s Indian fish exports were mainly in the form of dried fish, and in the 1970s and 1980s, fish exports were either canned or frozen. Today, in keeping with the worldwide trend in fresh and processed fish trade, Indian exports consist of fresh frozen and cooked frozen products (mostly shrimps). Thus food safety standards and HACCP implementation in seafood processing facilities have become essential for Indian exporters to retain and expand markets abroad.

The OECD countries as a group are the major importers (in value terms) of Indian food products. For seafood exports, Japan is the single largest country destination followed by the U.S.; in spices the U.S. is the single largest importer followed by the EU member countries; in tea and coffee the EU member countries are the major importers (besides Russia). While rice exports to U.K. and the U.S. are significant, most of Indian rice exports go to the Middle East (particularly to Saudi Arabia). However, value-added food exports from India find the largest markets in developed countries and the food processing industry is considered one of the sunrise industries in the country.

Since the American, Western European and Japanese markets are the most important export markets, quality and safety standards in these countries have adversely affected Indian food exports (due to consignment rejections or outright bans in these markets). While the first shock in marine exports was felt in 1997, when the EU banned seafood imports from India based on sub-standard processing units, other food products have also faced import barriers in the U.S. and EU (and to a lesser extent in Japan). In June 2001, the Indian Commerce Ministry noted that non-tariff measures/barriers (TBT and SPS measures) have adversely affected the Indian exports of fresh fruits, coffee, meat, rice and even herbal medicines. The barriers included stipulations on labeling, chemical pesticide residue, bacteria, filth, presence of GMO, etc.

During August 2001 through July 2002, the US-FDA refused a total of 459 food export consignments from India. Actually several food products from India have been under automatic detention and testing in the U.S. since the 1990s (US-FDA Automatic Import Alert) (including *basmati* rice, *farfar*, fresh and frozen

lobster/lobster heads, fresh raw/fresh frozen/cooked shrimp, morel mushroom, black pepper and sesame seeds).

The main cause of import refusals of Indian consignments by the US-FDA continues to be based on food contamination problems in the form of filth, unsanitary or deleterious substances and/or salmonella, accounting for 60 percent of all food consignment refusals during 2001-02 (US-FDA, 2002). However, issues related to labeling, and additive violations have also emerged as important basis of US-FDA refusals. More than 36 percent of Indian consignments were refused on the basis of inadequate labeling of products, pesticide residue or unsafe additives. Clearly, it is important for the food sector in India to focus not just on sanitary conditions and controlling for bacterial contamination, but also on types of additives used in processing condiments and develop proper labeling schemes.

III. IMPLEMENTATION OF SPS MEASURES IN INDIA

In India, the food safety and health standards are administered through various regulations and ministries. One of the major regulations is the Prevention of Food Adulteration Act of 1954 under the Ministry of Health and Family Welfare, which lays down specifications for various food products and is mandatory. The Ministry of Health is also the Codex Contact Point in India.

Another mandatory regulation includes the Essential Commodities Act of 1955, with a number of quality control orders including the Fruit Product Order, Meat Product Order and Vegetable Oils Control Order. These orders are primarily meant for regulating the hygienic conditions.

For example, under the 1955 Fruit Products Order, administered by the Ministry of Food Processing Industries (MFPI), licensing has minimum requirements for sanitary and hygienic conditions of premises, surroundings and personnel, water to be used for processing, machinery and equipment, product standards, as well as maximum limits of preservatives, additives and contaminants. During 1997-2000 some amendments were made in the Regulation on Fruit Products Processing Codes. The Ministry is amending existing product specifications and drawing up new products specifications to make product quality more competitive in India and to permit development manufacture of innovative products (MFPI *Annual Report 2001-02*). The MFPI is also closely associated with the activities of Codex.

Besides these, there are voluntary standards for various food items under the Bureau of Indian Standards 1986 (under the Ministry of Consumer Affairs), and Agriculture Produce Grading and Marking (AGMARK) under the Ministry of Rural Development for various agricultural commodities including semi-processed foods.

Steps Taken to Enhance Food Safety and Trade in India

* Considering the fact that implementation of SPS measures is the most important factor behind growth in food exports, the DOC intends to set up a nodal SPS point, and to further promote the adoption of food safety and quality systems, determination of minimum chemical residues, etc (DOC, 2002).
* There is now an effort to harmonize food safety and quality standards within India, and to club various regulations under a common order. The government is considering establishing a Food Regulation Authority (FRA) to formulate and update food standards for domestic and export market. One of the objectives would be to harmonize Indian standard with quality norms of Codex and WTO (MFPI *Annual Report 2001-02*).
* Financial incentives have also been offered directly to the food industry to implement quality certification for their facilities and products. For instance, the EXIM of India provides financial support to companies to obtain international certification (like WHO certification for pharmaceuticals), regional certifications like HACCP certification for food products, country certification like US-FDA approval for food products, etc. The Marine Products Export Development Authority (MPEDA) of India has also been promoting the implementation of the HACCP system in seafood processing plants since 1996, and reported that 155 processing plants had been guided in preparation of their HACCP manuals (*The Fish Inspector* #51, September 2001). India has reportedly spent US$25 million in upgrading the marine products industry in response to the OECD market quality and safety requirements (FAO 2002: 186).

* There are other assistance programs targeted at food processing firms like the MFPI's Plan Scheme for Generic Advertisement on Processed Food and Marketing Assistance. Under this assistance in the form of grant-in-aid is provided to all agencies to the extent of 50 percent subject to a limit of Rs.1 million (approximately US$20,000) towards the cost of implementing Total Quality Management including obtaining ISO 9000 certification, and HACCP system. Besides this, the MFPI has helped increase the awareness of quality management and certification in the industry.
* To control the quality of Indian exports and pre-shipment inspection, the Export Inspection Council (EIC) of India (set up under the Export Quality Control and Inspection Act, 1963) conducts consignment-wise inspection, in-process quality control, self-certification, and Food Safety Management Systems-based Certification (DOC *Annual Report 2001-02*). The Food Safety Management Systems-based Certification, aligned with international standards on HACCP/GMP is mandatory for fish and fishery products, egg products, and milk products (the latter was made mandatory in 2000). By November 2001, 113 processing establishments and eight freezer vessels were approved by the EIC for export of fish and fishery products to EU under the mandatory certification scheme. However, there are 199 EIC fish processing-certified units for exports to other countries (where standards are less stringent than those in the EU).
* Several training and awareness workshops on quality standards, HACCP and Codex standards have been conducted across the country to upgrade and increase certification among export-oriented firms.

The institutional challenges for India continue to increase. The export inspection and certification procedures of food exports need further strengthening as OECD countries increasingly stipulate procedural details and codes. Indeed the EIC's decision in September 2002 to ban production and export from five Indian seafood companies (some of which have state-of-the-art facilities) is a signal for export plants to upgrade and move to a zero-defect product line; since bad consignments from even one firm can jeopardize the export of marine products from all Indian exporters. The Indian punitive action is a response to consignments of Indian seafood that had been rejected by some Western European countries earlier this year. This is an attempt to move the system to zero-defects (no rejections) and increase the credibility of the EIC.

The current antibiotic residue alert (in particular chloramphenicol) in seafood in EU threatens to curtail seafood exports from India drastically as there are severe limitations on testing facilities for drug residue in the country. Similarly, under the Food Safety and Security Strategy under the US Public Health Security and Bio-terrorism Preparedness and Response Act of 2002, the Indian exporters expect additional formalities to be imposed in the form of testing and certification. Developing a strong Indian institutional base of domestic food health and safety regulations and certification system comparable to international standards can reduce the increasing uncertainties in international markets. This strategy needs to be coupled with increased participation in international standards setting, where the current practice of diverse health and safety standards by developed countries can be addressed systemically.

The Indian food processing industry has also been upgrading export-oriented units in response to the market access problems in the OECD countries. In the seafood industry in particular, perhaps the first major jolt for implementation of quality and risk management system like the HACCP came in 1997 when the EC banned all seafood imports from India. This ban was imposed after the EC team inspected Indian seafood processing units in June 1997. By the end of the same year, in December, the U.S. too made HACCP standards mandatory for seafood processing units (for domestic as well as foreign producers). The EU ban coupled with import requirements in the U.S. provided an impetus for the Indian seafood industry to move towards HACCP-based quality control measures in the latter part of 1990s. Eventually, the EC generated an independent list of approved Indian seafood exporting facilities, which are allowed to export to EU. Similarly the US-FDA maintains a list of 52 Indian seafood units whose consignments of fresh and frozen shrimps bypass the automatic alert system (only subject to random checks).

The increase in quality certification among Indian firms is reflected by the growth of quality assessment and certification service companies like the American Quality Assessors India Pvt. Ltd. and FoodCert B.V., Netherlands based quality certification firm in food and allied processing industry (*Business Line*, 10 July 2001). Moreover since a base in ISO-9000 certification has been built over the last six years (between 1995 and 2000, the number of ISO-9000 certified firms increased from 1,023 to 5,682, *ISO Survey 2002*), these firms will find it easier to upgrade to the quality requirements of OECD export markets. Registrations in

HACCP and hygienic codes of practices of European standards like EN 45011 are certainly on the increase in India.

IV. HARMONIZING SPS MEASURES UNDER CODEX AND ISO

As noted in the introduction, the SPS Agreement is primarily meant to harmonize SPS measures between members on the basis of standards, guidelines and recommendations developed by the relevant international organizations. This harmonization is to take place between the three sister organizations, including the Codex, the Office International des Epizooties, and organizations within the framework of the International Plant Protection Convention. The voluntary certifications under the ISO are also becoming important to ensure quality management in facilities.

India, however, has taken exception to the lack of uniformity in the formulation of international standards for foods under the Codex and the ISO. While the ISO has a voting by letter ballot in which all members have an equal vote, the Codex goes by majority voting and not by consensus (paper submitted to SPS Committee by India, 1999). Thus certain Codex standards get adopted even in the face of opposition from several developing countries, and India questioned "impractical and unrealistic standards" that impose high costs on developing countries (*ibid*).

Indeed a recent study (Henson and Loader, 2001) noted that the system of international environmental standards do not adequately reflect developing countries' preferences and resource endowment, since participation from developing countries have been typically poor. Such poor participation of developing countries was driven by the lack of technical expertise in SPS issues, lack of attendance in SPS Committee meetings, and infrastructure deficiencies in these countries. The DFID survey (2000) indicated that among the key problems are insufficient ability to assess the implications of developed country SPS requirements following notifications, inability to participate effectively in dispute settlement procedures and of course the inability to demonstrate that domestic SPS measures are equivalent to developed country requirements.

The use of more stringent food safety standards may also not be efficient and justified by the risk averted. A study by Otsuki, *et al*. (2000) showed that implementation of the more stringent aflatoxin standard in the EU had a negative impact on African exports of cereals, dried fruits and nuts to Europe. While new stringent EU standards could potentially reduce health risk by approximately 1.4 deaths per billion a year, it had threatened to decrease African exports by 64 percent (in contrast to regulations set at an international standard). The study highlighted the fact that the use of diverse food safety standards lead to substantial reduction in total world exports, by reducing exports notably from developing countries, and yet not all of the safety regulations seem justifiable or efficient if the risks involved are ridiculously small.

India suggested consensus-based decision-making at the Codex, such as one of the core principles of the SPS Agreement stated in Article 5, namely; "members should, when determining the appropriate level of sanitary or phytosanitary protection, take into account the objective of minimizing negative trade effects" (*Article 5.4*), and "members shall ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility" (*Article 5.6*) (paper submitted to SPS Committee by India, 1999)

V. CONCLUSION

The SPS- and TBT-related trade restrictions are poised to increase in the future since there has been a phenomenal increase in environmental notifications by member countries in the WTO in the last six years, and especially those under the provisions of Agreements of SPS and TBT. For instance, the number of SPS notifications increased by 59 percent during 1997-2000 from 300 to 468; and the number of environment-related notifications under TBT more than doubled from 41 to 97 during 1995-2000. Moreover, even voluntary standards under the SPS requirements are becoming *de facto mandatory* (DFID 2000) due to their widespread practice in developed countries. However, since industrialized countries continue to provide the largest food export market for developing countries, compliance with these standards is essential. The developing countries now need to aggressively pursue equivalent issues among trading partners and increase their participation in the international standards-setting bodies to ensure efficiency of standards in global food trade.

The Federation of Indian Chambers of Commerce and Industry (FICCI) expressed serious reservation against the EU's new food legislation that provides for the use of *Precautionary Principle* in matters of food safety (effective February 2002). Indeed developing countries like India have begun to question the motives behind unduly restrictive stipulations that can be used to protect and favor domestic producers in industrialized countries. Effectively it would reduce the liberalization of agricultural products sought under the Uruguay Round. Indeed, India wants the Codex to be accepted by developed countries as the permissible standards for food products, while it continues to develop her own SPS and testing expertise ("India to fight for Codex norms in food sector", *The Hindu*, 25 May 2002).

India had been pushing for transparency, mutual recognition and equivalence of food safety standards among the WTO members. In October 2001, the WTO's Committee on Sanitary and Phytosanitary Measures approved of a decision on recognizing the equivalence of different food safety (and animal and plant health measures). Equivalence involves governments accepting different measures that provide the same level of health protection for food, animals and plants. One objective is to help developing countries that use less sophisticated health and safety technologies to prove that their products are equally safe.

To prevent the risk of introduction of the disease Bovine Spongiform Encephalopathy (BSE) into the country, India notified the SPS Committee on the prohibition of import of live cattle, buffalo, sheep, goat, bovine; fresh meat, meat products/tissue/organs, bone meal, etc. of ruminant origin from countries where these diseases have been reported (WTO G/SPS/N/IND/7, April 2000).

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6. INDIA (2)

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INTRODUCTION

Agriculture is the lifeline of the country as nearly two-thirds of the population depends on farming and the share of agriculture contributes to 25 percent of GDP. Indian agriculture, since independence, has made rapid strides in taking the annual food grains production from 51 million mt of the early 1950s to 206 million mt at the turn of the century achieving near self-sufficiency. Further, India has made rapid strides on the horticulture front with a total annual production of horticulture produce touching over 152.5 million mt during the year 2000-01.

Liberalization of world trade in agriculture with the advent of the WTO has thrown up many challenges to developing countries in gaining market access to developed countries particularly in compliance with international standards on food hygiene, animal and plant health. Quarantine, both of exports and imports, has gained considerable attention so that Indian agriculture is protected from the ingress of exotic pests and diseases. Identification and declaration of pest-free areas for export may also be gaining importance in promotion of exports. However, this requires regular and constant technical survey/surveillance, which needs coordinated efforts by all States and Union Territories and the documentation of information in line with international standards. Thus there is an imperative need for capacity building and systems approach in meeting the stringent Sanitary and Phytosanitary (SPS) requirements of most of our developed country trading partners. Scientific capability and the capacity for risk analysis is an area of weakness, which deserves immediate attention. Also there is a need to adopt internationally recognized quality management systems and establish a credible system of registration of accredited laboratories for quality certification.

The present paper reviews current status of implementation of SPS measures and discusses the major issues of concern in implementation of SPS measures and expresses the current views regarding trans-boundary plant pests and animal diseases.

CURRENT SITUATION ON THE IMPLEMENTATION OF SPS MEASURES

National Food Safety Control System

The current status on implementation of food safety control measures at national level is described below.

1. ***Legislation***

The National Food Safety Control Measures are operated under the **Prevention of Food Adulteration (PFA) Act, 1954** and the rules framed under the Act viz., **PFA Rules, 1955, 1957, 1957 A & 65 (2)**. The main objective of the legislation is to curb and remedy the widespread evil of food adulteration and to ensure the sale of wholesome food to the people. The rules framed under the Act prescribe tolerance limits for pesticide residues and toxic contaminants and food commodities. Wholesome food which contains these components in excess of the tolerance limits prescribed under the PFA Rules are deemed to be adulterated and the persons involved in the manufacture or sale of such commodities are liable for legal action. The tolerance limits prescribed under the Rules of PFA Act are lower than prescribed under the **Codex Alimentarius Commission** of FAO/WHO. The lower level of tolerance limits of pesticide residues and toxic contaminants such as heavy metals are prescribed under the PFA Act after taking into account the food habits

and agro-climatic conditions in India. Besides this, **the Insecticide Act, 1968 and Rules 1971** regulate the import, manufacture, stock, sale, transport, distribution and use of pesticides in the country. Under this Act, registered pesticides only are allowed to be used in the country and quality of the pesticides manufactured are closely monitored by government agencies.

2. ***Organizational Structure***

The Ministry of Health and Family Welfare of the Central Government enforces the PFA Act through the assistance of state level health functionaries. Both Central/State Government employ food inspectors to monitor sanitation and hygienic conditions of food products at the place of processing, selling and serving in hotels/restaurants and other public places. The food inspectors are empowered to take appropriate legal action in case of foods deemed to be adulterated and impose penalties through courts. The food inspectors are under the direct control of the District Health Officer of the State Health Directorates. Besides this, Central Government employs Port Health Officers at various ports for inspection of imported food commodities. Under the said Act, a Central Committee for Food Standards is constituted under the Chairmanship of the Director-General, Health Services, Ministry of Health and Family Welfare to advise the Central/State Governments on matters arising out of the administration of the said Act.

3. ***Infrastructure Facilities***

The State Governments have established state testing laboratories and have appointed Public Analysts for analyzing food adulterants. Besides this, the Central Government has notified about it the four Central Food Laboratories at Ghaziabad (Utter Pradesh), Mysore (Karnataka), Pune (Maharashtra) and Kolkata (West Bengal). Further, it has established a premier institute viz., the Central Food Technology and Research Institute (CFTRI), Mysore. The CFTRI laboratory is also entrusted with developing standards and protocols for analyzing food commodities for pesticide residues and toxic chemical components.

National Phytosanitary Control System

The current status of implementation of phytosanitary measures is described below.

1. ***Legislation***

The plant quarantine (PQ) regulations are operative in India through the **Destructive Insects and Pests (DIP) Act, 1914** and amendments issued thereunder. Section 3 of the DIP Act empowers the Central Government to regulate or prohibit the import of articles likely to cause infection to any crop or of insects generally or any class of insects by a notification published in the *Gazette of India*. Further an amendment issued to Section 3 (vide the **Destructive Insects and Pests Amendment and Validation) Act, 1992 (No. 12 of 1992** published in Part II – Section 1, *Gazette of India* dated 31 March 1992) empowers the Central Government to levy and collect fees at prescribed rates by a notification issued under Section 3 of the said Act. Section 4 of the DIP Act empowers the Customs to operate the above notifications issued under Section 3 as if they had been issued under Section 11 (k) of Customs Act, 1962. The Sections 4A, 4B and 4D of the Act deal with powers of Central Government to issue domestic quarantine regulations and Section 5 and 5A deal with powers of State Governments to make domestic quarantine regulations and penalties for contravention of notification issued under 4A and provisions of 4B.

A new draft Plant Quarantine Bill is under consideration by the Ministry of Agriculture for replacing the existing DIP Act of 1914 with the following mandates viz., to prevent the introduction of quarantine pests in India by regulating the importation of plants, plant products and other objects; to prevent the spread of quarantine pests outside India by regulating the exportation of plants, plant products and other objects; to prevent the spread of quarantine pests from one State to another; to regulate the introduction in India of new or beneficial organisms and soil; to give effect to international agreements to which India is a party and in particular to the International Plant Protection Convention, the Agreement on the Application of Sanitary and Phytosanitary Measures, and the Agreement on Technical Barriers to Trade; and to provide for the constitution of the Plant Quarantine Authority of India and to ensure efficiency and accountability in the implementation of the above objectives.

The import of seeds/plants/plant materials both for sowing/planting/propagation and consumption, and soil/peat-moss, etc., is regulated by the **Plants, Fruits and Seeds (PFS) (Regulation of Import into India) Order, 1989** (Notification S.O. 867 (E) dated 26 October, 1989) (PFS Order) and amendments issued

thereunder. Both import permits issued by the Plant Protection Adviser or any authorized officer under the above-said notification and the Phytosanitary Certificate issued at the country of origin are mandatory for import of plants/plant material for sowing/planting/propagation as well as consumption. A special permit issued by the Plant Protection Adviser regulates the import of soil or peat/sphagnum moss.

Further, the import of cotton is regulated by 'Import of Cotton into India Regulations, 1972' (Notification G.S.R.393 (E) dated 26 August 1972) as amended by a Notification G.S.R.441 (E) dated 12 October 1972. As per the above notifications, cotton shall not be imported into India by sea except through the ports of Bhavnagar, Kolkata [Calcutta], Chennai [Madras], Cochin, Mumbai [Bombay] and Tuticorin. The fumigation is mandatory for the import of cotton bales into India at the port of entry to prevent the entry of cotton boll weevil. The import of live insects regulated by Notification No. 193/40A dated 3 February 1941 and the import of live fungi regulated by Notification No. 16-5(1)/43A dated 10tMay 1943.

The import of germplasm is permitted by the Director, NBPGR, New Delhi and for research purpose by the institutes or organizations under Indian Council of Agricultural Research (ICAR)/State agricultural universities. The import of transgenic seeds for research/trial purpose is permitted under a special permit issued by the Director, NBPGR, New Delhi after its import clearance by the Recombination Committee on Genetic Engineering and Modification of the Department of Biotechnology (DBT) constituted under the chairmanship of the Adviser, DBT.

A draft Plant Quarantine Order is in the process of notification to replace existing PFS (Regulation of Import into India) Order, 1989 and amendments issued there under to provide comprehensive regulations for importation of plants and plant products both for consumption and propagation; germplasm and transgenic; biocontrol agents; live insects and microbial cultures including algae; and genetically modified organisms (GMOs), soil, etc.

2. ***Organizational Structure***

The Directorate of Plant Protection, Quarantine and Storage established under the Ministry of Agriculture (Department of Agriculture and Cooperation) is responsible for the administration of PQ regulations issued under the DIP Act, 1914. The Directorate is headed by the Plant Protection Adviser and assisted by Joint Director (PQ) in PQ matters. A total of 57 points of entry are notified for import of plants plant material, of which 29 PQ stations are established that are manned by 461 staff and the rest are proposed for establishment under the 10th plan period (2002-07). However, the import of seed and propagating plant material is restricted through five major stations, viz., Amritsar, Chennai, Kolkata, Mumbai and New Delhi. The above regional stations are headed by Deputy Directors (Entomology/Plant Pathology) and assisted by Assistant Directors specialized in Nematology, Bacteriology, Virology and weed science and the minor stations are headed by Plant Protection Officers specialized in entomology or plant pathology.

3. ***Infrastructure Facilities***

Keeping in view the significant role played by the phytosanitary services in safe conduct of global trade in agriculture, the Government of India (Ministry of Agriculture) has established modern pest diagnostic laboratory facilities with high-tech scientific equipments at four regional centers of Amritsar, Chennai, Kolkata and New Delhi. The Project was aimed at developing and strengthening of PQ facilities at major ports through capacity building and human resource development. Under the FAO/UNDP Project training fellowship visits, study tour programs were organized in developed countries to acquire the knowledge of quarantine procedures and guidelines, rapid diagnostic techniques and to acquaint with quarantine policies and regulations in the implementation of phytosanitary measures. Besides this, local training programs were also held to upgrade the skills of in-service PQ personnel working at those ports.

Further under the above-said Project, various expert consultations were organized in drafting PQ legislation; training programs/workshops in pest risk analysis and surveillance; preparation of operational manuals; setting up of laboratory diagnostic facilities; designing of glasshouse facilities; quality systems and auditing, etc. A PQ website entitled <http://www.plantquarantineindia.org> was designed and hosted under the above-said Project .The PQ website provides information about contact points; PQ set-up; PQ act and regulations; New Seed Policy guidelines; quarantine procedures for issuance of permit, import clearance, post-entry quarantine inspection and export inspection and certification of agriculture commodities.

A software package entitled '**Quarantina 2k**' was developed in visual basic in front end and SQL in back end for computerized issuance of permits, import release orders and the phytosanitary certificates. The

same was installed at four major PQ stations at Amritsar/Kolkata (Calcutta)/Chennai (Madras)/New Delhi and the staff have been trained.

A National Phytosanitary Database was developed under the assistance of FAO/UNDP Project providing the data related to import inspection and export certification of agricultural commodities for the last five years, issuance of permits and the staffing of all PQ stations and the crop protection specialists. Further a suitable software package entitled '**Phytopest**' was developed for creating endemic pest database of prioritized commodities.

Quality systems – ISO 9002 certification was implemented for quarantine screening and laboratory testing of import/export plants and plant material at National Plant Quarantine Station, Rangapuri, New Delhi and the Regional Plant Quarantine Station, Chennai. The quality systems – ISO 9002 certification involved preparation of quality policy manual/quality procedures manual for documentation of procedures being practiced and periodical review and auditing to ensure the documented procedures being followed through corrective and preventive actions.

Further, a comprehensive need assessment was undertaken under FAO-TCP (Technical Cooperation Programme) Project TCP/IND/ 8925, which identified the following key strategic issues, viz., development of integrated information management system, integrated pest risk analysis system, integrated surveillance system, integrated phytosanitary certification system, integrated phytosanitary border control system and developing and strengthening of facilities at 'minor' ports for a fully national integrated PQ service to meet the global challenges of WTO-SPS Agreement. The requirements of this assessment are likely to be fulfilled in the next five years.

National Animal Health and Quarantine System

The current status of National Animal Health and Quarantine Inspection and Certification Programs are described hereunder.

1. ***Legislation***

The statutory support for animal quarantine inspection and certification derives from the Livestock Importation Act, 1898 and amendments issued thereunder. The said Act was last amended in 2001 to make it more broad-based including quality and hygienic livestock production. A Central Sector Scheme on Animal Quarantine and Certification Service was initiated during the Fourth Five-Year Plan period (1969-74) to extend budgetary support for animal quarantine activities and the same being continued to prevent ingress of exotic diseases of livestock and poultry in India. As per existing regulations, all the imported livestock and poultry on arrival at the notified port shall be checked by the regional officer-in-charge of animal PQ station and a Veterinary Health Certificate accompanying the animals is also required. The imported animals are then brought to quarantine station and kept under quarantine for a minimum period of 21 days or so as specified by the Department of Animal Husbandry and Dairy for monitoring the health status of the animals.

2. ***Organizational Structure***

A Central Livestock Health Unit established under the Department of Animal Husbandry and Dairying of the Ministry of Agriculture is responsible for administering the Animal Quarantine Inspection and Certification Services and liaison with the Office of International Epizootics in implementation of zoo sanitary standards. The Live Stock Health Unit is headed by Deputy Commissioner (Animal Husbandry and Dairy) and assisted by Assistant Commissioner (Animal Quarantine inspection and Certification).

3. ***Infrastructure Facilities***

With a view to implement animal quarantine activities, Government of India has established four regional animal quarantine stations at Delhi, Chennai, Kolkata and Mumbai. The Animal Quarantine Inspection and Certification Officer heads the regional animal quarantine stations. The regional animal quarantine stations are provided with animal sheds to hold imported livestock under quarantine including isolation of sick animals and also basic laboratory facilities for examination of stool and skin scrapings for parasites, urine analysis and hematology. Further, a high security animal laboratory has been established at Bhopal in Madhya Pradesh State for diagnosis of exotic animal diseases The Animal Quarantine Officer collects and ships the blood samples of imported live stock to the Bhopal Laboratory for clinical investigation to ensure absence of exotic animal diseases. There are about 39 animal diseases of quarantine concern, of

which the Contagious Equine Metritis (CEM) a highly contagious disease of horses was kept at bay by imposing ban on import of susceptible species of livestock from countries where this disease occurs.

MAJOR ISSUES REGARDING THE APPLICATION OF SPS MEASURES AND MEASURES UNDERTAKEN/PROPOSED TO BE TAKEN TO ADDRESS THE ISSUES

Sl. No.	Issues	Measures Undertaken	Measures Proposed
1.	Lack of effective coordination and concerted action plans on application of SPS measures		Setting up of a National SPS Committee to coordinate all SPS activities
2.	Lack of harmonization of application of SPS measures	Developed national standard on pest risk analysis and technical auditing of PQ activities	Development of national standards on food safety, phytosanitary measures and animal health in line with international standards
3.	Capacity building for carrying out pest risk analysis including risk analysis of weeds species and GMOs	Developed software for creating endemic pest database and preliminary risk analysis of commodities	Development of integrated pest risk analysis system
4.	Inadequate infrastructure facilities for undertaking inspection/certifi-cation	Developed modern diagnostic laboratory facilities at major ports	Development and strengthening of PQ facilities at minor ports
5.	Lack of harmonization of national laws related to food safety control, phytosanitary control and animal health inspection and certification and environment pro-tection	A new Plant Quarantine Bill is prepared to replace the existing Destructive Insects Pests Act, 1914. Also a new integrated food law is under consideration.	Review and updating of national laws related to food safety control and animal health inspection and certification and environment protection to give effect to international agreements.
6.	Designation and maintenance of pest-free areas		Developing integrated pest surveillance system
7.	Control of trans-border movement of pests and diseases	Guidelines/procedures for import inspection including post-entry quarantine inspection	Developing of integrated phytosanitary border control system
8.	Quality inspection/phytosanitary certification	Guidelines for export inspection and phytosanitary certification	Development of integrated phytosanitary certification system
9.	Accreditation of tissue culture facilities		Developing accreditation standard
10.	Inadequate mechanism for monitoring of pesticide residues/ aflatoxins in food commodities	Department of Agriculture and Cooperation in the Ministry of Agriculture identified as the model department for monitoring	Establishing of a number of pesticide residue/aflatoxin testing laboratories to monitor pesticide residues/aflatoxins at the field level, processing, storage and marketing of food commodities
11.	Creating awareness of SPS measures	Held industry consultations on phytosanitary issues	Constituting of permanent SPS consultation panels representing trade and industry under National SPS Committee for discussing SPS issues

CURRENT VIEWS REGARDING TRANS-BOUNDARY PLANT PESTS AND ANIMAL DISEASES

Consequent to the adoption of the SPS Agreement, there is a growing concern among the developing countries that stringent SPS measures imposed by the developed country trading partners may impede the export of agriculture produce from developing countries, as the latter are not well-equipped to address various issues related to SPS Agreements due to lack of information on measures that affect exports; lack of infrastructure facilities and scientific support for inspection, testing, diagnosis, and treatment; lack of risk assessment/surveillance capabilities; and lack of preparedness to associate with setting of international standards and participation in dispute settlement. On the other hand, trade by developed countries has increased many folds in the absence of countervailing measures by developing countries leading to widening the gap of the trade balance. Many of the developing countries including India have to face stiff challenges of product disqualification on account of pesticide residues/aflatoxins exceeding the limits set by the national standards of various EEC countries, which are higher than those prescribed by Codex Alimentarius Commission. The size, geographical complexity, diversified agro-climatic conditions and cropping patterns and huge population are present major challenges to India with regard to control of trans-boundary plant pests and animal diseases. Particularly, India has to share a long porous border with Bangladesh, Bhutan, Nepal, Pakistan and Myanmar and thus there is an urgent need to promote strong regional cooperation and linkages in developing effective mechanism for harmonizing SPS measures among the countries within the region. Under rapidly changing external environment, the need to develop an integrated national PQ service with world-class infrastructure facilities and various systems approach such as information management, pest risk analysis, pest surveillance, phytosanitary-border control and export inspection and certification, was considered to be a high priority by the Government of India to protect the country from the inadvertent introduction of economically important exotic pests and to facilitate market access by having credible and technically competent inspection and certification systems. A plan of action has been prepared and is likely to be implemented during the Tenth Plan period (2002-07).

7. ISLAMIC REPUBLIC OF IRAN

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INTRODUCTION

Most countries are totally or partially dependent on local or foreign food supplies to satisfy domestic requirements. So the growing complexity of problems of food production, handling, processing and marketing has now created a situation in which food may adversely affect the health and economy of individuals and nations. Therefore, the development of effective and adequate Sanitary and Phytosanitary (SPS) measures to ensure food safety and quality control systems at national level is now, more than ever before, is recognized to be of the most important thing. Such food safety and quality control systems should be able to protect consumers against any immediate or long-term health danger which may be caused by microbiological contaminants, food additives, pesticide antibiotics and hormones residues, mycotoxins, heavy metals, spontaneous spoilage, pest infestation and subsequent wastage and poor basic composition, hygiene and nutritional quality of food. In general, the aforementioned systems help protect consumers from any characteristic in food that may adversely affect their health.

In addition, such an effective food safety and quality control service would be able to avoid wastage that may occur as a result of improper handling and/or processing and promote fair regional, national and international trade.

FOOD SAFETY IN IRAN

For a national food safety and quality control system to be adequate and effective, the following measures should be taken:

1. Comprehensive food law
2. An effective inspection service
3. Sufficient analytical service
4. Proper service administration.

Such a food safety and quality control system should also be supported with a dynamic and well-trained staff at all levels as well as a program for providing information and advice thereby educate consumers. In places where food safety and quality control activities are performed by several organizations or authorities, the pertinent body should coordinate such activities.

In Iran for performing the above-mentioned activities, following programs include:

1. cooperation in the preparation and revising international standards and guidelines by ISO.
2. publishing and implementing more than 1,200 national food standards and food security systems as obligatory and voluntary standards by ISIRI.
3. organizing Coordinating Council Codex Alimentarious of Iran for preparation of national and international food standards and related texts.
4. establishing country committee HACCP (Hazard Analysis and Critical Control Point).
5. organizing country committee Food Fortification.

6. equipped laboratories for assessing of the capability of testing laboratories involved in the food quality control based on ISO/IEC (International Electrotechnical Commission) 17025.

NATIONAL AND INTERNATIONAL ORGANIZATIONS AND FOOD SAFETY

The Institute of Standards and Industrial Research of Iran (ISIRI) is the only governmental body in charge of compiling standards of food and agricultural products, supervising their implementation and conducting research in the related areas.

ISIRI is an active member of different international organizations as ISO-IEC codex. In addition to compiling national standards, ISIRI handles the issue of cooperation with the ISO.

In Iran, the greatest activities of ISO technical committees (TCs) one related to ISO/TC 34 (food and agricultural products).

Due to the prevalence of diverse and suitable climates in Iran, the potential of producing different agricultural products is immense. So in non-oil exports, agricultural products have a special place.

Now, ISIRI has set more than 6,000 national standards. The number of standards related to food and agricultural products are over 1,200 accounting for 20 percent of the total standards that came into effect in the country.

Regarding the implementation, there are two kinds; namely, obligatory and voluntary standards.

Taking into consideration the importance of supervising of food quality control in Iran, about 100 different food and agricultural products are under obligatory standards for imports, exports and production.

The worldwide recognition of the importance of international food trade and the need to facilitate this sector thereby ensure the quality and safety of food for the world consumers necessitated the establishment of the joint FAO/WHO Food Standards Program and the Codex Alimentarius Commission in 1962.

The objectives of the program are to protect the health of consumers and ensure fair trade, promote coordination of all food standards work undertaken by governmental and non-governmental organizations to determine priorities and initiate as well as guide the preparation of draft standards through the aid of appropriate organizations, to finalize standards, and after acceptance by governments, publish them in a Codex Alimentarius either at regional or global standards.

ISIRI is the codex contact point in Iran. ISIRI established initially the National Codex Committee (NCC) in Iran in 1984 with the aim of enabling it to organize and participate in Codex sessions.

According to the World Trade and Food Safety, for ensuring fair practice in food trade, all countries are required to apply the Agreements on Sanitary and Phytosanitary Measures and Technical Barriers to Trade. Both Agreements have a variety of implications for the work of the Codex. For this reason, constitution of new formation of Coordinating Council Codex Alimentarius of Iran has elaborated from 1998 and has been approved by the Supreme Council of Standards (No. 101) in 2001. The secretariat of the NCC of Iran is settled in ISIRI.

The elements and formation of Coordinating Council Codex Alimentarius of Iran are as follow:

1. Council
2. National Codex Committee
3. Technical Committee
4. Working Group.

1. ***Council***

Council members consist of Ministers of Agriculture, Health Treatment and Medical Education, Commerce, Mines and Industries, Science Research and Technology, and Head of ISIRI.

The sessions of the Council are held at least every six months. So far, two sessions were convened.

2. ***National Codex Committee***

Members of the Committee include senior experts of ministries and organizations who are also Council members. Director of NCC is the head of ISIRI.

In view of technical and producing requirements and available capability, 19 TCs were set up in NCC.

The ministries and organizations are responsible for the formation of TCs and secretary of TC introduced from ISIRI.

Table 1. Responsible Organizations for Technical Committees

Ministries and Organizations	Number of TC
Ministry of Agriculture	9
Ministry of Health Treatment and Medical Education	2
Ministry of Commerce	1
ISIRI	7

CURRENT SITUATION OF SPS MEASURES IN IRAN

Organizing Council Codex Alimentarius of Iran has brought useful results of which the most important ones are mentioned as follows. One of them is the activity in TC of Food Additives and Contaminants (CCFAC). With consideration of the Iranian experience about mycotoxins in the 33rd session of CCFAC, the preparation of Discussion Paper and determination of limits for aflatoxins in pistachio was offered to Iran. The Discussion Paper was approved in the 34th CCFAC. The determination of the limits of aflatoxins in tree nuts with the cooperating of 10 countries was offered to the country, too. Now TC of Food Contaminants Codex Alimentarius of Iran is preparing the related draft standard.

According to importance of mycotoxins as the one of the SPS measures, the following tables show statistics of exported and imported samples analyzed in ISIRI in 2001-02.

Table 2. Statistics of Exported Samples Analyzed in ISIRI, 3/2001-3/2002

Samples	Test	Total Number of Samples	Rejected Samples
Raw pistachio	Aflatoxin	222	47 (21.12)
Salty pistachio	- ditto -	44	2 (4.55)
Better shelled kernel	- ditto -	17	-
Fig	- ditto -	3	-
Peanut	- ditto -	1	-

Note: Figures in parentheses are percent.

Table 3. Statistics of Imported Samples Analyzed in ISIRI, 3/2001-3/2002

Samples	Test	Total Number of Samples	Rejected Samples
Rice	Aflatoxin and ochratoxin	1,187	97 (8.17)
Corn	- ditto -	51	3 (5.88)
Soybean	- ditto -	27	-
Cottonseed cake	- ditto -	2	1 (50.00)
Feed	Aflatoxin	68	7 (10.29)
Wheat flour	- ditto -	10	-
Wheat	Aflatoxin and ochratoxin	58	1 (1.72)

Note: Figures in parentheses are percent.

The other result is the activity in TC of nutrition and foods for special dietary uses. The comments of Iran about specifications of infant formula based on national standard were circulated to all members of the Commission for voting.

The next important subject is pest. The Plant Protection Organization of Iran is responsible for the survey and management of pests in Iran. The responsibility of this organization is to prevent the entry of new pests into the country and spread of pests from one region to others. About 30-40 percent of agricultural products of Iran is damaged by pests. This percentage can change based on alteration of climate, region and product. The following are the major plant diseases existing in Iran: wheat yellow rust; wheat black rust; potato late blight; sugar beet powdery mildew; cotton wilt; and citrus canker.

The most important method for controlling plant pests currently in Iran is making use of the Integrated Pest Management (IPM). IPM uses non-chemical method specially biological control.

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8. MALAYSIA

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INTRODUCTION

Agriculture in Malaysia has been projected as the third engine of growth. The Third National Agricultural Policy (NAP3, 1998-2010) underscores the need for enhanced food security via increased food production, better market access and competitiveness of the country's exports. Despite the declining growth rate of the agriculture sector (from 7.0 percent in the 1970s to about 1.2 percent in the year 2000) and its reduced contribution to the GDP (from 33.6 percent in the 1970s to about 8.2 percent in the year 2000), agriculture will still play a pivotal role in the nation's economy vis-à-vis the other sectors such as manufacturing and services. Malaysia's main export markets are the United States, Singapore, Japan and the European Union (EU). The major sources of imports were from Japan, United States of America and Singapore. Agricultural and food products account for a relatively small proportion of both commodity imports and exports and Malaysia's major agricultural and food exports are palm oil and palm oil products and timber. Processed food exports are small in proportion to the total commodity exports. However, certain processed food sectors have achieved significant growth in exports and demonstrate real growth potential for the future. The Malaysian horticulture sector, a sector very much associated with elements involving Sanitary and Phytosanitary (SPS) measures, is one of the focus areas to be strengthened to meet increasing demands for fresh and processed tropical fruits and vegetables in both the international and domestic markets. Based on recent figures, the total export value of Malaysian fruits and vegetables is estimated to be US$79 million and US$32 million, respectively.

Consequently, Malaysia observes the necessary rights and obligations inherent in the SPS Agreement and is continuously developing and implementing various measures to meet or comply with the various requirements stipulated in the Agreement. The paper outlines the following:

* The general administrative setup and mechanisms for the implementation of the SPS Agreement.
* The level of compliance or implementation of the key elements of the Agreement.
* Issues and constraints related to SPS implementation.

GENERAL ADMINISTRATIVE STRUCTURE AND MECHANISMS FOR IMPLEMENTING THE SPS AGREEMENT

In Malaysia, overall responsibility for WTO matters lies with the Ministry of International Trade and Industry (MITI). There is a mission in Geneva, which handles meetings of the SPS Committee along with all other WTO Agreements. Malaysia has also established enquiry and notification points as required by the SPS Agreement. Within Malaysia, the overall administration on matters related to the SPS Agreement comes under the mandate of the Ministry of Agriculture (MoA). In general, MoA coordinates all SPS-related matters

ranging from agricultural production to trade in agricultural products, and ensures that these measures conform to the Malaysian laws. The general administrative structure and the enquiry points are shown in Figure 1.

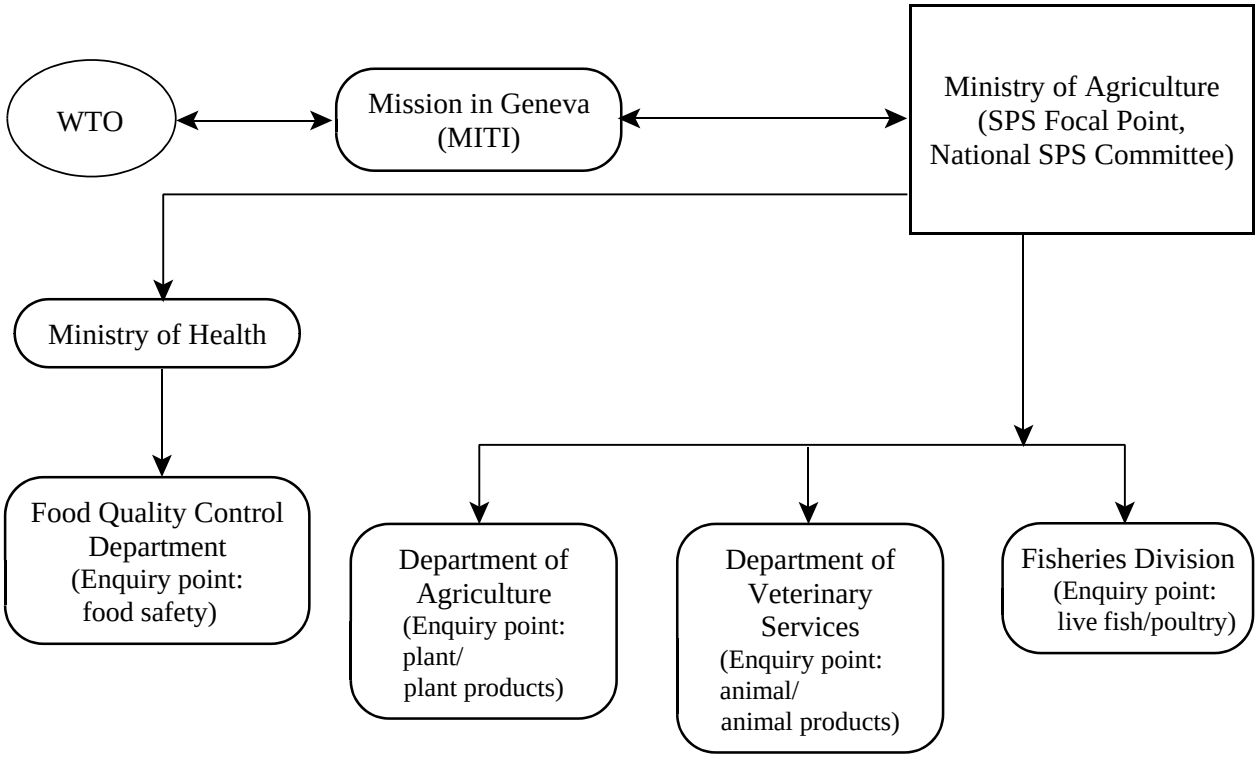

Figure 1. General Administrative Structure of SPS in Malaysia

The Agreement on SPS measures has implications for the following laws and regulations of Malaysia:

1. The Plant Quarantine Act 1976 and the Rules of Plant Quarantine 1981, which protects the Malaysian agriculture sector from foreign plant diseases and pests. Currently, the Act, whose rules and regulations are based on both the Codex Alimentarius and the International Plant Protection Convention (IPPC) is under review to be consistent with the Agreement on SPS Measures;
2. The Animal Ordinance 1953, including Animal Rules 1962 and Animal Importation Order 1962 which helps to prevent animal diseases and pests from infecting Malaysian livestock and animals. Although the original Ordinance is aligned with international standards, work is ongoing to formulate and harmonize the various Acts to meet SPS requirements;
3. Fisheries Act 1985 and its Amendment 1993 which only covers the distribution and marketing of live fish and related organisms. It does not cover the marketing of fish products and aquaculture; and
4. Food Act 1983 and Food Regulations 1985 which is aimed at controlling the production and sale of food products to ensure the health and safety of consumers.

Food safety issues include the abuse of beta-agonist and nitrofuran, contamination by dioxins, pesticide residues in fruits and vegetables, hygiene and enforcement. The import of controlled substances such as non-nutritive sweeteners for sale, processing and use is controlled through a system of import licensing. The Food Quality Control Department (FQCD) under the Ministry of Health (MoH) is responsible for the enforcement of the Act. Recently, there had also been amendments to the Food Regulations 1985 for nutrition labeling in line with recommendation of Codex Alimentarius. The regulation of pesticides is the responsibility of the Pesticides Board, which is within the purview of the MoA. The Board regulates the approval and usage of pesticides and registration of distributors and handlers. It is also responsible for making recommendations

to the Regulatory Committee, under the MoH, on Maximum Residue Levels (MRLs) for Pesticides in Foodstuffs. Most MRLs in Malaysia are based on those laid down in Codex Alimentarius. A similar board is responsible for control of veterinary drugs and for making recommendations to the Regulatory Committee on MRLs for Pesticides in Foodstuffs. All controls relating to palm oil are the responsibility of the Ministry of Primary Industries.

The enquiry points for the various areas are as follows: plant products and phytosanitary measures (Department of Agriculture; MoA); sanitary measures, viz. food safety, (Food Quality Control Department, MoH); animal and animal products (Department of Veterinary Services, MoA); and fisheries (Fisheries Division, MoA) (Figure 1).

In general, MoA is responsible for animal and plant health and safety associated with agricultural production, while the MoH is responsible for processed food. Although responsibility for controls on live fish, both from marine fisheries and aquaculture, lies with the Fisheries Division of the MoA, in the case of exports of fish and fishery products to the EU, however, the MoH is the competent authority.

A National SPS Committee has been established at MoA that meets to discuss current issues and notifications. This comprises officials from MITI, MoH, MoA and Ministry of Primary Industries, among others. The National Codex Committee structure is utilized to deal with particular technical issues. National positions and/or priorities are communicated to Geneva if necessary. To date, Malaysia has notified 11 measures under the SPS Agreement (MITI, 2000/2001 Reports). Of these, six were emergency measures. Government officials are well informed about the importance of SPS controls, both domestically and relating to exports/imports, and what improvements are required to enhance capacity. In addition, to cover plant and plant products, a National Standards Committee has been established to discuss and review drafts of the International Standards for Phytosanitary Measures (ISPMs).

In Malaysia the relatively well-developed laboratory infrastructure can undertake most of the analyses required for food safety controls relating to domestic production and consumption as well as export and import. The FQCD in the MoH has laboratories that specialize in particular types of analysis and can perform most of the required tests. However, in some cases, outsourcing of food analysis to other local institutions is also done such as for dioxins, antibiotics, pesticide residues PCbs and mycotoxins. Besides the establishment of the National Food Safety Council, the FQCD has developed the Food Safety Information System, which interfaces with the Custom Information System to facilitate enforcement and import control at entry points. These laboratories work closely with other agencies including the MoA, Department of Chemistry, Department of Standards Malaysia, and universities. It is recognized, however, that SPS issues had been given a high priority for the food safety, not only in the case of products of export interest to Malaysia, but also for the protection of health and safety of domestic consumers. The latter involve the monitoring of pesticide residues in imported fruits and in meat the presence of mad cow disease or Bovine Spongiform Encephalopathy (BSE) and the variant Cruetzfeldt-Jakobs (vCJD). There is a Crisis Alert Team (CAT) to handle food safety crisis.

In general, officials in relevant ministries of the Malaysian Government are well informed about SPS issues and the role of the SPS Agreement. This includes the Multilateral Trade Relations Department of the MITI, Codex and International Affairs Section of the FQCD, Department of Public Health, the MoH and the relevant divisions and departments of the MoA.

IMPLEMENTATION OF SPS MEASURES AND IMPLICATIONS ON TRADE AND ISSUES REGARDING THE APPLICATION OF SPS MEASURES

MITI 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 MoH and MoA and from the various industries serve to highlight the key concerns of agricultural and food product exporters in Malaysia.

Malaysia's response to the following key elements of the SPS Agreement areas follows:

Harmonization (Article 3)

In food safety, the harmonization process is undertaken by the Technical Advisory Committee on the Food Regulations 1985, the FQCD, and the MoH, which promulgates as well as amends provisions under the

Food Regulations 1985, using a stepwise procedure adapted from Codex. The benchmark used for this purpose is Codex standards, guidelines and recommendations and as far as possible the process of harmonization prioritizes on this, if standards are available. The FQCD, MoH, as the Codex Contact Point for Malaysia, is actively participating in Codex work. A National Codex Committee was set up in 1985 and 28 sub-committees, task forces and *ad hoc* working groups were also organized to address Codex issues of interest to Malaysia. These committees discuss and promulgate Malaysia's position on those issues of interest. Malaysia attends Codex International Meetings of interest, for example, CCGP (Codex Committee on General Principles), CCFL (Codex Committee on Food Labeling), CCFH (Codex Committee on Food Hygiene), CAC (Codex Alimentarius Commission), etc. Malaysia is the Codex Coordinator for Asia for the term 2001-03 and had hosted the 13th Session of Codex Coordinating Committee for Asia in Kuala Lumpur from 17 to 20 September 2002. The FQCD has also embarked on the registration of local companies intending to export food products (seafood and seafood products) to the EU, which is complemented by a monitoring program for residues in seafood and seafood products. The MoH has also launched the Hazard Analysis and Critical Control Points (HACCP) Certification Scheme in 2001, which is mandatory for companies exporting especially to EU countries. From 2000 to 2002, 30 consignments of seafood were rejected due to microbiological contamination and one for fraud. Two consignments, one each to the UK and Australia, were rejected due to presence of aflatoxin in satay sauce and curry, sesame, ground nuts, respectively.

In 2001, 330,900 consignments of food were inspected at the 34 entry points. Some 11,093 samples were taken from 8,357 consignments where 457 were found to contravene the Food Act 1983 and the Food Regulations 1985. Two hundred and twenty-two (222) consignments were either rejected or destroyed.

Concerning animal health, as indicated in Section 2, the process of review and harmonization of the other pertinent local acts/regulations with the WTO-based SPS measures are also currently underway with ratifications from the Organization International des Epizooties (OIE) and the IPPC is forthcoming.

In the area of phytosanitation, at the regional (ASEAN) level, harmonization efforts have also been initiated for heat treatment for the fruit fly, training of quarantine officers and Codex standards on MRLs for food safety. Malaysia is eager to enhance its input to the drafting of standards to complement the ISPMs. For example, Malaysia is a member of the Standard Committee that undertakes standard setting and assists in the development of ISPM that has been identified by Interim Commission on Phytosanitary Measures (ICPM) as a priority standard. It is also playing an active role in the drafting committee on timber products to ensure the needs of tropical timber producers.

Equivalence (Article 4)

In food safety, the FQCD allows designated competent authorities from importing countries access to the food premises for purposes of certification and accreditation. Certificates issued by the relevant competent authorities of exporting countries are also accepted based on requirements already agreed upon. Inspection of premises in the exporting countries is also conducted on the basis of need. Currently, there is a requirement for Vapor Heat Treatment (VHT) for disinfesting mangoes destined to Japan against the fruit fly. Malaysia has embarked on alternative treatments, such as irradiation, and if this measure is proven effective, Japan will be expected to accept this measure as equivalent to VHT.

Risk Assessment (Article 5)

The generic model for the implementation of phytosanitary measures is shown in Figure 2. For food safety, the FQCD has set up a National Risk Analysis Committee that addresses issues pertaining to the three components, i.e., risk assessment, risk management and risk communication. Capacity building in this area is crucial and as such the Division is conducting an internal exercise to come up with a risk profile on a seafood product contaminated with vibrio parahaemolyticus. The Division is also involved in a risk assessment exercise conducted by the CCFH. In general, 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, research teams, etc. The key weakness is a lack of baseline data and the costs involved in instituting the process.

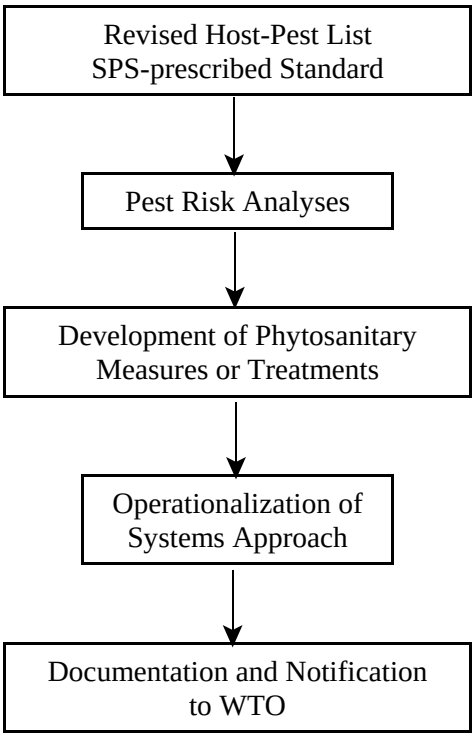

Figure 2. Generic Model for Implementation of Phytosanitary Measures

Appropriate Level of Protection (ALOP) (Article 5)

There is no particular policy on ALOP, which depends by and large on the pests, the commodity infested and the allowable level of risks. A simple dichotomy of decision such as YES and NO will determine the necessity of treatments.

Transparency (Article 7)

Malaysia complies with SPS requirements by providing timely notifications to the WTO such as the dioxin crisis in 1999. Both the MoA and the MoH receive notifications from the WTO directly and some notifications are also sent directly to these agencies by notifying countries. Figure 3 shows the generic pathway towards managing phytosanitary problems when it arise especially those coming from importers. Essentially, on receipt of the enquiry, working groups are formed either based on pests or the commodity. The members of these working groups comprise experts in the specific areas who focus and find solutions on the necessary technical aspects of the enquiry. The Report is then passed to an advisory group, which formulates risk management protocols in addition to advising the enquiry point on the appropriate actions to be taken.

Technical Assistance (Article 9)

To date, the following programs had been conducted by various organizations as part of the technical assistance provided to facilitate capacity building. These include areas in Pest Risk Analysis for the South American Leaf Blight and Genetically Modified Organisms (GMOs) conducted under the auspices of the FAO, United Nations. Technical cooperation with the Japanese International Cooperation Agency (JICA) is currently undertaking measures:

* A 3-year period from June 2002 to May 2005 in capacity building including strengthening of laboratory and expertise in import inspection and food safety regulations.
* In August 2002, the FQCD, MoH and the Macro and Strategic Planning Division, MoA were involved in a Seminar on the Implementation of the Agriculture and SPS Agreements in Malaysia, under the APEC capacity building program.

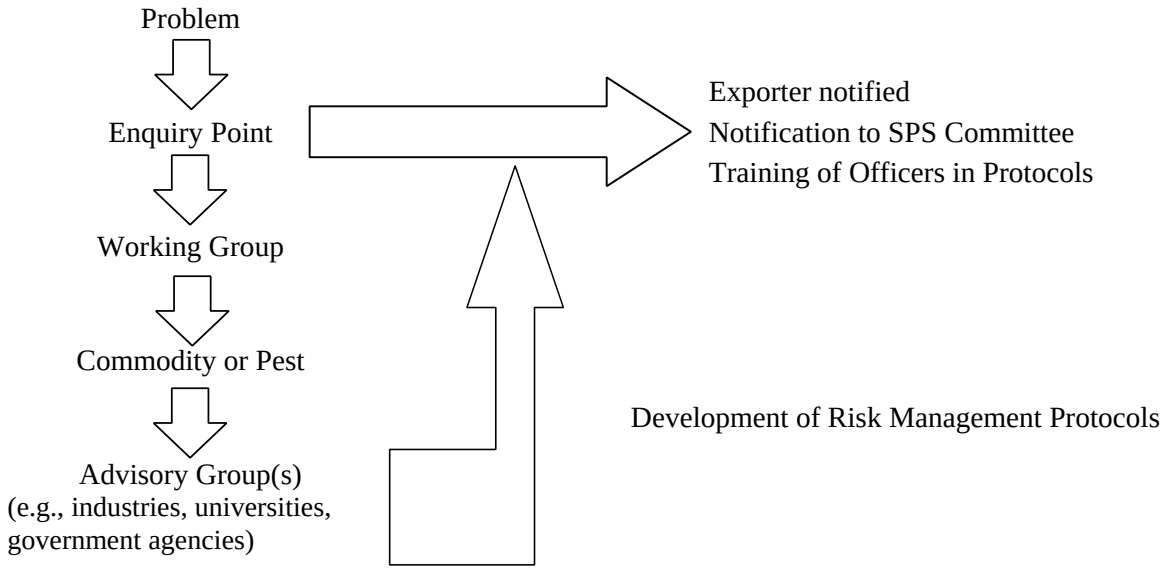

Figure 3. Generic Model for Implementation of Enquiries and Problems

Dispute Settlement (Article 11)

So far, Malaysia has not been involved in any significant dispute settlement. In some cases (e.g., shrimps to U.S.A.), negotiations get underway on a bilateral basis.

Role of SPS Measures with regards to Trans-boundary Plant Pests and animal Diseases

Malaysia historically has the reputation of dealing with introduced quarantine pests, which arrive at its shores mainly through human and commercial pathways. The current Plant Quarantine Regulations 1981, which governs the laws relating to the eradication of agricultural pests and noxious plants (as described in the Fourth Schedule (Regulation 9) of the Plant Quarantine Regulation 1981) and control and prevention of plant diseases, also include control measures against all pests. The number of yearly interceptions made by local quarantine authorities bears strong testimony to this. Recent introductions of pests into Malaysia include the agromyzid leafminers, *Liriomyza* species, the beet armyworm, *Spodoptera exigua* and the tobacco whitefly, *Bemisia spp*. (Anwar and Sivapragasam, 1999). Lack of knowledge on these pests and their management results in indiscriminate pesticide applications, which directly or indirectly impact local biodiversity and environment and increase costs of agricultural production (translates to reduced competitiveness). Thus, the development of harmonized SPS measures against trans-boundary pests could be very useful tools to reduce the inherent pest risks involved and to facilitate trade.

CONSTRAINTS TO IMPLEMENTATION

Although Malaysian products are currently exported to several countries, in as equally as many other countries we are still faced with a task to penetrate international markets. Among the constraints faced in the implementation and compliance of SPS Agreement that affect our agricultural trade is as follows:

Inadequate Information on Plant/Animal Health Status and Treatments

Implicit for the implementation of SPS is that any decision made should be science-based. Unfortunately, local plant health information is scanty and needs updating and verification on pest status by experts or subject matter specialists. The records on insects and other arthropod pests and on diseases, which are almost more than 20 years old and in most cases irrelevant, have to be updated. For example, the standard reference for arthropods is the host pest list written by Yunus and Ho (1980) needs updating on the list of pests recorded, as most of the insects recorded could be mere records of incidences rather than pests in the strict sense. The presence of such records as reference materials to importing countries on pests occurring in Malaysia could have far-reaching implications on trade. It also impacts the ability of making scientific justification for SPS requirements and has a ‘domino effect’ on the various processes ranging from

surveillance to pest risk analysis. There is also dearth of information on the key quarantine pests as listed in the Fourth Schedule of the Plant Quarantine Regulations 1981, Malaysia (Table 1) and as such information sharing between countries would be very helpful in decision-making and facilitating the SPS implementation. Based on the list, the two commonly encountered pests are the fruit flies and the khapra beetle, *Trogoderma granarium*. More recently, this list was revised to exclude the cocoa pod borer, *Conomorpha cramerella* (Snellen). Recent attempts by several local exporters to export our local tropical fruits to Korea and South Africa failed because of unavailability of local science-based plant health information to support our application for export. Plant health data is also relevant and crucial in the long-term process of establishing Pest-Free Area (PFA) for our export commodities since PFA is a requirement imposed by an importing country. Currently, the Department of Agriculture is in the process of developing a comprehensive database on the various plant quarantine aspects which is available in a website (http://agrolink.moa.my/pqnet). There is a lack of expertise in certain key areas, including veterinary drug residues, analytical and sampling methods, etc.

Table 1. Crop/Beneficial Organisms and Their Arthropod Pests Listed in the Fourth Schedule of the Plant quarantine Regulations 1981, Malaysia

Crop/Beneficial Organisms	Pests
Cassava	*Caliothrips masculinus* and *Monmychelus tanajoa*
Citrus	*Anastrepa fraterculus, A. ludens, A. mombinpraeoptans, A. spp., Ceratitis capitata, C. rosa, Dacus tryoni* and *Quadraspidiotus perniciosus*
Cocoa	*Sahlbergella singularis, Distantiella theobromae, Helopeltis bergrothis, Stenoma decora* and *Acrocercops cramerella*
Coconut	*Pacymerus nucleorum, Pseudotheranthus wayi, P. devastans, Rhynchophorus palmarum, Oryctes monocerus, O. boas, Coelaenomenodera elaeidis,O. rhinoceros, Melitoma insulara, Eriophyes guerreronis, Artona cataxantha,* and *Setora nitens*
Coffee	*Antestiopsis spp., Leucophora coffeella,* and *Planococcus kenyae*
Cotton	*Anthonomus grandis, A. vestitus* and *A. spp.*
Hevea rubber	*Leptopharsa heveae* and *Aleurodicus cocoas*
Honeybees	*Acarapsis woodi*
Maize	*Diatrea spp., Sesamia cretica* and *Prostephanus truncates*
Mango	*Noorda albizonalis* and *Stenochetus mangifera*
Oil palm	*Pachymerus lacerdae, P. nucleorim, Darna trema, Coelaenomenodera elaeidis, Mahasena corbetti, Metisa plana, Oryctes rhinoceros, Retracrus elaeis, R. phoenicius, Setora nitens,* and *Sibine fusca*
Potato	*Leptinotarsa decemlineata*
Rice	*Diatraea spp.* and *Lissohopterus oryzaephilus*
Sugarcane	*Diatraea spp.* and *D. saccharalis*
Tobacco	*Ephestia elutella*
Tung	*Trogoderma granarium, Popilla japonica* and *Quadraspidiotus pernicious*

Organizational needs

Malaysia's effective participation in international standard setting is stifled by travel costs. A key concern is the cost of unscheduled meetings that could not be anticipated and were not built into annual budgets.

Lack of Resources and Infrastructure

There is still a need to develop laboratory capacity for 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, current capacity is not sufficient to undertake pest risk assessments both domestically and on imports. Consequently, most assessments to date have been based on reviews of literature alone. Likewise, current controls, both domestically and on imports, are considered inadequate. However, there is a need for enhanced capacity, including both skills and laboratory infrastructure, to undertake risk assessments.

FUTURE NEEDS AND ENDEAVORS

Although Malaysia has a relatively well-developed system of SPS controls, is able to handle relations with the WTO relating to SPS matters and participates in international standards-setting organizations, it does have technical assistance requirements. Key issues include the following:

1) 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;
2) 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; and
3) Related to the above, laboratory facilities in Malaysia need to be further developed, particularly for animal diseases and plant pests and diseases.

To overcome some of the above constraints, currently efforts are in progress towards the compliance with SPS measures such as generating comprehensive pest data and plant health information. The role of the Department of Agriculture will be to create a national framework, seek funds for capacity building, upgrading facilities and infrastructure and networking and seek collaboration, support and technology assistance from researchers in complying with SPS Agreement. To strengthen the infrastructure, the following should be in place, viz, pest collections, properly identified; updated host-pest list; disease herbarium; designated experts in taxonomy; and adequate identification tools.

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9. MONGOLIA

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INTRODUCTION

Since Mongolia is currently in the transition to market economy, it is facing a difficult problem in providing food safety services.

However, the government gives special attention to such problems and other activities like providing legislational environment, providing food safety, expanding food supply and manufacturing and services as well as the setting up of professional inspection system.

Providing food safety is a broad spectrum of socioeconomic problem that needs to be addressed through active intervention. Closer collaboration of consumers, NGOs and businessmen engaged in manufacturing and services sector under the control and coordination of the state. The formation of a system that ensures safe supply of food, ecologically clean environment, hygiene and quality and enhancement of manufacturing service and consumption would solve the problem. The system for providing food safety is illustrated.

STATE CONTROL AND COORDINATION

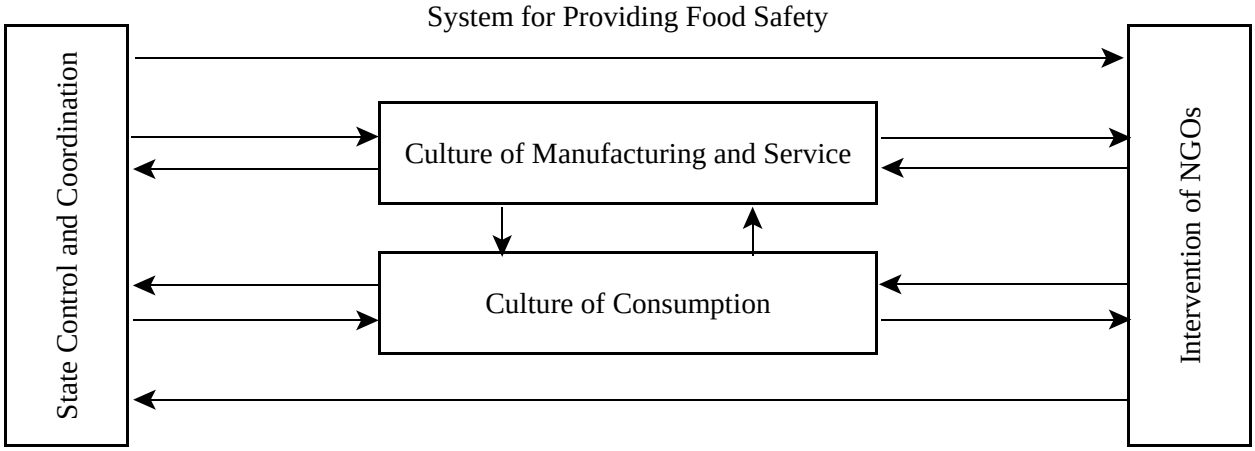

Figure 1. The System for Providing Food Safety

State control and coordination are directed toward the formation of proper legislative environments and optimal inspection system and their effective implementation.

System of State Control and Coordination

* Legislation
* Rules and Regulations

* Instruction and Guidelines
* Programs and Projects
* Control and Inspection.

More than 20 laws such as the Constitution of Mongolia, Laws on State Services and Food, Protection of the Rights of Consumers, Sanitation, Confirmation of Standards and Quality, Protection of Livestock Gene Pool and Health, Protection from Chemically Poisonous Substances were adopted, among others. The Laws would help facilitate coordination among the pertinent bodies concerning the food safety provision.

In 2000, food safety issues have been provided with guidance and control of the government. The Ministry of Food and Agriculture is in charge of handling these issues.

According to Resolution 32 of the State Ikh Hural in 2000, a governmental coordinating agency, called "State Inspection Service of Food Safety and Agriculture", which is responsible for controlling food safety within the framework of duties of the Ministry of Food and Agriculture, was set up.

Special inspection services were also established for provinces. These services are now responsible for the inspection of sanitation and safety of meat, milk, potatoes, vegetables and other food products, manufactured and consumed by the local manufacturing, service and entities for food purposes.

Thus, it can be said that a mechanism providing a nationwide integrated guidance and organization by the state in food safety problems has been established.

CULTURE OF MANUFACTURING AND SERVICES

Culture of manufacturing and services is determined with living styles and patterns of people, social progress, creativity and skills of individuals.

System for Providing Food Safety within the Framework of Food Manufacturing and Services

* International standards, leading technologies and methods
* National standards, leading technologies and methods
* Institutional standards, technologies and procedures
* Ethical level of employees.

CULTURE OF CONSUMPTION

High demands for food products are especially important for providing food safety. In other words, it means the higher the demands of consumers for quality and safety of food products, the higher the level of food safety will be. This is an attribute of social development level and real wage of citizens.

Nowadays, with the widening gap in the living standard of people, the disparity of food consumption and health services opportunities between the rich and the poor is worsening. Poor households get only 65 percent of daily requirement of food calorie. The children from poor family are mainly affected by malnutrition and food deficiency.

This indicates the need in the improvement of the level of education and culture of citizens as well as living standards, which are now incorporated in the policy of the government.

The rights of consumers for getting access to safe and quality food as well as information about the food items and compensation whenever there is health damage caused by unsafe food, are ensured.

System for Providing Food Safety to the Extent of Consumption

* Civilian educational level
* Level of knowledge
* Custom
* Living standard.

INTERVENTION OF NGO

Intervention of NGOs is essential for providing safe food. In market economy, the business community, working in manufacturing and services sector are mostly organized in the forms of professional associations

to provide the conditions for protection of their own market area and free themselves from any unlawful pressures. The basic approach for protecting market can be accomplished by producing quality product and guaranteeing safety or having bearing the responsibility of not to produce low or poor quality products for any members, affiliated in the professional associations, and exerting joint efforts in collaboration with governmental organizations against the delivery of low or poor quality products. The potential for cheaper and simpler accomplishments of measures, such as the setting up of international links, obtaining up-to-date technologies and information, improving the qualification and skills of employees and spreading the progressive experiences in cooperation with professional associations, will be obtained. Professional associations are allowed to bear clear responsibility for attaining these objectives.

ECOLOGICAL SITUATION OF MONGOLIA

Though the growth of heavy and light industries such as mining, electricity, animal raw materials processing and food manufacturing plants and of urbanization have contributed to the development of certain major cities, including Ulaanbaatar and other major towns over the last few decades, most of the country is still backward. But almost half of Mongolia's total population is still living in urban areas. Livestock resources are the key economic sector for Mongolia in which meat, milk and a lot of raw materials for industry are produced from. Though modern farming and livestock development are minimal, it can be said that almost all the animal products are derived from well treated animals that are reared in ecologically clean condition.

Domestic Food Production

Former state-owned food manufacturing, service and commercial enterprises were fully privatized while numerous new private economic firms in the stated sector have been established. These business firms lack qualified personnel and use rather old fashioned or ageing technologies.

In Mongolia, there are more than 1,700 large- and small-scale enterprises engaged in food production. They include over 90 meat packing and processing plants, 700 flour mills, 250 dairies, 420 flour manufacturing factories, about 200 companies producing alcoholic drinks and over 300 soft drink producing plants.

In Ulaanbaatar alone, there are more than 6,600 business entities engaged in food production, trading and servicing of which 550 of them are engaged in the production of food, about 1,900 in the transaction of food and more than 2,300 in public catering services.

However, the result of quality inspection shows that 43 percent of the 376 kinds of soft drinks produced by 147 companies in Ulaanbaatar city fail to meet the standard requirements. Meat and milk are mostly delivered to the consumers without any industrial processing. Food factories lack internal technological and quality inspection. Their employees have insufficient technological knowhow and skills while the levels of consumers' consumption and education are lower. And proper mechanism providing for the enhancement food safety were not created in the manufacturing companies.

Imported Food Products

Except of the above demands in domestic manufacturing and services to provide food safety, the country must be independent from any countries in terms of food supply. Therefore, meeting the demand of the people through the supply of ecologically clean food is advisable.

Currently, the country has trade relations with many foreign countries, where over 60 percent of all basic food products are imported from. However, the cases that these imported food products may loose their popularity for they are kept for longer period, the possibility of market access will be less, which might be one of the reasons for the increase in low quality food products that can not meet sanitary demands.

Only 35-40 percent of all imported products in the trading and service areas are now inspected in laboratory of which 18.1 percent and 15.6 percent are contaminated, respectively while 5.1 percent cannot meet the required standard physically.

Taking into account the above situations, it can be said that there are a lot of problems that need to be solved in the area of food supply and safety.

Active intervention and closer collaboration of relevant state organizations, employees of food producing factories, storage, transportation and delivering, consumers and NGOs are essential.

Development of a national program “Food Supply, Safety and Nutrition” in Mongolia provides an opportunity of broader scale and closer cooperation with WHO and FAO.

The following issues need special attention in future actions:

* To further improve the current system for providing food safety and drawing experiences from countries with well developed markets.
* To advance the internal inspection system for food quality and safety at all stages of manufacturing, storage, shipping and selling.
* To increase the capability of accredited laboratories for side inspection of food quality and safety, and strengthen qualified personnel.
* To allow the organizations and business firms deliver products, meet the standard requirements according to classification of “inter-connected system of product description and coding”, from the internationally acceptable exporting factories.

10. NEPAL

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INTRODUCTION

In the present context, the trade globalization in agriculture has offered a unique opportunity for developing countries not only to enhance their food and agriculture production, but also to benefit from expanded access in agri-exports. To enhance the crop yield per hectare, there is need of introducing new crops, high-yielding varieties, and germplasm for improving quality through importation from other countries. This is associated with the dispersion of unwanted exotic organism also as pests, diseases and weeds from one country to another. Also with an increase in trade in agri-products, the associated exotic organism may greatly be dispersed globally. Today, the rising food productivity is not the only ultimate goal of agricultural development, but all those factors that have effects on the economy; people's welfare and environment must also be taken into account. There are several obvious examples of devastation of crops, plants and animals around the world due to attack of newly introduced exotic organisms. With respect to food safety and the protection of human, animal and plant life or health from the introduction and spread of pests/ diseases/weeds, three international standard-setting bodies are recognized in the framework of WTO/Sanitary and Phytosanitary (SPS) Agreement. These are:

1. ***Codex Alimentarius*** which sets sanitary and technical standards for food safety, including food standards for commodities, codes of hygiene on technological practice, limits for pesticide residues in foods and standards for contaminants and food additives.
2. ***Office International des Epizooties (OIE)*** is the standard-setting body for animal health and zoonosis and sets sanitary standards for the international movement of animals or animal products.
3. ***International Plant Protection Convention (IPPC)*** is a standard-setting body, with a primary role of preventing the spread and introduction of pests of plants and plant products, and of promoting measures for their control. It also plays an important role in the conservation of plant biodiversity, including forests and the protection of natural resources.

For joining the global economy, the country has to face few challenges, that is in implementing the WTO/SPS Agreement. Developing countries, in particular, are faced with a number of challenges arising from the SPS Agreement and meeting requirements of international standards. Firstly, they must strive to meet the SPS requirements of importing countries. These measures may act as significant barriers to free trade even when or where tariffs have been reduced or removed, and the costs of ensuring food and agricultural products to meet the required standards can be prohibitively high. Secondly, they face the challenge of making sure that the domestic food supply and imported agricultural products do not pose unacceptable risks to human, animal or plant life or health.

NEPAL'S RESPONSIBILITIES IN SPS MEASURES

Country's Scenario

Nepal, a small landlocked mountainous country with a land areas of 147,181 km^2 is bordered by two most populous countries of the world; namely, India in the East, South and West with a common border of 1,690 km and China in the North, with 1,236 km common border. Nepal with altitude variation from 60 to

220 m at the southern lowland to 8,848 m at north having the highest peak of the world, the Mount Everest has immensely diversified topography and climatic condition. With a wide variety of plant resource, including wild flora for medicinal purposes and agricultural products, for feeding and improving the economy of 23.3 million people, Nepal in fact is in advantageous position for expanding trade in plant products. Exports in crude medicine herbs and herbal products have been a steady source of foreign currency to the country. India alone imports about 90 percent of the Nepalese crude herbs. Export records of crude medicinal and aromatic plants show that *Navdostachys frandiflora, Picrorhiza scrophulariflora, Rheum australe, Rubia manjith, Sapindus mukorossi, Swertia chirayita*, and *Valeriana jatamansi* have great demand in global market (Annex 1).

Nepal's agriculture trade is 10 percent of its total trade (in terms of value). Half of its total agriculture trade is with India; 30 percent of the total agriculture products is exported to India and 12 percent of the total agricultural products is imported from India.

Agriculture is the backbone of Nepalese economy currently engaging about 80 percent of the total labor force. The agriculture sector's contribution to the national economy constitutes around 40 percent of the GDP. About 25 percent of national budget has been allocated to the agriculture sector for the promotion and commercialization of agriculture commodity. However, Nepal's comparative advantage to tap the international market is undermined by various constraining factors, resulting, for example, in slower pace of agricultural modernization. The sector still deserves the national priority for accelerating into a modern agriculture with sustainable high productivity and combating poverty through export promotion, industrial development and employment generation. A 20-year visionary Agriculture Perspective Plan (APP) to sustain high growth rate in agriculture is being implemented. APP aims at increasing the agricultural growth from the current trend level of 2.5-5 percent and reducing the poverty proportion from 49 to 17 percent. The running year 2002 is the third year of the Plan.

The average landholding size of Nepal is 0.96 ha. The agriculture land comprises 3.9 million ha with an irrigated area of 0.9 million ha. The major crops grown in those areas are paddy (1.56 million ha), maize (0.82 million ha), wheat (0.64 million ha), cash crops (oilseed, potato, tobacco, sugarcane, jute) (0.39 million ha), pulses (lentil, peas, gram, soybean) (0.30 million ha), fruits (0.048 million ha), and vegetables (0.15 million ha).

Application of SPS Measures

Realizing the important role of plant and animal health in trade policy and the need to meet obligations for science-based risk assessment under the WTO/SPS Agreement in international trade, environment protection and food safety, Nepal has already enforced the SPS measures for the protection of human, plant and animal health. The SPS measures applied by Nepal partially comply with WTO/SPS Agreement.

Responsible Organization for SPS Measures (Annex 2)

1. Department of Food Technology and Quality Control under the Ministry of Agriculture and Cooperatives (MOAC) established in 1981 is responsible for food quality and safety of food with the enforcement of the Food Act and Rules as demanded by Codex standard along with five regional lab throughout the country.
2. Animal Quarantine Section under the Department of Livestock Services/MOAC, deals with animal health and livestock service by adopting the Animal Health and Livestock Services Act 1998 and Regulation 1999 in line with OIE standard. There are 23 animal check posts at land borders in different districts of the country.
3. Plant Quarantine Section under the Plant Protection Directorate (PPD), Department of Agriculture (DOA)/ MOAC with the promulgation of Plant Protection Act 1972 and Plant Protection Regulation 1974 is actively engaged in phytosanitary measures to protect the plant diversity and health of plants.

Nepal's Adherence to International Agreements in relation to SPS Measures

* IPPC proposal has been approved by cabinet and is now under consideration in the Parliament.
* Nepal is a member of Asia-Pacific Plant Protection Commission (APPPC) in 1965.
* Nepal commenced her journey to join the WTO in May 1989 submitting application to the General Agreement on Trade and Tariff (GATT). Since the formation of WTO on 1 January 1995, Nepal has

been fulfilling required formalities to obtain the membership of this rule-based trading system. It is now envisaged that Nepal will join WTO within year or two.

* Nepal is signatory to Codex.
* OIE member for maintaining zoo sanitary standard.

Being designated to Plant Quarantine Section as a plant quarantine officer, I therefore would now like to focus on phytosanitary measures of SPS of my country with detail information on plant quarantine system of Nepal.

National Plant Protection Organization

To cope with the food demand of the growing population of the country, the national PPD is playing significant role by adapting eco-friendly plant protection measures to save environmental degradation and human/plant health. The PPD, one of the main organizations of DOA/MOAC performs the following functions through Plant Quarantine Section, Post Harvest Reduction Section, Pesticide Registration and five regional plant protection laboratories.

* Enforcement of Plant Quarantine Regulations to prevent exotic pests
* Implementation of Pesticide Regulation and management through enforcement of the Pesticide Act 1991 and Pesticide Rules 1993
* Introducing and adapting innovative technologies such as Integrated Pest Management (IPM)
* Promoting measures to control crop pests and diseases
* Developing the appropriate technology for postharvest technology.

Plant Quarantine Section

Nepal became a member of APPPC in 1965. Then onwards only, plant quarantine as a legal measure of plant protection was started with the promulgation of Plant Protection Act 1972, and Plant Protection Regulation 1975. With six land boarder check posts along Indo-Nepal boarder and one at international airport within the country at present, the Plant Quarantine Section is performing the phytosanitary measures for importing and exporting plant and plant products, and additional check posts have been already proposed as mentioned later in this paper. The national Plant Quarantine Section is mandated to provide regularity services for the protection of plants, natural resources and the environment from exotic pest, disease and weeds. Presently, as a central body, Plant Quarantine Section is working under PPD of DOA/MOAC/HMG, Nepal.

1. ***Staff***

About staffing, HMG/N has recruited three technicians (two officers, one junior technical assistant [JTA] in Plant Quarantine Section, one officer, two junior technicians [JTs] in all seven check posts) to assist healthy movement of plant and plant products as required by IPPC. About the institutional capacity, the plant quarantine program was first established in Khumaltar, which was technically well-equipped but in reorganization process after its shifting to DOA.

2. ***Plant Quarantine Activities***

Nepal has adopted legislative, technical and administrative measures for export and import certification in order to meet the international standard.

To achieve the objective of plant quarantine, the Plant Protection Act 1972 was enacted, and Plant Protection Rules 1975 was notified. The main activities of Plant Quarantine Section are:

a. *Import Permit (IP)*

For the importation of plants or plant products an application with name of plant or plant product, scientific name, variety, quantity, point of entry, source country, special reason for importation, name and signature of importer is demanded. No permit is required for the import of processed food, packed, tinned or dried fruits and vegetables as well as cocoa, tea and tobacco ready for consumption.

A declaration form also has to be submitted at the time of entry. Furthermore, a phytosanitary certificate (PC) must accompany imported plants from the country of origin.

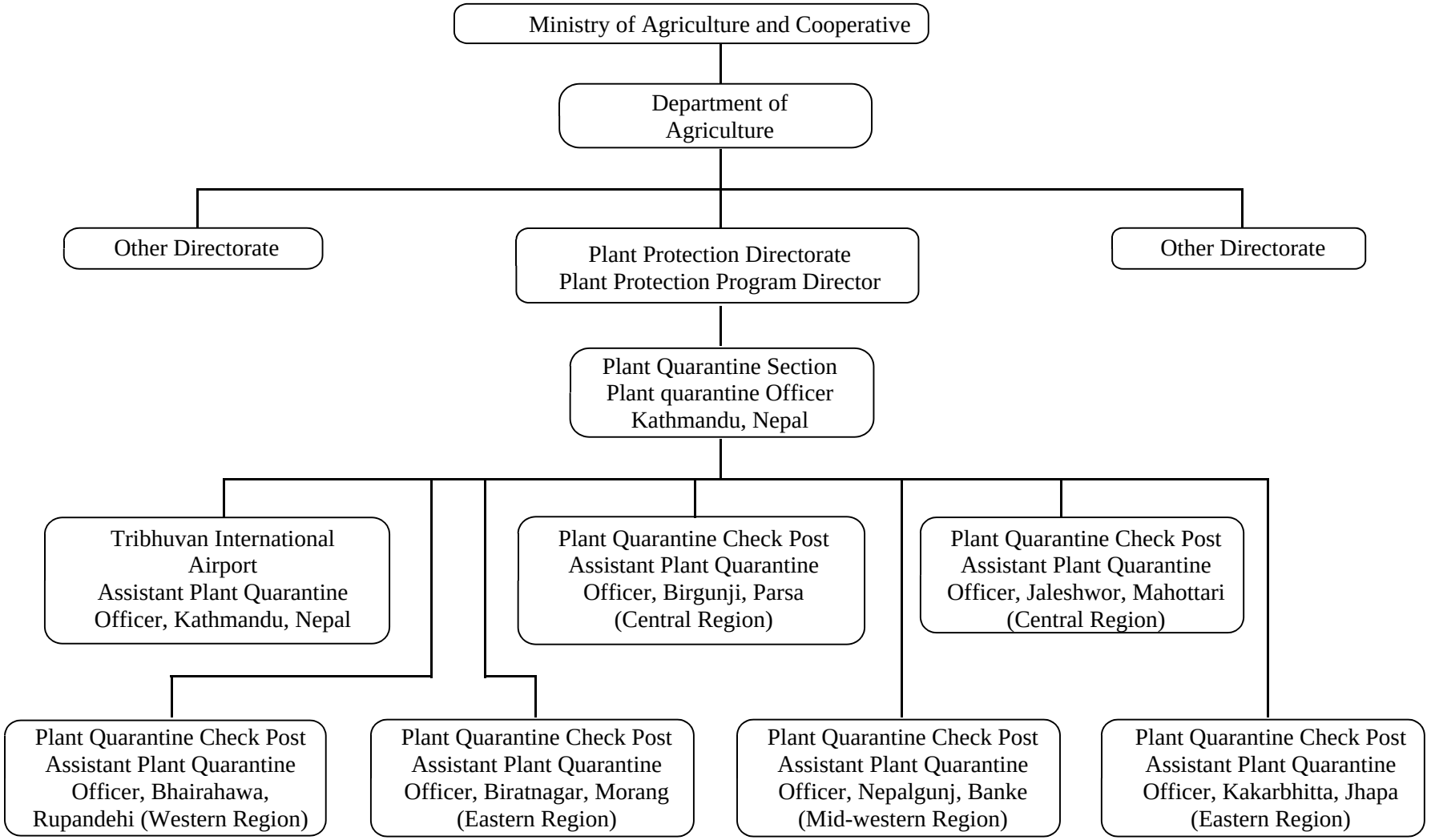


Figure 1. Ministry of Agriculture and Cooperative

The plant quarantine officer may, if he thinks proper, provide specified facility for the import of plant or plant product by government or NGOs for study, research or any other scientific work.

Inspections of the introduced items are done at the entry sites, and these mainly relate to visual symptoms of disease infection or pest attack. Particular attention is given to disease and pest problems categorized in Plant Protection Regulation to prevent their introduction into the country. Plants and materials suspected of disease infection or pest infestation are normally sent to the plant pathologist or entomologist for diagnosis.

b. *Phytosanitary Certificate*

i. The PC is issued strictly in conformity with the Plant Quarantine Regulation of importing country to ensure that no consignment of banned export or prohibited import by the importing country is certified.

ii. The plant quarantine officer checks all the applications and documents received for the export of consignments.

iii. The consignments prior to export are inspected and fumigated, and disinfected if necessary.

iv. The inspection of seed, and propagating plant material such as bulbs, cuttings, saplings, etc. are inspected in nursery/farm when necessary. The methods of inspection and testing procedures adapted in general are:
   * viral examination
   * incubation test
   * grow-out test
   * inspection in field/godowns

The issuance of PC is provided in the model certificate as prescribed in IPPC.

3. ***Post Entry Survey***

Due effort is always made to monitor the imported plant and seeds that require post entry quarantine survey to ascertain free from exotic pests/diseases.

4. ***Records***

Records of import/export, IP, PC, treatments, and revenue collection are maintained/registered.

5. ***Charges***

A small fee, Rs.10 (US$0.12) is charged for IP only. The fumigation charge is Rs.2 (US$0.025) per cubic and seed treatment is Rs.1 (US$0.0127) per kg, which is being revised.

6. ***Significance***

Plant quarantine of Nepal is dealing with more than 40 countries in the exchange of germplasm, plant and plant products. Some of the imported materials are rice, wheat, rape varieties, legume, betel leaves, vegetable seeds, corn seed, grass seed, cottonseed, flower seed, flower bulb, ornamental flower plants, medicinal plant, tea plant, spices, tissue culture, fruits and vegetable, etc. Likewise cereals, tobacco, niger seed, ginger, coffee bean, onion seed, vegetable seed, medicinal plants, cardamom, ornamental flower bulbs, cut flower, forest plants, fruit plants, sunflower seed, wheat seed, buckwheat, rape seed, strawberry, jute, rice, fruits and vegetables are exported in quite large amounts from Nepal.

SOME IMPORTED PESTS AND DISEASES

Due to long and porous boarder and the weak plant quarantine system in land border, new quarantine pests and diseases have been introduced to Nepal, and already established as serious pests in the country. Some of the obvious examples are:

* bacterial blight (*Xanthomonas campestris*) of rice
* brown rot (*Pseudomonas solanacearum*) of potato
* black wart (*Synchtricum endobioticum*) of potato
* tuber moth (*Phthorimaea operculella*) of potato
* kernel bunt (*Neovossia indica*) of wheat
* stalk rot (*Sclevotinia sclerotiorum*) of cauliflower
* club rot (*Plasmodiphora brassicae*) of crucifers
* army worm (*Mythmina separata*) of maize

* wooly apple aphid (*Eriosoma lanigerum*) of apple
* citrus greening (*Liverobacter asiaticum*) of citrus
* citrus tristeza virus of citrus
* parasitic plant (*Cuscuta reflexa*) of berseem fodder plant and lentil.

CURRENT ISSUES ASSOCIATED WITH QUARANTINE FOR IMPLEMENTING PHYTOSANITARY MEASURES

Nepalese Plant Quarantine Program is severely constrained by the following factors:

1. ***Lack of Trained Manpower***

Technical capacity and capability enhancement in quarantine field are lacking. No staff under plant quarantine institution has got special plant quarantine training. The movement of dangerous pests and diseases mostly take place through the land border. Training to plant quarantine staff on pest risk analysis, pest surveillance, modern plant quarantine procedures and laboratory techniques is essential so that they are technically competent in ascertaining the phytosanitary requirements for the importation and exportation of agricultural commodities as well as in the management of pest incursion.

2. ***Lack of Physical Infrastructure***

Facilities are inadequate to deliver the required services, as there is no equipped lab, fumigating, treating facilities and post-entry quarantine facilities.

3. ***Inadequate Plant Quarantine Land Border Check Post***

Present six land border check posts are not enough to cover the entire range of land border to check pest entry. Especially in the Nepal-China border and Far-Western Region, no check post has been established yet. At least three new check posts in those areas have been proposed.

4. ***Implementation of the Legislation***

Since 1975, Plant Quarantine Act and Regulation has not been yet revised. Amendment the existing Plant Quarantine Regulation is in process for further action by concerning agencies.

5. ***Lack of Specialist***

Many a times quarantine technicians have faced difficulties in diagnosing the infection and infestation on exporting and importing consignments, as a core group of virologist, mycologist, entomologist, weed scientist, nematologist, etc. has not been developed/identified within the institution.

6. ***Lack of Computer Technology***

Computer system for database development, pest risk analysis, pest surveillance, issuance of permits and PCs have not been developed.

7. ***Lack of Effective Communication Mechanism***

The Plant Quarantine Section of Nepal needs the international coordination with the relevant institution for the harmonization of phytosanitary measures, development of national and regional standards and for sharing technical information.

8. ***Lack of Awareness***

There is still a need to further aware administrators, decision-makers, policymakers, custom staff, agriculturists, importers, exporters, distributors and public.

9. ***Lack of Resources***

Due to budgetary constraint and limited resources, plant quarantine programs are behind the schedule as compared to other countries in Asia. Nevertheless, ample efforts are made every year towards meeting this obligation.

To save the national biodiversity and facilitate trade, strengthening plant quarantine system is among the top priority agenda of the Nepalese Government to be consistent with WTO.

Plan/Strategies

Nepal is in the process of becoming a member of WTO, for which it requires the adoption of international SPS measures. In this regard, the long-term APP of Nepal has given emphasis to plant

quarantine for the effective enforcement of phytosanitary measures. The future plan and strategies for plant quarantine services are as follows:

* Amendment of existing regulations
* Upgrading the existing facilities of plant quarantine check posts
* Upgrading the technical skills of the manpower
* Fostering coordination among the relevant organization
* Revising the pest lists of country
* Determination of pest-free area.

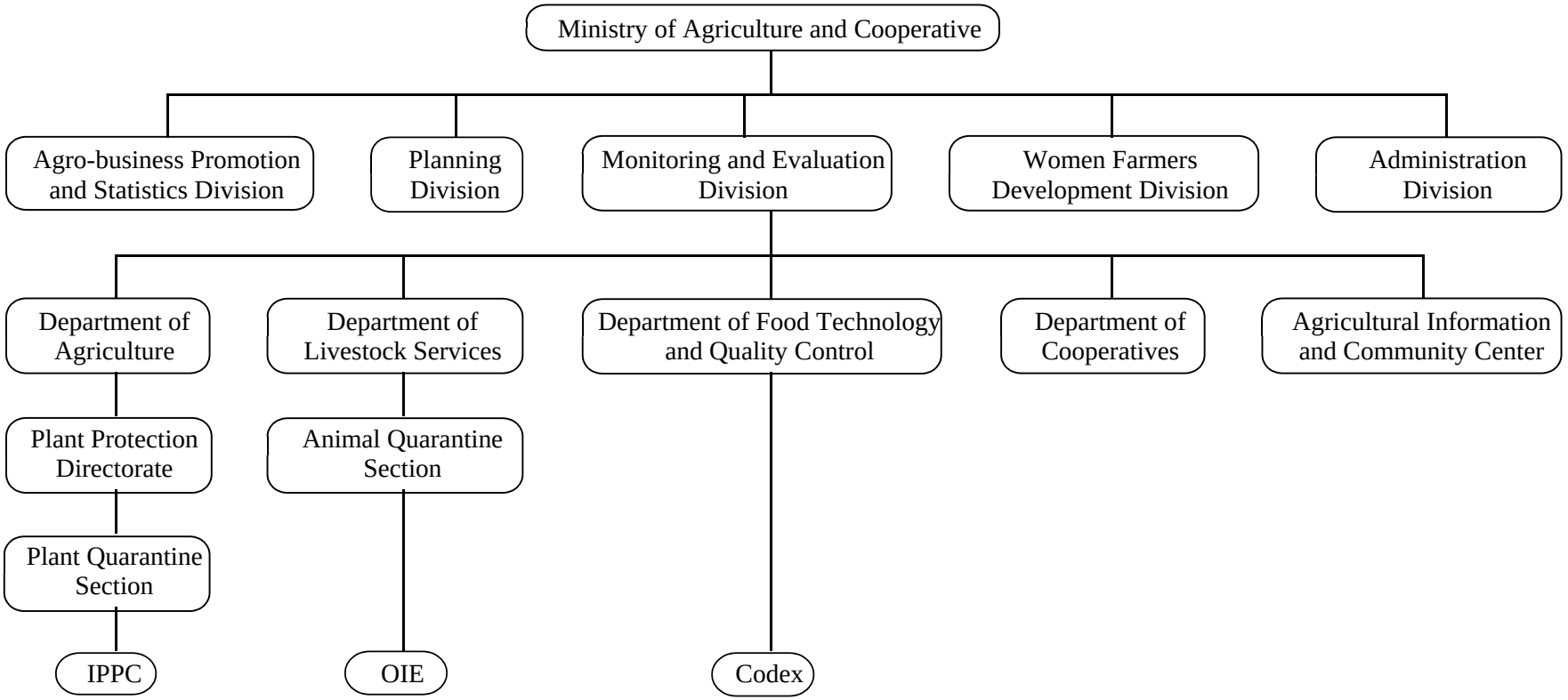
Annex 1

Well-known Plant Species in Trade from Nepal

S. No.	Botanical Name	Nepali Name	English Name
1.	*Acacia catechu* (L.F.) Willd.	Khayer	Cutch
2.	*Acorus calamus* L.	Bojho	Sweet flag
3.	*Asparus racemosus* Willd.	Satawari	Asparagus
4.	*Azadirachta indica* A. Juss.	Nim	Neem tree
5.	*Bergenia ciliata* (Haw. Sternb.)	Pakahnved	Rockfoil
6.	*Cinnamomum tamala* (Buch.-Ham.) Nees and Eberm.	Dalchini, Tej pat (leaf)	
7.	*Dactylorhiza hatagirea* (D. Don) Soo	Panchaunle	
8.	*Dioscorea deltoidea* Wall.	Vyakur	Yam
9.	*Elaeocarpus sphaericus* (Gaertn.) K. Schum.	Rudrakshya	Ultrasum bead
10.	*Lycopodium clavatum* L.	Nagbeli	Lycopodium
11.	*Nardostachys grandiilora*	Jatamsi	Spike nard
12.	*Nigella sativa* L.	Mugrelo	
13.	*Parnassia nubicola* Wall.	Mamira	
14.	*Picrorhiza scrophulariflora* Pennell	Kutki	Pseudo gentian
15.	*Pinus roxburghii*	Sallo	Pine
16.	*Pinus wallichiana* A.B. Jacks	Sallo	Blue pine
17.	*Rauvolfia serpentina* (L.) Benth. ex Kurz.	Sarpagandha Chandmaruwa	
18.	*Rheum australe* D. Don	Padamchal	Rhubarb
19.	*Rubia manjith* Roxb. ex Fleming	Majitho	Madder
20.	*Sapindus mukorossi* Gaertn.	Ritha	Soap-nut
21.	*Shorea robusta* Gaertn. f.	Sal	Common sal
22.	*Swertia chirayita* (Roxb. ex Fleming) Karsten	Chirayita	Chiretta
23.	*Terminalia bellirica* (Gaerth.) Roxb.	Barro	Bastard myrobalan
24.	*Terminalia chebula* Retz.	Harro	
25.	*Valeriana jatamansi* Jones	Sugandhawal	Valerian

Annex 2

Organizational Structure of Ministry of Agriculture and Cooperative



11. PAKISTAN

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INTRODUCTION

Pakistan and GATT have some remarkable similarities. Both were born in 1947. Both came out of the chaos that marked the years between the wars. Both marked a world that was adrift from Pax Britannia to Pax Americana. Both were the results of very tough negotiations. In both cases it was British stalwart politicians of the caliber of Wilson and Cripps who, on the one hand, had to negotiate phase out of "imperial preferences" and on the other withdrawal from imperial territories. Quaid-e-Azam Muhammad Ali Jinnah succeeded in achieving the creation of Pakistan. Both Pakistan and GATT started as fledging entities. Both hardly qualified as "most likely to succeed". Both have survived, despite obstacles by powerful forces perhaps because, to use Professor Jackson's phrase, "*history required it*". Their interaction is no doubt interesting. This presentation will help in understanding of Pakistan's position on GATT and WTO in both historical and contemporary contexts.

APPLICATION OF AGREEMENT ON SPS MEASURES IN PAKISTAN

Pakistan since its creation joined the GATT in 1947, signed the Technical Barriers to Trade (TBT) in 1979. Pakistan is pursuing the provision of Article XX(b) of the GATT and TBT. As a result of Uruguay negotiations, along with other countries, Pakistan has signed WTO Agreements including Agreement on Sanitary and Phytosanitary (SPS) Measures in 1994. Being a newly born state and having less resource, it made all possible efforts to implement the provisions of WTO Agreements. To ensure the food safety and quality control, Pakistan have adopted and framed legislations and created their enforcement departments mentioned against each regulation.

I.	Agricultural Products Grading and Marketing Act, 1973 and Rules	Agricultural and Livestock Products Marketing and Grading Department, Karachi and its regional offices
II.	Pakistan Animal Quarantine (Import and Export of Animal Products) Act, 1970 and Rules	Animal Quarantine Department, Karachi and its regional/ field officers
III.	Pakistan Fish Inspection and Quality Control Act,1997 and Rules, 1998	Marine Fisheries Department, Karachi
IV.	Plant Quarantine Act, 1976 and Rules	Department of Plant Protection, Karachi and its regional offices
V.	Pure Food Laws, 1960 and Rules	Provincial Food Departments, Health Departments and local government/bodies

Their respective departments are enforcing all of the above-mentioned food safety laws, most of those are located in Karachi, a port city where imports and exports are inspected, samples tested and qualities are certified. Those departments have their testing laboratories and qualified professionals to perform their jobs

in the provinces, districts, *tehsile* and town committee, etc. Except Fish Inspection and Quality Control Act 1998, all other laws require revision and modernization as being old and inherited from British India.

Quality Certification of Imports and Exports of Animal Products by Animal Quarantine Department under SPS/Quarantine Measures

During the last five years the Department of Animal Quarantine has inspected and certified the following import and export consignments. Due to the SPS conditions of developed countries, there is a decrease in the export of animal products. Table 1 provides imports and exports certification data for animal products in the last five years.

Table 1. Import/Export Health Certificate for Animal Products

Year	Export Number of Health Certificate Issued	Import Number of Health Certificate Issued
1997-98	10,140	2,270
1998-99	10,685	2,299
1999-2000	6,860	2,698
2000-01	6,895	2,134
2001-02	8,395	2,357

Source: Animal Quarantine Department, Government of Pakistan, Karachi.

Quality Certification of Fish/Shrimp for Export by Marine Fisheries Department

Table 2 indicates that during the last five years the Marine Fisheries Department has inspected, tested and certified the following fishery products for export purposes. But the SPS conditions of developed countries are not allowing the increase in exports of fishery products. However measures for improvements are being taken under a development project.

Table 2. Certified Fishery Products for Export

Item/Year	1997	1998	1999	2000	2001
Quantity (mt)	83,183	73,710	90,384	84,693	83,521
Value (Rp. billion)	7.27	5.93	7.02	7.88	8.02

Source: Marine Fisheries Department, Government of Pakistan, Karachi.

Grading and Quality Testing of Agricultural Commodities Certified by Agricultural and Livestock Products Marketing and Grading Department

The Agriculture and Livestock Products Marketing and Grading Department has examined quality, standards and certified the grades of different agriculture items during the last five years for export facility. Table 3 provides the item- and year-wide data which indicate the application of SPS measures for strict quality testing have decreased exports of certain items.

PAKISTAN'S EXPANDING TRADE AND IMPROVEMENTS IN SPS MEASURES

Being an agricultural country, Pakistan is surplus in cotton, wheat, rice, sugar, fruits, vegetable, dairy, and livestock commodities. Some of the products are being exported to Middle East, EU, America, Africa and Asian countries. To extend and maintain its export trade, Pakistan has signed WTO Agreements and is striving to apply all SPS measures in its domestic as well as international trade.

In order to apply the WTO Agreements including Agreement on SPS Measures, the following standing committees of experts have been constituted in the Ministry of Food, Agriculture and Livestock (MINFAL):

Table 3. Certified Agricultural Products

Commodity	Unit	1999-2000		2000-01	
		Consignment	Quantity	Consignment	Quantity
Wood	kg	84	1,040,807	59	58,078
Hair	kg	105	1,244,001	108	1,490,437
Casing	Hanks	764	3,355,343	701	3,325,675
	Pieces		1,472,020	-	1,825,789
	Bladder		13,548	-	-
Citrus fruits	Carton	1,481	5,238,436	692	2,278,149
Mango	kg	7,588	35,625,271	1,153	10,330,856
Onion	mt	1,579	79,662	86	4,229
Oilcake	mt	30	13,890	10	4,156
Fish meal	mt	-	-	-	-
Dry fish	kg	-	-	-	-
Potato	mt	943	47,710	86	2,359
Bone	mt	174	20,700	179	23,136
Chili	kg	135	958,185	2	6,250
Garlic	mt	10	1,004	-	-
Date	mt	548	17,192	4	141
Molasses	mt		-	-	-
Egg	Number	29	704,160	160	5,748,840
Fresh vegetables	mt	2,275	1,331	87	34

Source: Agricultural and Livestock Products Marketing and Grading Department, Government of Pakistan, Karachi.

* Standing Committee of Experts on SPS Measures;
* Standing Committee of Experts on Agreement on Agriculture (AOA);
* Standing Committee of Experts on Trade-related Aspects of Intellectual Property Rights (TRIPS); and
* National Consultative Group of Experts and Stakeholders on WTO.

All these committees/groups are working since the last one and half years to review the existing SPS measures and its upgradation as per international standards set by the following organization. The quality safety standards set by the standards-setting international organizations like, FAO, WHO, Codex Alimentarius Commission (CAC) and Office International des Epizooties (OIE) are being adopted for developing and notifying national quality control standards for all food, agriculture and livestock commodities. Besides, the above-mentioned international organizations and their laws, the Pakistan Standard and Quality Control Authority under the Ministry of Science Technology and Agricultural and Livestock Products Marketing and Grading Department of MINFAL are planning and organizing standards notification and quality control in the country. About 15,000 standards have been developed. Two hundred standards have been notified so far and 41 standards are compulsory for exports, imports of agricultural commodities and food items.

Existing quality-testing laboratories are being improved; upgraded, equipped and professional staffs are being trained for accreditation of those labs. The Pakistan National Accreditation Council is arranging accreditation of food testing labs. Following are main labs: Animal Veterinary Laboratory, Plant Quarantine Laboratory, ALMA Test House, Pakistan Agricultural Research Council (PARC) Laboratory, National Institute of Health Laboratory, Pakistan Council of Scientific and Industrial Research (PCSIR) Laboratories, Agriculture and Food Labs of Pakistan, Atomic Energy Commission and Animal Quarantine House which are operational.

Harmonization

The Laws, Quarantine, Food Safety, Quality Control, Food Safety Standards and methods of quality testing are being revised and amended to harmonize those with the SPS measures, international standards and laws of other member countries.

Equivalence

The SPS measures quality standards and Food Safety Laws are being equalized with other countries and international organizations. The standards and laws of other countries, when they provide sufficient safety, are treated equally.

Risk Assessment

A systematic approach has been adopted in risk assessment on the basis of actual risk involved and international standards. Risk/disease assessment documents have been prepared for the information of importing countries.

Disease-free Areas

Pest Surveillance System, pest survey and diseases monitoring mechanism have been evolved through provincial governments, specialized research institutes and processing industries/private sector to identify and declare the specific pest/disease-free area. Pest/diseases warning and reporting system is being followed with the neighboring/regional countries with the coordination of FAO.

Developing Countries

Pakistan being a developing country has proposed to FAO, WHO and WTO for technical assistance in training, especially capacity building, labs upgrading and consultancy services for improving and harmonizing Pakistan's SPS measures.

Dispute Settlement

Pakistan in case of any dispute has always-preferred bilateral consultation and WTO dispute settlement procedures.

Education and Training

All the farmers/producers, traders, handlers, packers and exporters, etc. are being trained with reference to WTO SPS measures and future requirements of food safety.

PROSPECTS AND PROBLEMS OF PAKISTAN'S EXPORT TRADE UNDER WTO REGIME

Pakistan, being a member of the WTO, is duty-bound to observe and comply with the bindings, rules and conditions of Agreement on SPS Measures in its trade. Although all effort are being made to apply all SPS measures in food safety and quality control but like all other developing countries, Pakistan is facing a problem of capacity and compliance gaps due to technical, legal and human resources constraints. Therefore, its export trade related to food/agricultural commodities is being affected.

The current crops production and export data given in Tables 1-3 indicate that there is a considerable increase in per hectare production of wheat, rice, cotton, sugarcane, fruits, vegetables and livestock. Consequently their exports are also increasing. Since the last 2-3 years Pakistan has become in surplus of food items which can be exported.

In case Pakistan's capacity is enhanced, commodity testing labs are upgraded and accredited, and human resources developed, Pakistan can expand its trade beyond the immediate region to the world market.

List of Development Projects Initiated for Upgradation of Testing Laboratories and Improvement in SPS Measures

Following legal and administrative measures and development projects are under consideration and execution to further improve the quality, standards and SPS measures for food safety in Pakistan.

* Acceptance of Revised Text of International Plant Protection Convention (IPPC), 1997 under consideration of Cabinet.
* Department of Plant Protection has been recognized as NPPO (National Plant Protection Organization).
* Put in place a pest surveillance system with the coordination of provinces.
* Notification of Agriculture Export Zones.

* Registration of growers, procurers and exporters for exports.
* National Food Safety Plan (NFSP) is being prepared with the consultation of WHO by Ministry of Health, Government of Pakistan, Islamabad.
* A Drugs Residues Testing Laboratory is being developed in Animal Quarantine Department.
* Fish/shrimp inspection and safety project worth of Rp.47-402 million is approved and funds have been released.
* Plant Quarantine Laboratory is being completed at Karachi at a cost of Rp.118 million.
* Vapor Heat Treatment Plant provided by Japan is being operated with an outlay of Rp.8.5 million for research and data on fruit fly and infestation treatment.
* National Animal and Plant Health Inspection Service Project at a cost of Rs.105 million for providing all SPS measures/quality certification under one roof as a one window operation has been proposed.
* Hazard Analysis and Critical Control Point (HACCP) is being adopted in the testing of all food, agricultural and livestock products.
* Imports, risk analysis for all imported products is being considered for food safety.
* Early warning system among members/neighboring countries is being developed.

Table 4. New Projects Proposals

Sl. No.	Name of the Scheme	Estimated Cost (Rp. million)	
		Total	Financial Aid
1.	Grain Testing Laboratory, Islamabad and Karachi	198.530	22.900
2.	Rinderpest	873.589	705.967
3.	National Veterinary Laboratory, Islamabad	153.832	109.020
4.	Fisheries Research Vessel	400.000	0.000
5.	Strengthening of Marine Fisheries	47.402	0.000
6.	Establishment of Hatchery Complex	18.900	0.000
7.	Development of Animal Quarantine, Karachi	5.861	0.000
8.	Establishment of Animal Quarantine, Sialkot	4.518	0.000
9.	Establishment of Seed Testing Laboratory, Mingora	7.010	3.716
10.	Integrated Pest Management, Sindh	75.540	0.000
11.	Expansion of Plant Quarantine Section, Karachi	150.770	108.770

RECENT DEVELOPMENT IN THE APPLICATION OF SPS MEASURES IN MEMBER COUNTRIES

The right of every person to have access to safe and nutritious food is affirmed in the opening statement of the 1996 Rome Declaration on World Food Security. In recent years, public awareness of food safety issues has increased in the developed countries. The international and domestic markets need to cope with the increasing demands for food safety. With the expansion of agricultural and food trade, the WTO Agreements to eliminate unjustified trade barriers have initiated efforts for the harmonization of food standards and regulation between countries. This changing situation creates both challenges and opportunities for the food and agriculture sector, including fisheries.

FAO has revised the text of the International Code of Conduct on the Distribution and Use of Pesticides. Pakistan, being signatory to the IPPC in 1951, has been participating in its activities. The revised text of IPPC is under active consideration of the Government of Pakistan for its acceptance.

At its 120th Session (June, 200l), the FAO Council endorsed the FAO-led initiatives to convene jointly with WTO, a Pan-European Conference on Food Safety and Quality and a Global Forum of Food Safety Regulators. The FAO convened First Global Forum in Marrakesh in June 2002, and a Pan-European Conference in Budapest, Hungary in February 2002. Similar initiatives are being considered for other regions to promote food safety and quality worldwide. A regional meeting on Modernizing Food Control System in South Asian Association for Regional Cooperation (SAARC) Countries is being held on 10-11 December 2002 at Kathmandu, Nepal with the cooperation of FAO.

The FAO conferences provided opportunities for the exchange of information on food safety regulations and risk management. There was a need to build the capacity of developing countries through these conferences. Countries have learned that it was possible to use food safety regulations to reduce food-borne illnesses and improve the health of their population. Such measures may create trade opportunities and enhance quality and standards.

Further it was agreed to adopt a risk-based approach in developing food safety policies. It was recognized that to clarify the application of the risk analysis paradigm in all situations and additional investigations and more transfer of knowledge is required among countries. The Pan-European Conference recommended that:

* cooperation between countries to reduce food safety risk and incidence of food-borne diseases.
* harmonization of food safety, quality legislation and control system based on international standards.
* facilitating the involvement of stakeholders throughout the food chain in improved food safety and quality.
* joint efforts by governments, agencies and institutions, and stakeholders, including consumers, to improve transparency and effectiveness of food production and food safety control system and to improve communication with the consumers and their organizations.
* the First Marrakesh Forum agreed to convene another forum in 2002 in a developing country with the theme "Building Effective Food Safety Systems".
* regional conferences on food safety were stressed in Marrakesh Forum.
* in both global forum and Pan-European Conference, the need for capacity building was stressed as some developing countries are facing technical and legal problems in food safety systems.

The FAO and WHO are addressing food safety and quality from their respective perspective within the UN System, which ensures the food safety from producers to consumers. The FAO has the capacity to address the food safety as whole food chain. This technical assistance would be on the demands of countries.

Pursuant to the 2001 WTO Doha Ministerial Meeting Communiqué, FAO, WTO, OIE and the World Bank agreed upon a partnership initiative for supporting capacity building in food safety in developing countries.

FAO Headquarters, in the 123rd Session of FAO Council held on 28 October 2002 in Rome tabled an agenda item No. CL-123/20, Discussion of "Food Safety Regulators" for discussion among member countries.

To modernize and harmonize the SPS measures, Food Safety Laws, procedures, etc, of SAARC countries, Pakistan has proposed to organize a Workshop on "Setting Up a Sanitary and Phytosanitary Measures Network among SAARC Countries" in 2003. This will help to harmonize the SPS measures in South Asia region.

SAARC Countries' Position in Application of SPS Measures

* Bangladesh, India, Maldives, Pakistan and Sri Lanka are the members of WTO. Nepal is in the process of accession to WTO and Bhutan has also taken the initiative for membership.
* Legislation on food safety, plant and animal health are already in operation in all the SAARC countries except in Maldives. Bhutan has yet to develop food legislation and plant health legislation. Fishery regulation is in progress in Maldives.
* The countries of the SAARC region have joined CAC and OIE except Maldives. Bhutan, Maldives and Nepal are yet to ratify IPPC.
* All countries of the SAARC region are committed to upgrade existing legislation to comply with WTO's SPS requirements.
* The SAARC countries experience need of technical assistance in terms of their capacity building for Human Resource Development (HRD), and infrastructures, and even some countries of the region need technical assistance for updating existing legislation to comply with SPS/TBT requirements.
* Most countries of the region find difficulties to export their products mainly because of the higher standard of the developed countries.

* Inadequate pace of harmonization of standards, inspection approach, and analytical data generation at the SAARC regional level.
* Inadequate resource allocation in SPS activities due to lack of public awareness.
* Lack of participation in CAC, OIE and IPPC activities and, no use of regional data in the international standard-setting process.
* Inadequate flow and exchange of information on SPS matters at regional level.
* Lack of referral laboratories for SPS-related services and no regional fund generation for assuring the health of people, plants and animals.
* With the exception of few developed countries, the position of SAARC and other Asian nations is not so encouraging.

In view of the above-stated position there is a need to create a network of food safety, enhance capacity and upgrade the laboratories for quality testing.

ISSUES AND CONSTRAINTS IN IMPLEMENTATION OF SPS MEASURES AMONG ASIAN COUNTRIES

* Lack of harmonization in procedures, mechanisms and standards.
* Inadequate capacity to comply with stringent measures in risk assessment.
* Lack of regional capacity to generate regional exposure data for chemicals, pesticide residues, mycotoxins, heavy metals, veterinary drug residues and microbiological risk, etc.
* Prevalence of high compliance cost in the exports of shrimp and marine products owing to the quality requirements of the importing country.
* Small farm sizes and enterprises make difficulties in meeting the SPS requirements.
* Inadequate existing facilities for quality testing, certification, and accreditation (Pakistan lacks in all these facilities.)
* Lack of legal consistency.
* Inadequate supply of information (laws, notification, and standards, etc.)
* High input cost for food production.
* Lack of regional initiatives on SPS matters.

RECOMMENDATION FOR IMPROVEMENT AND IMPLEMENTATION OF SPS MEASURES AMONG ASIAN COUNTRIES

* Reviewing and updating of existing legislation in line with WTO's SPS/TBT Agreements. Pakistan requires legal consultancy in this regard.
* Harmonization of regulations at the regional level taking into account CAC, OIE and IPPC principles, guidelines and recommendations.
* The Asian countries should expedite the process of regional harmonization by institutionalizing the Asian Regional Network for Food Safety and should take initiative in building up regional capacity in SPS/TBT-related matters and particularly for Pakistan.
* Capacity building in standard formulation procedure and risk assessment, considering regional exposure data to reveal in Codex work. Pakistan needs immediate technical assistance for its food safety standards.
* Strengthening of infrastructure for SPS requirements (inspection, testing, certification, method validation, equivalence mutual recognition of laboratory services, SPS-related information and biotechnology, etc.)
* Establishment of regional referral laboratory system to provide competent services in the region.
* Development of human resources for import/export inspection, certification, accreditation, and food analysis. Pakistan has large human resources which need to be developed through trainings.
* There is a need for National Food Control Authority at the apex level for the facilitation of standard formulation, food contaminants, adulteration and pollution.

* There is a need to develop special packages for food control management including food inspection, research on food contaminants, Good Manufacturing Practice (GMP), HACCP and generation of food analytical database and their interpretation.
* Food control services of the Asian regions are in urgent need of strengthening laboratory services with modern equipment such as Gas Liquid Chromatography (GLC), High Performance Liquid Chromatography (HPLC), Atomic Absorption Sectrophotometer (AAS), Ultra Violet/Infra-red (UV/IR) spectroscopy, etc. to cope with emerging problems on food trade involving SPS/TBT requirements.
* Member countries need to initiate preventive and proactive quality management system of the food chain, including processing industries, handling, transportation, and distribution by introducing code of good practices for augmenting safe food supplies.
* Member countries are urged to develop and establish information database for the exchange of information and make resource sharing for such network.

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12. PHILIPPINES

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INTRODUCTION

Philippines agriculture is in transition – with expanding opportunities. The domestic market is becoming gradually more sophisticated. For Philippines liberalization of trade under the WTO means greater opportunities in the global market. In spite of this, however, the country's competitive advantage vis-à-vis its key commodities has continued to slip and relatively few new products have emerged where the country can compete in any significant way in the world markets.

The country's imports of agricultural products have grown by an average of 3 percent from 1995 to 1998, while exports have increased by only 1.8 percent over the same period.

The low growth in the country's exports is the result of different factors such as high transaction and marketing costs, lack of investment, declining competitiveness, policy and institutional distortions, and lack of market access due to an increasingly stiff Sanitary and Phytosanitary (SPS) regulation of export markets.

The FAO defines SPS measures as applied to the protection of animals or plant life or health; the risk related to the entry, establishment or spread of pests or diseases; disease-carrying organisms; the risk arising from food additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs; and any measures applied to protect human life and health from diseases carried by animals, plants or animals and their derived products, or from the entry, establishment or spread of pests. These include any measure taken to limit or prevent damage from entry, establishment or spread of pests.

SPS measures include all laws, decrees, regulations, requirements and procedures related to end-product criteria, processes and production procedures, testing, inspection, certification and approval procedures, quarantine treatment, statistical methods, sampling procedures, methods of risk assessment, packaging and labeling.

Like most developing countries in the Asian region, the Philippines has experienced some problems in adapting to both the complex procedures and mechanisms, and legal and technical interpretation of WTO rules and agreements – particularly the SPS Agreement. The problems on the aspect of adapting fully to the SPS Agreement lie primarily on the inadequacy of technical manpower and facility. While technical interpretation, more often than not, is left at the discretion of individual member countries. This usually leads to disagreement between trading partners.

IMPLEMENTATION OF SPS MEASURES IN PHILIPPINES

The implementation of SPS measures in the country is under various legislation by various agencies. The Philippines Department of Agriculture (DA) handles the implementation of specific food safety (chemical residue) and quarantine of agricultural products including live, fresh, or semi-processed. For processed food and agricultural products, the Department of Health, Bureau of Food and Drugs (DOH-BFAD)has the primary obligation to ensure safety of human health.

Under the DA, the Bureau of Plant Industry (BPI), by virtue of Presidential Decree 1433, is tasked to enforce plant quarantine regulations in the country; the Bureau of Animal Industry and Bureau of Fisheries and Aquatic Resources are mandated within the law to implement animal and fish quarantine accordingly.

Other agencies – the National Meat and Inspection Commission (NMIC), Fertilizer and Pesticide Authority (FPA), and Bureau of Agriculture and Fisheries Product Standard (BAFPS) – also regulate food safety and standards of agricultural products.

Upon referral of the Bureau of Customs, any imported agricultural and fishery products should pass through the procedures, testing and clearance of these pertinent agencies – whichever is appropriate – as well as export SPS certification of agricultural products after meeting all Philippine requirements and conformance of the importing countries' requirements.

SPS MEASURES IN THE PHILIPPINES

Risk Analysis

Probably the most important SPS measure the Philippines has adopted is the pest risk analysis (PRA). The measure provides for a thorough assessment of risk involved in importation of any agricultural commodities prior to importing the item into the country.

Based on the PRA result, protocols and procedures and possibly quarantine treatments are recommended to address the risk associated with the importation. In all cases, expert advice is requested to attain a scientifically sound result.

Bilateral Agreements

The Philippines has various bilateral agreements/arrangements with its trading partners to ensure SPS compliance and facilitation of trade. Existing agreements are as follows:

Country/ Trading Partner	Philippine Import	Philippine Export
Japan		Mango, papaya
Korea		Mango, papaya
U.S.A.		Mango
Australia	Gapes, apples, pears, stone fruits, citrus, kiwi fruit	Mango
Iran	Fresh apples	Banana
New Zealand	Kiwi fruit, apple, etc.	Mango, papaya, banana pineapple
Chile	Grapes, apples, pears, stone fruits, citrus, kiwi fruit, cherimoya	

Other Philippine commodities are also exported even without agreements. The requirements of the importing country are fully respected.

These agreements facilitate the safe trade of agricultural commodities, enabling the Philippines, for example, to export **90,397,303** kg of mangoes to the U.S.A., Japan, Korea, New Zealand and Australia from 1987 to 2002, aside from the other major commodities as fresh banana and pineapple covered by agreements. Without these agreements, export of these commodities would not have been possible.

Procedures and Protocols

Under the present legislation, the Philippine DA or its agencies can issue Orders, which contain Procedures and Protocols as measures that ensure the safe trade of agricultural commodities.

The Protocol for the Export of Fresh Okra to Japan is one of the measures crafted by the DA-BPI this year to facilitate the export of fresh okra with high confidence. It is the only safe and pest-free okra that is shipped to Japan. In this Protocol, sampling of okra for residue analysis is being done in the Philippines on all shipments to ensure safety and, at the same time, create awareness among growers/ farmers the importance of keeping the residue level within the limits.

Other Protocols are also issued to facilitate the imports of safe agricultural commodities such as garlic, onion, coffee beans, potato, orchids and planting materials.

Inspection of Commodities

Inspection of commodities is one of the most reliable SPS measures the Philippines have so far institutionalized. All incoming and outgoing commodities are subjected to SPS inspection; inspection of 10 percent of the consignment is carried out through random sampling, usually done during packing.

During inspection, the quarantine inspector would take measures whenever pest or disease is observed. The problem would be addressed or spread of pests is prevented.

Quarantine Treatments

Commodities that cannot be traded due to the presence of pests and diseases in an area/country are given the chance to be traded with the availability of approved quarantine treatments.

One such measure is the Vapor Heat Treatment (VHT), which the country uses to disinfest fresh mango and papaya fruits against fruit flies. VHT has paved the way for the acceptance of Philippine mango and papaya to Japan, Korea and New Zealand, and mangoes to Australia and the U.S.A.

Incoming fresh commodities, especially fresh fruits, are accepted by exposing them to cold treatment against pests – whether pre-shipment or post-entry.

The Philippine Plant Quarantine Service likewise administers such other quarantine treatments as fumigation, chemical spraying and dipping to ensure effective phytosanitary measures against any hitchhikers carried by both import and export agricultural commodities.

Special Quarantine Zone/Area

The Philippines is host to some of the major pests of concern of its trading partners. Realizing the implication of this situation, the country has isolated such areas as the Palawan Islands through quarantine to prevent the movement of commodities, particularly mango, to prevent the spread of the mango pulp weevil to other parts of the Philippines.

The Guimaras Island was placed under quarantine to prevent the entry of mango pests. The Guimaras Island is now recognized as mango pulp and seed weevil-free area.

In instituting special quarantine zone within the country, the Philippine mango gained market access to the U.S.A. and Australia, thereby facilitating trade.

Accreditation and Certification

One of the ways to ensure that all stakeholders, particularly importers and exporters, know their obligations in the trade of agricultural commodities is the institutionalization of an accreditation system. The systems ensure that importers and exporters are made major partners of government in trade and are given the clear idea of their role and responsibilities. This system provides for sanctions within the bounds of the law for violators.

Certification of both local and foreign treatment facilities also plays a major role in facilitating the safe trade of agricultural commodities. The Philippines ensures that these facilities meet the standards and requirements set both by the Philippines and its trading partners.

All the SPS measures the Philippines institutes work in complementary with each other towards attaining safe food and substantially preventing entry of pests and diseases while trading agricultural commodities. In doing so, the obligations under the SPS Agreement are being complied with, taking into consideration the different principles stated in the Agreement.

ISSUES ON THE APPLICATION OF SPS MEASURES

Since the implementation of SPS measures in the country are legislated with concerned agencies, conflicts and overlapping of functions and responsibilities among these agencies occur.

In the DA, for example, overlapping of functions among its different bureaus and agencies sometime exist. While the BPI is tasked to implement the country's plant quarantine program, there's the BAFPS that is also tasked to regulate food safety and standards of agricultural products. The BPI, Bureau of Animal Industry and Bureau of Fisheries and Aquatic Resources have their own respective mandates to implement quarantine, yet these tasks either overlap or conflict with those of BAFPS' as well as the functions of such agencies as the NMIC and the FPA.

Another issue in the implementation of SPS measures in the Philippines, particularly those imported food and agricultural products, is the role of the Philippine Bureau of Customs in the release and clearance of these commodities. The Customs, mandated with collecting duties and providing revenues for the government, is the Philippines' frontline defense in ports of entry. Their being in the frontline to ensure revenues are collected based on tariffs and excise tax, has relegated the DA and other agencies, such as the DOH-BFAD, as mere secondary defense on safeguarding Philippine agriculture against any foreign hitchhikers that travelers and traders carry with their agricultural commodities.

This situation leads to another problem that threatens the safe trade of agricultural commodities, which is smuggling.

In the light of all these pitfalls and concerns, it is now imperative that the Philippines builds its capability to cope with the increasing demand for effective and efficient implementation of SPS vis-à-vis the dynamics of global trade and its importance in the country's effort to sustain its program to protect its own agricultural resource. Whether the Philippines is up to the challenge of trade liberalization and how the country can prevent the introduction of pests with the influx of agricultural commodities remains a daunting challenge to the country's quarantine service.

Harmonization of SPS Measures

The Philippines, as a member of the WTO, FAO-IPPC (International Plant Protect Convention), ASEAN and other relevant international organizations, participates in global harmonization efforts. Participation to various symposia and technical meetings towards harmonization efforts is a priority of the government.

In the absence of a Philippine standard, international standards on SPS measures set by the global body, such as Codex, are adopted.

Measures Undertaken to Address the Issues

Realizing these problems and their implication on Philippine agriculture, the DA has proposed an ambitious project of redirecting agricultural policies towards creating a responsive and efficient implementation of SPS measures.

The project, "Diversified Farm Income and Market Development Project" to be funded by the World Bank, is geared towards strengthening the institutional and capacity of the DA where reforms shall be undertaken on budget and accounting system, training of personnel, quarantine and phytosanitary service, regulation enforcement in food and animal safety and bio-safety. Capacity-building shall form part of the project's main component by providing the required equipment and facilities, such as laboratories.

At the moment, the DA coordinates with all the agencies concerned for a more collaborative effort to address the various issues.

Current Views on the Role of SPS Measures

The Philippines has various experiences with regard to the implementation of SPS measures since the liberalization of trade began in 1994.

The SPS measures have paved the way for some Philippine agricultural products to be exported overseas and, on some occasions prevented entry to some countries with unusual strictness of SPS measures.

It is the general view of the Philippines that SPS measures can very well control the trans-boundary movement of animal and plant pests and diseases, but may only be used fully by developed countries. Complicated and very elaborate regulation in the guise of SPS measure laid by other countries on the other hand may put the Philippines at a disadvantage. Developing countries like the Philippines could very well find SPS measures as a trade barrier if adjustments during the transitions will not be executed and completed within the limited time.

It is with urgency that the Philippines strengthen its capability and capacity to implement all the necessary reforms and measures to be at par with developed countries. Any delay in reforms will mean setback for the local agricultural industries that have been perceived as lagging behind in terms of competitiveness.

13. SINGAPORE

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INTRODUCTION

The Sanitary and Phytosanitary (SPS) Agreement covers measures imposed by countries:

* to protect human life from risk arising from additives, toxins, plant and animal-carried diseases;
* to protect animal life from risk arising from additives, toxins, pest, diseases and disease-causing organisms;
* to protect plant life from risk arising from pests, disease, disease-causing organisms; and
* to protect a country from the risk arising from damages caused by the entry, establishment or spread of pests.

The Agreement allows countries to set their own standards, but they must be based on science. Member countries are encouraged to use international standards, guidelines, and recommendations where they exist. However, they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

The Agri-food and Veterinary Authority (AVA) of Singapore is the agency responsible for food safety and animal and plant health in Singapore. The discussion below will give a general guideline as to how AVA enhances the nation's food safety and maintains its freedom from important animal and plant diseases through our risk assessment and monitoring program.

FOOD SAFETY

Assurance of food safety is a combined effort. Food processors at different levels of production bear a responsibility for the production of safe food. Singapore is a city with a very concentrated population. It is heavily dependent on imports as its local farms produce only 5 percent of vegetables, 9 percent of fish and 37 percent of eggs consumed. Thus, Singapore is very vulnerable to food-borne infection and intoxication.

AVA has in place an integrated food safety program. This system checks and counter-checks at critical stages to ensure that hazards, which can cause serious illnesses or food poisoning are removed at source before they can be introduced into the food chain. It includes the following measures:

* Review of production systems and practices at source
* Inspection and accreditation of source farms, abattoirs and food processing establishments
* Inspection of primary produce at the point of entry into Singapore
* Laboratory testing on livestock, frozen/chilled meat, live/chilled fish, fruits, vegetables, eggs and processed foods.

Surveillance and monitoring programs for high-risk products based on history of violation of safety standards.

Risk assessment is the vital first step in the chain for meat and meat products. This is a crucial step as many potential food-borne hazards begin at source. We need to ascertain that the exporting country has the resources and capabilities to prevent any hazards from entering the food chain. Our food safety standards are consistent with those set by the Codex Alimentarius. Import requirement for meat and meat products is also

consistent with Office International des Epizooties (OIE) standards and guidelines. For example, Singapore recognizes disease-free regions for foot-and-mouth disease, classical swine fever, highly pathogenic avian influenza, etc.

Our accreditation program is a two-stage process. When a new application is received, we will evaluate the country/province first before reviewing the establishment. A comprehensive documentary assessment of the new source country/province's health standards, production system and practices is carried out. Information on the country's animal health status (especially the OIE List A & B diseases), the country's veterinary public health status and veterinary services, their legislation in place and their disease control program will be reviewed. Legislation governing the operation of slaughterhouse and meat processing plants, meat inspection system, the role of inspectors and official veterinarians, handling, storage and distribution of the meat is also an important factor in Singapore's evaluation.

Once a country/province is accredited, the country would carry out a thorough documentary evaluation on the new export slaughter and processing establishments. Singapore will consider the construction and layout of the establishment and the facilities and equipment available at the establishment. After the paper evaluation on the information provided has been done, an on-site inspection will be carried out. This is to ensure that the actual establishment and the facilities meet the country's requirements.

The accreditation process may be applied to the whole country or individual farms, abattoir and processing establishments. Upon approval, the country or establishment may begin trading with Singapore. Currently, the country has accredited meat establishments from 26 countries. Such a system allows performance-based inspection and tracking.

All imported meat consignments are subject to mandatory inspection. This includes scrutinizing the required health documents and examining the consignments visually for wholesomeness and freedom from disease, spoilage and economic fraud. Depending on the performance of the establishment, products imported from the establishment may either be under the monitoring or surveillance inspection program. Under the monitoring program, random samples would be taken for laboratory testing. Under the surveillance program (for new or problematic establishments), the product will automatically be detained. Samples from three consecutive consignments will be selected for laboratory testing. Consignments, which are found to be unfit for human consumption, will be refused to be imported and destroyed or returned to the country their origin.

Fish is a relatively low-risk food. However, the consumption of raw or lightly cooked molluscan shellfish such as oysters, clams and cockles can lead to serious illness. Efforts are therefore concentrated on these high-risk items, which are often harvested from coastal waters and are subject to human and industrial activities. Cooked prawn and cooked crabmeat, which are exposed to excessive handling are also considered high-risk products and are given due attention. As such products are subject to hold and test, AVA only allows the import of oysters, blood cockle meat, cooked crabmeat and cooked prawn meat in frozen form. Import of live oysters is also allowed, but only from areas with comprehensive shellfish sanitation program and is to be accompanied with health certificates. Imports from areas affected with bio-toxins (e.g., toxic red tide, ciguatera toxin) and infectious disease will be suspended.

AVA took over the control of import of fresh fruits and vegetables from the Ministry of Environment in 1995. At that point of time, the violation rate for pesticides was about 40 percent (up to 70 percent) and excessive pesticide residues continued to be the primary concern with regard to fresh fruits and vegetables. Singapore set up two different inspection programs. They are the Monitoring Program and the Enforcement Program. Under the Monitoring Program, the country did random sampling to set up a baseline. Under the Enforcement Program, it conducted targeted sampling with the product being put under hold and test. This has enabled the country to set up its own track records of what are the problematic products and sources. Currently, the country has managed to narrow down its targets to 22 types of vegetables that have high violation rates. In 1998, Singapore initiated the Enhanced Enforcement Program. Under the Enhanced Enforcement Program, it also conducted hold and test for specific fruits or vegetables. In addition, if the consignment is found to exceed the specific pesticide Maximum Residue Limit (MRL), the consignment will be destroyed and the importer will be fined. Should their consignment (same product) fail inspection for the second time, within three months, the importer will be suspended from importing the specific product from that country of origin for three months. This system has successfully brought the violation rate down to 8 percent. There are also fewer types of pesticides detected and the levels found only marginally exceed the MRLs.

Although these measures had succeeded in bringing down the incidence of violation, certain imported vegetables were still found to contain excessive pesticide residues. New measures have been implemented to augment existing efforts in order to maintain food safety. A Restricted Import Program was initiated in 1999. Under this program, should the violation rate of certain specific vegetables exceed 20 percent within 1-3 months, the country will be suspended. Import will only be allowed from farms approved by AVA. So far, there has been no need to implement the restricted import measure.

Review of the exporting country's animal health status and veterinary health status is an ongoing process. Should there be an outbreak of disease, the country has to be alert and take prompt action. AVA maintains a continual vigilance over potential hazards in food moving through international commerce. Singapore suspends import at source, if necessary, to safeguard public health. Suspension can be due to outbreak of disease at source country or when flaws are detected upon import. These suspensions remain for as long as the hazards persist. AVA will lift the suspension after we are satisfied that the source country has resolved the problem. As for outbreak of animal disease, e.g. foot-and-mouth disease, the country follows the OIE guideline for country or region freedom from disease.

AVA has various ongoing surveillance programs to check for potentially hazardous pathogen in products imported from overseas establishments. Some of the country's routine checks are: *Salmonella enteritidis* (SE) in live and frozen poultry and eggs; *Escherichia coli* O157 in comminuted beef; *Listeria monocytogenes* in ready-to-eat products; *Campylobacter* and vancomycin-resistant *enterococci*; beta-agonist, chemical contaminants; and antibiotic residues. Several establishments were suspended due to presence of *Listeria monocytogenes* in ready-to-eat products. Although healthy individuals rarely fall seriously ill after exposure to the pathogen, it may result in miscarriages and stillbirths. It may lead to serious and even fatal infections in those with weak immune system.

As an import/export testing and certification laboratory, Singapore's AVA Veterinary Public Health Laboratory actively seeks accreditation to international standards to provide assurance to its regulatory counterparts. In 2000, the AVA laboratory was accredited under the Singapore Accreditation Council – Singapore Laboratory Accreditation Scheme (SAC-SINGLAS), to meet the requirements of ISO/IEC (International Electrotechnical Commission) Guide 25.

Strict standards are similarly applied in licensing the country's local meat and fish processing plants and slaughterhouses. Before licenses are approved, AVA plays an active role in ensuring that sound infrastructure and control systems are in place. AVA will provide the necessary assistance in the establishment of the essential infrastructure and is instrumental in ensuring proper process flows, and educating licensees on Good Manufacturing Practices (GMPs) and the use of food safety program such as Hazard Analysis and Critical Control Points (HACCP), as well as other relevant quality control programs. Licensed establishments are inspected regularly to ensure that all AVA licensing conditions are adhered to and that all the GMPs and food safety measures are observed.

Singapore is a trading country. Besides imports, it also exports a lot of value-added foodstuffs to other countries. The AVA facilitates trade by providing the necessary export health certification services to the food industry. The country's AVA laboratory is accredited by regulatory authorities in Australia (Australian Quarantine and Inspection Service) and Japan (Ministry of Agriculture, Forestry and Fisheries) and is recognized by the European Commission for export health certification testing. The AVA laboratory certification scheme is also recognized by more than 40 countries. This underlines Singapore's reputation as a center for safe food.

AVA's approach to enhance food safety and trade is based on international standards where it exists. In its risk assessment to accredit a new country or establishment, Singapore is transparent in giving its requirements and standards to the exporting countries. We also accept measures which exporting countries show to be equivalent. However, there are still quite a number of problems encountered in the country's approach:

* Problem of getting information from exporting country
* Lack of certain international standards, e.g., there is no standard on the level of *Listeria monocytogenes* for ready-to-eat products. AVA has set the limit to zero-tolerance but some exporting countries may have different standards.

Animal Health

AVA is dedicated to cultivating and preserving an environment for animals and plants to thrive and coexist harmoniously with people. A series of comprehensive animal and plant health programs are implemented, aimed at preventing the introduction and spread of exotic diseases, and ensuring that animals, plants and related products imported into Singapore are free from major animal and plant health diseases and pests. The underlying principle governing these programs is the prevention, control and assessment of the risk of disease and other biohazards at source. This is achieved through intensive monitoring and surveillance for animal and plant disease including inspection, statistically-sound sampling at point of entry and quarantine for imported animals.

Similarly, Singapore's animal health program is also two-tiered at the critical points: accreditation at source and documentary verification, inspection and laboratory testing at import.

Accreditation of poultry (broilers, layers, layer breeders) farms is also based on risk assessment, which includes evaluation at the country and the individual farm levels. A comprehensive documentary assessment of new source country's veterinary and organizational infrastructure, professional qualifications, laboratory capabilities, national disease surveillance, national disease control program, animal disease legislation, border controls, notifiable diseases, OIE list A disease status (e.g., Highly Pathogenic Avian Influence [HPAI]) is carried out. After which, at the farm level, we will be looking out for technical details such as the farm's management systems, farm location and layout, facilities, bio-sanitation, production capacity, animal health status, disease prevention and control, medication and vaccination, feed source, flock replacement, record-keeping. After assessing the paper documentation, AVA will carry out an on-farm inspection. We will verify the technical farm information submitted and carry out physical inspection for Good Agricultural Practice (GAP), location, bio-security, bio-sanitation and hygiene. Observation of the animal health status and disease surveillance program is also done. Sampling of the feed and swabs for culture will be carried out. This includes a joint testing for SE to accredit export layer and layer breeder farms.

For example, Singapore has been able to maintain SE-freedom through Singapore's vigilant monitoring. Imports of day-old chicks will be suspended if SE is isolated from the day-old chicks during post-arrival quarantine. The batch of day-old chicks will be destroyed too. When SE was isolated in a flock of birds on a local layer farm, immediate action is taken to cull the infected flock. The remaining flocks on the farm undergo rigorous testing and stringent bio-sanitation measures are put in place to ensure that the farm remained free from SE.

The export criteria for live pigs would include quarantine and bio-security, management of the animals in the farm, inventory and identification, blood sampling and inspection, medication, veterinary supervision and disease status at the farm.

Due to its strict import regulations, Singapore has remained free from major diseases of animal and plant that threatened public health and economic importance, including rabies, Nipah disease, HPAI and Bovine Spongiform Encephalopathy (BSE). No outbreak of any disease on List A of the OIE was reported.

Singapore was accepted as a Rabies-Free Island (RFI) by the Ministry of Agriculture, Food and Fisheries, United Kingdom. This further enhanced recognition of our disease-free status. In an exercise carried out by the European Union in March 2001, in categorizing the likelihood of BSE in a country, Singapore was accorded a Category 1 status for geographical risk for BSE (i.e., free from BSE) alongside countries like Australia and New Zealand. This is an international acknowledgement of the AVA's capability in maintaining Singapore's freedom from major diseases.

Plant Health

Similarly, Singapore is able to stay free from major plant pests and disease through our risk management and surveillance program.

The requirements for import of plant and plant products are based on risk assessment. Singapore would first evaluate the possible risk of certain plant pest or plant disease present in the imported product. If the risk of having the plant pest or plant disease in the imported product is high, we would continue to evaluate the risk of having such a plant pest or plant disease in our country. If the risk of such a plant pest or plant disease in the country is high, the country would require certain action to be taken to remove the plant pest or plant disease. Singapore is open to any equivalent measures taken by its counterparts to remove any possible risk.

The country's Pest Risk Assessment and Import Risk Assessment are conducted based on international guidelines, e.g., International Standards on Phytosanitary Measures (ISPM). Pest surveillance for quarantine and endemic pests and guidelines for phytosanitary certificates are also conducted in line with ISPM.

With its strict import requirement, Singapore has remained free from major plant quarantine pests and diseases such as the South American leaf blight, Khapra beetle and fruit flies (Mediterranean and Queensland).

Although Singapore is free from most major animal and plant diseases, it has encountered similar problems as other countries:

* Problem in getting information from the exporting country, which created difficulties in assessing the country's disease status
* Lack of information, e.g., on weeds and pests in Singapore could result in problems in exporting to other countries
* Lack of expertise in working out the taxonomy of the different plant pests.

With the increase in world trade in food and agriculture, Singapore will continue to enhance food safety program in order to protect the nation's food safety and cope with any emerging food-borne disease. Animal and plant health surveillance program will also continually be reviewed and enhanced to cope with any emerging animal and plant disease.

14. THAILAND

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INTRODUCTION

As tariffs are being lowered and the use of other traditional trade barriers is being disciplined by the agreements of the World Trade Organization (WTO), there is a concern that technical measures such as Sanitary and Phytosanitary (SPS) Measures are taking their place. Governments apply SPS measures to ensure the safe supply of food to consumers and prevent the spread of pests or diseases among animals and plants. Hence, by their very nature, SPS measures may restrict trade either explicitly or implicitly. While such measures do indeed serve reasonable goals, there is at the same time a risk that SPS measures are misused for protectionist purposes. This distinction is, of course, difficult to make and it is not less difficult to design a system to ensure that protectionism in disguise of SPS measures is ruled out. It was with the intention of avoiding such problem that the Agreement on the Application of Sanitary and Phytosanitary Measures was established during the Uruguay Round Negotiation. The difficulties in exporting under increasingly strict SPS measures are manifold. It would be more complex particularly for Thailand and many other developing countries. The costs involved included both the production costs of respecting the SPS requirements and that of conformity. When SPS requirements increase, production costs rise, as new inputs may be required from technologies. The conformity costs include the costs of certification and control. The costs of respecting SPS measures are higher in Thailand and other developing countries than in developed nations. Access to technical know-how is more restricted and the private and public service sectors that certify conformity are underdeveloped. The establishment of international disciplines to apply SPS measures would therefore be very important to Thailand. As Thai processed foods mainly tightened in international markets, increasing attention on food standards are getting more severe after the WTO has brought into two new agreements which are first, an Agreement on the Application of SPS and secondly, an Agreement on Technical Barriers to Trade (TBT). The SPS measures have great and direct impact to food industry with lesser compromise on the quality and safety of food produces. The new role of GATT 1994 or WTO acts as enforcer with a set of rules as well as compromiser in the international trade circle. An immediate need in conforming the above Codex Alimentalius Commission, International Plant Protection Convention and Office International des Epizooties guidelines and standards.

CURRENT SITUATION CONCERNING THE IMPLEMENTATION OF SPS

Major Activities and Accomplishment

Transparency is the most important in SPS measures. The Thai Government has notified the content of SPS measures to the WTO/SPS Committee. Consultations are held frequently to ensure transparency in the practice of SPS measures, and civil petitions made by the public are responded to avoid any mis-understanding. Concerning the transparency of SPS measures implemented by the government, any problems in their operation are thoroughly examined through government administration inspection by the national authority. The Thai Government is dedicated to continuing its endeavors to ensure consistency and transparency of the SPS measures and faithfully implement the WTO/SPS Agreement.

A significant change in Thailand's policy in the establishment of national standards is the adoption of international standards as a basis for the Thai Industrial Standards (TISs). The Thai Industrial Standards

Institute (TISI) has since 1997 implemented this policy, which reflects Thai authorities' strong desire in complying with the TBT and SPS Agreement. From January 1998 to July 2002, the total number of TISs including final drafts, which were prepared by adopting international standards such as ISO, IEC and Codex standards, is 375 of which 30 of the standards are related with the SPS. However, there are some instances where international standards have been found to be inappropriate for Thailand as they were prepared based on criteria or technical data of developed countries. Therefore, they are not appropriate for technical infrastructure and/or climatic conditions of Thailand. Currently, imports that are subject to SPS inspection include feedstuffs, fishery products, other food products, hazardous substances, live animals, plant seeds and plants.

In setting national Maximum Residue Limits (MRLs), Thailand takes the Codex MRLs into consideration to the development of national MRLs. Furthermore, The Thai Government is implementing regional coordinating project, "the Harmonization of MRLs of Pesticides among ASEAN Countries", which has been in existence since the last five years to facilitate intra- and extra-ASEAN trade. There are many commodities such as fruits and vegetables, which are traded within the ASEAN region and Codex MRLs for many of these products are not available. To date, the total number of harmonized MRLs of pesticides in vegetables and fruits that have been endorsed by the ASEAN Ministerrial Meeting on Agriculture and Forestry (AMAF) has reached 170 involving a total of 13 pesticides.

Quality management for horticultural products include Good Agricultural (or Manufacturing) Practice (GAP or GMP), Hazard Analysis and Critical Control Points (HACCP), ISO 9000 series, and ISO 14000. The Thai Food Processing Club has taken gradual steps to establish some forms of business-like independent organization to work on export inspection service and trying to maintain a forward linkage with innovative approach to meet the buyer countries' requirements on hygiene, health, pest and disease inspection processes. Besides, the Food Processing Club also provides the industrial members with training and technical advice aimed at tackling operational problems. Courses on quality assurance, GMP, HACCP and ISO 9000 series, etc., are on the move to maintain the industry's high-level technical disciplines. The Club also conducts seminars aimed at updating members with the latest world technology and international food laws. More often, the public sectors, Food and Drug Authority (FDA) and TISI organize joint forums to train and exchange views and has better understanding about domestic regulatory processes among the membership. Currently, Thailand does not insist on HACCP certification for its imported foods, but is encouraging its domestic industries to get HACCP certification.

Risk management is exercised by highly qualified regulatory authorities with the sole objective of providing high levels of protection to consumers. Risk management principles are set by law or by the risk manager's judgment to minimize the possibility of recurrence to the lowest level. An annual sampling plan that detects drug and chemical residues in food can be an example for risk management. Violent residue information is used as the basis for standard setting and enforcement and other follow-up activities.

Today, many pathogens in food or animal feed cannot be identified. Other pathogens have developed resistance to time-tested controls such as heat and refrigeration. The agencies' research focus immediately to develop rapid and cost-effective tests, which can detect pathogens in food such as *Salmonella, Crvptosporidium, Escherichia coli* 0157:H7, and hepatitis, a virus in a variety of foods, especially those foods already associated with food-borne illness. In addition to this, enhancement of understanding on how pathogens can become resistant to food preservation techniques and antibiotics would be achieved. Moreover, technologies for the prevention and control of pathogens such as the newly introduced methods of decontamination of meat, poultry, seafood, and fresh produce and eggs are being developed through researches.

FDA and the Department of Education work with the food industry and consumer associations/groups to launch a campaign aimed at raising the public awareness about food safety. The partnership would help develop, evaluate and disseminate a single food safety slogan and other several messages on standards.

Agencies educate physicians to diagnose and treat food-borne illness: strengthen efforts to educate producers, veterinarians, and local regulators about the proper use of animal drug and HACCP's principles and work in partnership to train retail and food service workers about safe handling practices and inform high-risk groups how to avoid food-borne illness, e.g., people with liver disease, an illness that may be caused by eating raw oysters which contain *Vibrio vulnificus*.

Up to now, there are no regulatory programs such as Quality Assurance, a measure – especially for the fresh-cut industry – have been in operation in many countries for some time. The fresh fruit and vegetable industry is unique in many respects. Most operations remain an extension of the domestic market – small-scale and family-run or from farm to table, the handling chains consist of fragmented and highly individualized sectors. Conflicts of interest are also common. The produce is seasonal and perishable, and the quality of products is largely influenced by the skill (and even luck) of the operators. Some of the factors influencing the speed and success of quality assurance adoption in Thailand are as follows:

* The influence of policy and role of governments – both exporting and importing countries. Lack of understanding or reluctance to agree on international/regional cooperation regarding equivalence and mutual recognition of rules and regulations in a legal context.
* In a quality assurance system, the exporting countries may place emphasis on process performance, while the importing countries have little confidence in the monitoring process carried out by the exporting countries. There is confusion as to whether to assess the process performance carried out in the exporting country or to assess the final product after it arrives in the importing country.
* Lack of understanding of quality assurance systems for perishable produce results in difficulties in selecting a feasible and suitable quality management system. The need to meet the legal, quality, and safety requirements differs for different produce – greater significance is placed on some particular aspects in some situations, and requirements can be subject to change. Decisions on the type (or combination of types) of quality assurance system to be used are not always clear. For the most part, the operator cannot fully understand the detail and the complexity (or ease) of a specific quality system, the choice of an appropriate system and priority activities to be undertaken.

EFFECT OF THE SPS AGREEMENT TO THAILAND

Thailand is experiencing difficulties in meeting developed countries' SPS requirements and concerns have been expressed about the way in which the SPS Agreement has been implemented to date. The cases are as follows:

1. ***Tuna***: The Middle East countries including Egypt, Saudi Arabia and others prohibit the entry of all GM foods. Accordingly, they are prohibiting Thai canned tuna imports with soybean oil because of their belief that the oil is made from GM beans. Thailand has protested to this claim and urged the stated nations to accept certificates from Thai producers asserting that their food products are free of GM. However, Egypt up to now refuses to lift its ban imposed on imports of Thai tuna into its country. Thailand requested WTO to settle its disagreement with Egypt on 22 September 2000. Saudi Arabia is not a member of the WTO and is not subject to its dispute settlement proceedings.
2. ***Rice in Mexico***: Thailand welcomed the recent change in Mexico's restrictions on Thai rice. In 1994, Mexico placed a ban on Thai rice claiming to find an insect that resembles beetle in rice imported from Thailand. Thailand, however, appealed against the ban to the WTO. Under WTO discussions, Mexico admitted that there was no beetle found in Thai rice. However, Mexico claimed that instead of the beetle, Thai rice was, in fact, contaminated by fungus. After some time, Mexico once again admitted that its claim of finding fungus was unfounded. However, Thailand questions why certain conditions still seem to discriminate against Thai rice, for example, certification and fumigation at port of entry.
3. ***Durians in Australia***: After discovering "durian seed borers", Australia embargoed all durian imports from Thailand under the SPS Agreement. In 2000, Australia lifted the ban; however, restrictions still apply to durian imports. Durian from Thailand may only be imported between the months of April to December because these are the months in which the pest cannot survive in Australia. Furthermore, the imported durian may only originate from the eastern region of Thailand. Thailand has stated its disapproval of the restraint, however, there have been no changes to the import terms as to date.
4. ***Orchids in European Union (EU)***: The EU market prohibited the importation of all cut flowers from Thailand and specific prohibition on all species of orchids because of the contamination orchid's export to EU markets by thrips in 1996. In this case, Thailand had negotiated with the European Community during the Thailand-EU Experts Meeting in June 1997 and appealed to hold the enforcement of such

measures. Fortunately, the European Community has accepted the appeal. However, Thailand has to prove that it is taking remedial measures and action to ensure that its orchid exports are free from thrips contamination. The Thai Government has reacted to the problem soon. Through the implementation of the various remedial measures, statistical data on the exportation of Thai orchids to Italy showed a declining trend of thrips contamination, unit August 1998 where there are no reports of thrips contamination.

Table 1. Declining Trend of Thrips Contamination in Orchids

Month	Total Number of Shipment	Total Exterminated Shipments	Percentage of Exterminated Shipments
March	696	25	3.59
April	489	14	2.86
May	533	9	1.69
June	506	3	0.59
July	449	5	1.11
August	461	0	0

FUTURE TRENDS

Although Thailand is faced with one of the most serious economic crises it has ever experienced, the government remains fully committed to liberalization of trade and intends to carry out all the commitments made in every forum. Thailand is also a member of the Cairns Group, which played an instrumental role in agriculture negotiations in the Uruguay Round and continues to be a major force in the same area until today.

Thailand's trade policies continue to aim at maintaining an open trade regime so that trade growth contributes to sustainable economic development. It has been the government's policy to allow market forces to determine pattern of trade and ensure non-discriminatory access to markets. All measures that cause inconvenience to importers and exporters will be minimized. The government will continue to pursue policies geared toward greater liberalization in its economy. To accomplish the objectives of the policy, Thailand has reformed its bureaucratic system. The Thai Government has established a new institute, the Institute of Agricultural Standard, charged with all national standards, which will be effective in the coming year. All measures under the SPS Agreement will collectively be implemented under the new institution.

Thailand will also actively participate in the WTO with a view to contributing to the improvement of the multilateral trading system. Towards this end, the food and other regulations are being reviewed in order to harmonize, where possible, with national measure and international standards, guidelines and recommendations developed by the WTO. Steps will also be taken in capacity building program, which is one of the core forces, propelling Thailand as well as other developing countries, to move closer and faster towards the full implementation of WTO obligations.

CONCLUSION

The existence of the SPS Agreement may serve as a catalyst for regulatory reform. Members may unilaterally decide to review their existing regulations and procedures used for drafting new regulations to ensure that they are in conformity with the SPS Agreement. This implies that member countries may benefit from the Agreement despite the fact that they are unable to use complex instruments, like the dispute settlement system the Agreement requires. This is particularly interesting for developing countries since they, as emphasized above, face difficulties in using many of the opportunities offered to members in the Agreement.

The implementation of the Agreement has encountered two fundamental problems. Firstly, there appear to be a wide gap between the financial, human, and technical resources and the resources required to exercise the Agreement.. The various cost of participating in the management of the Agreement that takes place in the SPS Committee, for example, the costs of participating in future negotiations regarding the Agreement, the costs of participating in the setting of standards and the costs of making complaints in the dispute settlement

system. These cost sums up to a demand for resources that Thailand could not afford. However, it does not mean that Thailand cannot benefit at all from the Agreement, as there is still an opportunity for member countries to become beneficiary without being able to exercise fully the obligation as enshrined in the Agreement.

The total cost of implementing the Agreement may be high. It is difficult to determine the exact cost since that may requires a thorough estimate. The cost is likely to be substantial and it is particularly difficult to determine the benefits since there is a possibility in which some developing countries may not gain from the Agreement. This would be the case if a country is incapable of using the opportunities offered in Agreement while still having to bear the implementation costs.

For a number of underdeveloping and African countries, this seems to be an undesirable situation. The issue of implementation costs lead to the second fundamental problem of the Agreement. This is the extent of harmonization of international standards, which is desirable from developing countries' viewpoint. In the Agreement, standards that achieve a higher protection level than international standards are considered, but standards that achieve a lower protection level are ruled out. This contravenes the interest of many developing countries' as the food safety problems they experience differ basically from the ones that are addressed in the international standards. This problem is a major source of high implementation costs although the discussion is properly more theoretical than real, as a country is unlikely to be asked to raise standards by its trading partner. Since the harmonization of SPS measures around international standards evolves, it is nevertheless a very important problem that must be taken into account. Should the world focus on one general set of standards like the aim of the SPS Agreement? Or would a two-tier system be appropriate? The high local standards in developed countries and export sectors targeting these and lower local standards in developing countries? If the latter is the right answer (and developments in the real world seems to point in that direction), it would be wise to incorporate this in the SPS Agreement in order discourage developing countries from using their scarce resources. This issue is not only relevant for domestic trade within Thailand but also for trade between developing countries.

15. VIETNAM

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INTRODUCTION

Total area of Vietnam is about 330,000 km^2, of which land area is about 325,000 km^2 stretching vertically from north to south for a distance of more than 2,000 km with two lowland deltas, the Red River Delta in the North and Mekong River Delta in the South. Other areas are mainly hilly and mountainous area (80 percent).

Vietnam is an agricultural country with a population of 80 million, 80 percent are living in the rural areas. Rice production dominates the whole country with almost 7.5 million ha. Vietnam is the third biggest exporter after India and Thailand.

Table 1. Main Crops Cultivated in Vietnam, 2001

Crops	Area (000 ha)	Production (000 mt)	Export (000 mt)
Rice	7,484.4	31,970	3,730
Maize	727.2	2,112.7	
Sweet potato	244.7	1,655.1	
Cassava	263.8	2,806.6	
Soybean	140.1	176.2	
Peanut	241.2	352.8	
Sugarcane	290.9	14,325.5	
Tobacco	23.9	30.8	
Cotton	27.3	27.4	
Tea	95.6	371.8	68.2
Rubber	418.4	300.7	308
Coffee	568.2	843.9	931
Coconut	156.2	977.5	
Pepper	35	44.2	57
Cashew	199	70.2	43.7
Vegetables	494.7	6,676.7	
Fruits	74.8	442.8	
Mango	45.1	178.7	

The livestock sector in Vietnam is not very well developed. It comprises some 4 million cattle, 3 million buffalo, 18 million pigs and 155 million poultry and produces about 1.6 million mt of meat annually. The overall meat per capita consumption is about 20 kg. Livestock production provides about a quarter of farm incomes. Despite the many difficulties in animal production, slaughter and processing, Vietnam hopes to increase livestock production and meat exports. Advantages in the future could be:

1. rice production is fully developed and produces by products that can be used in livestock production;
2. the increasing incomes of the 80 million Vietnamese people will increase demand for red meat and poultry; and

3. exports of pork and poultry are likely to increase as the quality and sanitary conditions in the industry increase.

ORGANIZATIONS IN CHARGE OF SPS MANAGEMENT IN VIETNAM

Administrative responsibility for Sanitary and Phytosanitary (SPS) measures is divided within the government: i) Plant Protection Department (plant health); and ii) Veterinary Department (animal health).

The government manages plant protection and quarantine, combining advanced techniques and traditional experiences, assuring the common social interests.

Plant Health

The Plant Protection Department carries out:

* protective extension work;
* activities to prevent introduction and spread of domestic and exotic pests; and
* management of pesticides and regulations.

The Department is divided into eight operating divisions, of which the Plant Quarantine Division maintains a Central (diagnostic) Laboratory and some 30 plant quarantine stations (at various ports of entry with a large concentration along the Chinese border) and two post-entry quarantine stations. The largest division, Plant Protection maintains four regional centers, 61 provincial plant protection offices, and some 450 district stations.

Animal Health

The basic organizational structure is similar to that of plant protection at the national, regional and local level. Imports of live animals and meat are inspected at points of entry.

TECHNICAL MEASURE

Vietnam's sanitary regulations applicable to imported animals and animal products are based on standards provided by international and regional organizations as Codex, Office International des Epizooties (OIE), and ASEAN.

A health certificate is required for imported live animals. The document must indicate that the animals are free from infections and contagious diseases. It must also state that the exporting country has been free of certain diseases, including foot-and-mouth disease and rinderpest, for a period of three years.

In accordance with the revised text of the International Plant Protection Convention (1997), Vietnam receives phytosanitary certificates issued by the national Plant Quarantine Agency of the exporting country for exported goods. Phytosanitary certificates are required for imports of fruits, vegetables, plants, and parts of plants. Packaging accompanying plants must be certified free from diseases and pests.

Imports of processed food products require a certificate of laboratory analysis. A certificate of Good Manufacturing Practice (GMP) and a certificate of Hazard Analysis Critical Control Points (HACCP) are recommended for regular shipments of processed foods. The ship owner must provide a certificate indicating that the vessel is less than 15 years old. Mandatory Standards of Vietnam (TCVN) apply to goods that are significantly important to the economy. Pursuant to the Ordinance on Quality, an independent Vietnamese or foreign inspection organization carries out Mandatory Conformity Certification and Quality Inspection. Imported goods subject to inspection include petroleum products, fertilizers, electronic and electrical products, food and beverages, machinery and equipment, steel, and pharmaceuticals. The list of products is updated annually by the Ministry of Science, Technology and Environment. Goods originating from a country, which concluded an Agreement on Standardized Quality Mutual Recognition with Vietnam Products may be exempted from inspection. Milk powder and condensed milk are subject to Ministry of Health's inspection for the purpose of food hygiene and safety standards.

Vietnam has various legal documents regulating sanitary, phytosanitary and health quarantine. The government promulgated Decree No. 86/CP dated 8 December 1995 stipulating and assigning the responsibilities on State Quality Control Management of Goods among various governmental agencies. Live animals and plants, products originating from animals, and plants used for feeding animals are subject to the control of the Ministry of Agriculture and Rural Development. The Ministry of Fisheries is responsible for control and monitoring the veterinary hygiene of aqua-products.

GENERAL ATTITUDES TOWARDS SPS MEASURES AND TRADE

Legally any organization/individual is entitled to complain to either the specialized inspection office of plant protection and plant quarantine or directly to the superior office for State management of plant protection and plant quarantine about the conclusions and the treatment which have been made through the process of inspection at its place.

The manufacturing, importing and exporting and distribution and usage of all plant protection chemicals are under a State unified management. The government supplies plant protection and quarantine chemicals in the whole country and different local areas.

Vietnam has a comprehensive SPS regulation. In the area of phytosanitary protection it started to harmonize its standards with the Codex Alimentarius, whereas is the area sanitary standards regulations of the OIE are applied.

GOVERNMENT INITIATIVES

Quality Assurance

The National Fishery Inspection and Quality Assurance Center (NAFIQACEN) is a "national competent authority" for control of quality and hygiene assurance in fishery production and trade. The fishery quality and hygiene assurance program involves the whole production chain from capture/aquaculture to handling, processing, transportation, export, import, and distribution in domestic market. It carries out inspection and certification of fishery establishments, provides assistance, training and advice to firms, and cooperates with similar organizations in international forums.

NAFIQACEN has developed a list of firms approved and certified to meet EU standards, including quality and safety control programs based on GMP and HACCP. The laboratories currently operate with good laboratory practices and will soon be certificated for ISO 9002. NAFIQACEN laboratories have the equipment and capability of organoleptic assessment and analyzing all common quality and safety parameters of seafood, they are also analyzing certain special parameters such as residues of heavy metals, veterinary drugs, pesticides, histamine, biotoxins, etc.

AWARENESS OF SPS AGREEMENT

Administrative Responsibility for SPS Agreement

The government shall also provide the implementation of international conventions for plant protection and quarantine. The State management includes also:

* watching, discovering and identifying pests;
* granting, revoking business licenses for plant protection, plant protection chemicals and chemicals for disinfecting plant quarantine objects;
* permit and certify plant quarantine;
* checking and inspecting the implementation of regulations on plant protection, plant quarantine, plant protection chemicals;
* treating violation of these regulations and procedures; and
* settling disputes, complaints, etc.

Participation in SPS Agreement and International Standards Organizations

The Multilateral Trade Policy Department, which is attached to the Ministry of Trade, handles all relations with multilateral organizations (such as ASEAN) and Agreements (such as the WTO). The Department is directly involved in the WTO accession process. After achieving observer status in 1994, Vietnam formally submitted a memorandum of accession to the WTO Secretariat in August 1995. Vietnam is in the "fact finding" phase of its application to the WTO. The Working Party on Accession reviewed the application and submitted over 1,000 questions to the Government of Vietnam. Many of these questions had to do with SPS measures and barriers to trade.

Vietnam sought membership in the WTO because it was changing from a command-based economy to a market economy. In addition to seeking WTO membership, it is an active participant in ASEAN, and other multilateral organizations, such as Codex, but within its manpower and financial limitations.

The questions from the Working Party on Accession raised a number of questions about the SPS regime in Vietnam and about its compatibility with WTO membership. According to an EU-financed study, that evaluated agricultural policies, including SPS measures, only a small gap existed between Vietnam regulations and the WTO.

Constraints to Participation in SPS Agreement

1. ***Resources and Infrastructure***

Vietnam lacks sophisticated laboratory equipment and trained personnel and has only a few people to follow a large and complex area while the larger developed countries have whole legions to do so.

2. ***Risk Analysis***

Clearly, the ability to conduct risk analysis, as required by the SPS Agreement, is lacking in Vietnam.

Operation of the SPS Agreement

The early stages of the WTO dispute process involve bilateral negotiations, which Vietnam can freely initiate now, but which require participants to respond in fixed and relatively short periods of time and in a manner that aids transparency of relationships and at clearly defined contact points.

Plant protection activities are based on the Decree of Plant Protection and Quarantine, which was issued in February 1993. The regulations were claimed to be based on the International Plant Protection Convention (of 1977), regional plant protection agreements and on Vietnamese law. Codex standards were used for maximum pesticide residues. It was noted that standards of the International Standards Organization were also used.

ACTION PLAN MADE FOR PERIOD 2002-05

1. Review regulations and laws relating to SPS in Vietnam, refer them with that international regulations such as SPS and TBT Agreements of WTO, Agreement and Protocol No.8 of ASEAN, rules and laws on plant protection and phytosanitary of United States, EU, and Japan (big markets) for adjustment targeting to export purpose.
2. Establish a new series of Vietnam standards on SPS, disseminate and instruct for application especially standards on analyzing risk of phytosanitary accident establish none-effected disease zones and program on disease investigation and monitoring.
3. Establish phytosanitary objects of Vietnam (general and detail lists by plants), and set up software for phytosanitary objects in Vietnam.
4. Set up one website (bilingual) of Vietnam for plant protection and phytosanitary (including written laws and regulations, technical standards, organization system and trading connectors).

CONCLUSIONS

The most important export products for the European market are fish products. Due to its historical development from a central to a market-based economy, Vietnam is just establishing its trade links in the

world market, and it still has strong traditional links to other Asian markets such as China, Taiwan and Hong Kong, hence the limited international participation by Vietnam.

The general principles laid down by the SPS Agreement are supported by the Vietnamese Government and it is acknowledged that Vietnam will benefit from the Agreement in the future.

To facilitate international trade Vietnam considers the participation in the WTO, which will give Vietnam access to dispute settlement body, and provides greater acceptance Vietnam export products, as a very important issue.

The Government of Vietnam has taken a number of initiatives to improve sanitary and quality control according to EU standards so as to enter into the list of authorized countries for EU exports. To date, only very few companies are approved for exporting to the EU.

16. CAMBODIA

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INTRODUCTION

Along with the overall economic development policy being practicable, the Government of Cambodia has also given great priority to alleviate the people from their burden of poverty.

With the view of improving the people's standards of living, the government in the past years has carried out extensive work in the expansion of agriculture including in animal husbandry and in fishery. This in turn had led to the production of wide varieties of foods by the people especially fresh or frozen products primarily aimed at promoting export opportunities.

The new development initiatives being pursued require the government to find ways to best protect the health of consumers domestically and to improve confidence with regard to exported products on foreign market, by meeting the safety requirements of importing countries.

In addition to this, Cambodia is likely to become the first "least developed country" to join the WTO, scheduled for probable accession to the world body in late 2003. It has to enact reform to gradually meet WTO demands. In this respect, Sanitary and Phytosanitary (SPS) measures are one of the priorities to be strengthened.

Food safety remains a major public health concern in Cambodia with food-borne diseases becoming a major cause of personal distress, preventable death, and avoidable economic burden. Typically, food-borne disease incidences are caused by mishandling of perishable food, especially where ready-to-eat food (provided by restaurants, markets, street food and other vending locations) is prepared and provided to the public for consumption.

The provision of safe food has become a challenge for all health authorities.

This will urge the government to build its national capacity that will enable it ensures food safety as well as to manage the control of pests and diseases through the strengthening of Cambodia's border quarantine.

Despite these and other efforts being taken care of by the government, Cambodia is still faced with various challenges pertinent to food safety. Such challenges include as building a stronger capacity and capability that will help it manage an efficient food control and safety scheme, and the harmonization of its national measures with international standards, such Codex, Office International des Epizooties (OIE) and International Plant Protection Convention (IPPC).

CURRENT SITUATIONS CONCERNING THE IMPLEMENTATION OF SPS MEASURES WITH REGARD TO ENHANCING FOOD SAFETY AND TRADE IN CAMBODIA

Cambodian Food Chain

The food supply chain begin from the farm or fishing boat, and extends through markets, food factories, stores, and supermarkets to the street food vendors, restaurants or kitchens of the consumer. Food processing operations range from few large-scale foreign-owned operations to small-scale plants. The food supply chain is a source of employment and wealth generation for many Cambodians. Many sectors are typically informal, and assist people of low socioeconomic status to meet their food and nutritional requirements.

The following diagram seeks to show the principal stages of the Food Supply Chain and highlights all the sectors requiring attention in a comprehensive National Food Safety Control Program for Cambodia. It does not include the various service providers such as transport operations, packaging supplies, middlemen and other agents involved in the food trade.

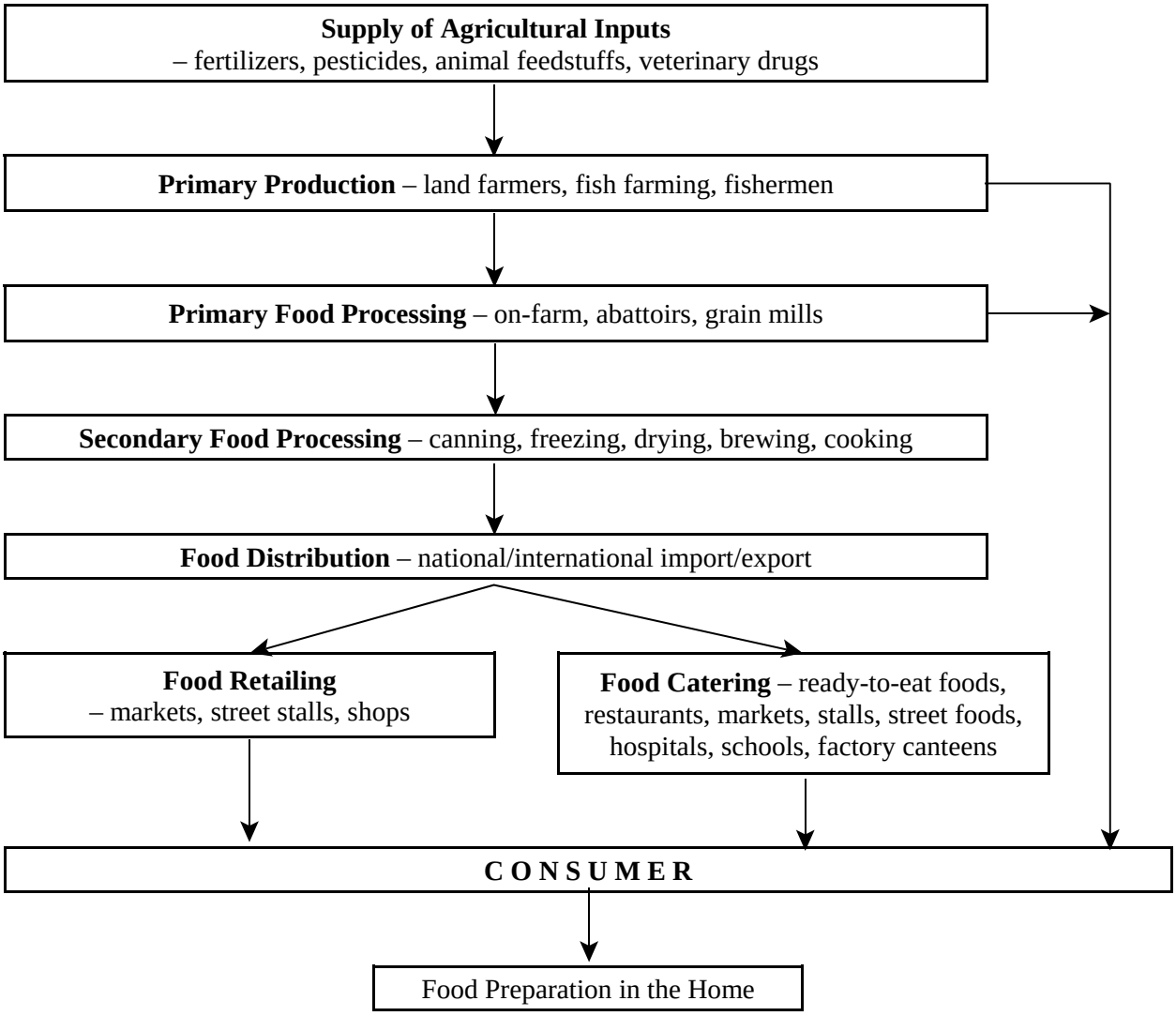

Figure 1. Cambodian Food Supply Chain

Source: Adapted from Guidelines for Strengthening a National Food Safety Programme (WHO/FNU/FOS/96.2).

Farmers producing crops and fishermen catering fish, supply the final consumer via intermediaries such as urban and rural markets, street food vendors, supermarkets, or restaurants. Controlling of one these sectors in this chain will not secure food safety or will not prevent further hygiene abuses or insults on food safety and wholesomeness. Accordingly, a National Food Control Program must integrate all the major control components to ensure a complete coverage of the concerns.

Organizational Matters

The primary role of government in food regulation is to protect public health and safety as well as to ensure fair practices in food the trade. The following line ministries are responsible for food safety issues.

The Ministry of Commerce (CamControl Department) is the leading food safety authority in terms of initiating technical regulations, development and control operations. In the field of control operations, CamControl is responsible for import, export and market surveillance.

Furthermore, the Ministry is empowered by the Act promulgated on the 26 June 2000, titled the "Law on the Management of Quality and Safety of Products and Services", to undertake also the "Repression of Fraud" and the "Safety" of all products except pharmaceutical products.

Thus in addition to ensuring the compliance of the rules by food processors with safety requirements, the Law empowers CamControl to ensure that packaged food are complemented by proper labeling by an approved food factory or ensures that the composition of the food conforms with the label of the ingredient.

The officers from CamControl are bestowed with the power to enter into all premises and to assess if production processes are complemented with the actual production programs and to inspect the final products (taking samples for analysis), and to censure food merchants from selling unsafe or impure food products.

The Ministry of Health is also responsible for food safety management. In the absence of more descriptive legislation, food control officers of the Ministry of Health has limited justification for inspecting food premise and the collection of samples for analysis. Viewed from the continuum of various control activities for safety, the following activities are deemed necessary to be addressed to complement to food safety by the government.

1. Undertaking of food safety research activities including risk assessment exercise;
2. Establishing epidemiological surveillance of food-borne diseases;
3. Collecting information about the level of exposure of the Cambodian population;
4. Strengthening of public hygiene (market place, restaurant, public catering, etc.);
5. Improving the safety of street food; and
6. Educating food handlers, health professionals and consumers in food safety.

The Ministry of Industry, Mines and Energy is responsible for food quality control in the factory and control of process and food registration. Emphasis should be made on these undertakings to promote safe food technologies and development of food standard especially in those areas where international standards are nonexistent.

The Ministry of Agriculture, Forestry and Fishery is responsible for animal source food contaminated by animal disease causing organisms mainly at the stage of primary food processing; abattoirs.

Legislation Governing Food Control

As stated above, the Law that came into force approved by the parliament and titled "Law on Management of Quality and Safety of Products and Services" promulgated in 2000 provides a legal framework for the maintenance of food safety across the food continuum (from farm to table). With paramount importance attached to public health, the Law stipulates clearly that it is the food processors' legal responsibility to produce and market safe foods.

The Law also empowers a continuous and coordinated program of mandatory inspection and enforcement.

It authorizes national agencies in charge of establishing regulations or standards for foods, including how it should be prepared, packed, and to indicate permissible levels of food additives and contaminants (microbial pathogens, hazardous chemicals, natural toxins and harmful parasites).

Regulation on labeling for pre-packed food had been issued based on the Codex standards. Food Hygiene Regulation (sub-decree) including microbiological specification for various kinds of foods is endorsed by the National Codex Committee and is to the government for formal adoption.

Regulation on food additives, contaminants in food, maximum limits for pesticide residues and maximum residue limits for veterinary drugs are in the process of being drafted.

As recommended by the WTO/SPS Agreement, Cambodia adopts the policy of harmonization of the above requirements with those of Codex wherever appropriate.

Enforcement Activities

Currently, Officers of the Ministry of Commerce (Cambodia Import Export Inspection and Fraud Repression Department [CamControl]) are the most accepted inspectors of food. On national market places, CamControl has set up an active surveillance program for food either produced domestically or imported.

The major focus of its activities, for processed and packed foods, is to comply with labeling requirements, especially the omission of use-by-date or the expiration thereof.

Recently, high-risk food especially perishable foods and critical issues such as inappropriate food storage, unhygienic handling practices for perishable food, adulteration (treatment with harmful chemical), high level of pesticide residues on vegetable had become the main concern for control. Falsification of the products is also on the agenda of the routine investigation.

For processed and packed food produced domestically the program of surveillance is complemented by the assessment of hygienic process in the factories according to the Hazard Analysis and Critical Control Points (HACCP) principles. CamControl inspectors will set up a visit scheduled for the food factories for that purpose. Limited numbers of samples will be taken following such schedules for analysis, especially for microbiological analysis.

All imported consignments of foods are inspected. CamControl in this regard is moving towards developing an Imported Food Program by setting up inspection categories based on the nature of the food (the potential risk to human health) and historical inspection data.

With regard to the export aspect, the main concern is about increasing our trade in food commodity especially raw food by getting confidence of the purchaser in the safety and quality of the food being imported.

CamControl is the agency also given the task to perform product certification which would ensure that the product meet the specifications required by the importer and is satisfactory to any laws or regulations of the receiving country.

CamControl has much to undertake so that it can fully strengthen its capacity in this area especially to be accepted by the EU as a National Control Authority in Cambodia for the export of seafood to the EU.

As a technical support, the government has funded the establishment of two laboratories that will undertake food analysis, chemical analysis and microbiological analysis in CamControl. Currently, the operational capacity and capability of the two laboratories are still at the beginning stage.

The Ministry of Industry, Mines and Energy also carries out analysis in its laboratories of sample of selected food products, for example, bottle water, rice, wine, fish sauce, vinegar, soy sauce, etc. The Ministry regards this scheduled testing program as quality control of final products in the factories.

Even if the processor may pass the analysis, the quality and safety of the relevant final products had to be closely monitored while still in the market, because most of the obligations may not have been met on the basis of the food hygiene requirements.

At the Ministry of Health, two Departments are involved in food safety issues; the National Center for Health Promotion and the Department of Drugs, Food, Medical Materials and Cosmetics.

Few samples of food had been taken from the factories and from the markets for analysis to have a baseline data on chemical and microbiological status of the food supply.

Educational awareness programs have been carried out for food handlers, health professionals especially in the capital city and some provincial towns.

Efforts have been made for enhancing the reporting of food-borne diseases complementing to the identification of high-risk food and the additional clarification of the contaminant status of the food supply.

MAIN ISSUES REGARDING THE APPLICATION OF THE SPS MEASURES IN CAMBODIA

Since food safety issues are of multi-sector nature, the government has set up the Inter-ministerial Committee for Coordinating the Control of Quality and Safety of Products.

The Committee comprises as its member representatives from every ministry concerned with food safety issues, namely:

* the Ministry of Commerce
* the Ministry of Industry Mines and Energy

* the Cabinet of the Council of Ministers
* the Ministry of Agriculture, Forestry and Fishery
* the Ministry of Health
* the Ministry of Environment
* the Ministry of Finance
* the Ministry of Interior.

The Committee's main task is to define the responsibilities of the Ministries concerned with the application of the SPS measure.

The Committee is also given the task of developing the National Policy on Quality and Safety of Products (foods) and fair practices in the food trade, and to monitor and evaluate the progress of the application of SPS measures by concerned agencies.

This Committee is also entrusted with the responsibility to carry out the role of the National Codex Committee. Its members are made to be broad-based to comprising persons from the academia, representatives of the industry and representatives of the trade sector. The consumer has no representation in this committee.

The National Codex Committee, with its four Technical Working Groups participates in the Codex activities by following up the ongoing activities of the Committees of the Codex Commission by providing comments, whenever possible taking into account the need and interest of Cambodia. Cambodia has a strong desire to send a delegation to participate in the meeting of the Committees the terms of reference of which Cambodia is highly interested in. Due to financial constraints, most of the time in the past, it was not possible for Cambodia to fulfill its ambitions. The country has so far been able to participate only in the Coordinating Committee for Asia (CCASIA) meetings and this was made possible by funding from FAO.

The Committee has also adopted the policy of "no need to reinvent the wheel". The national standard body of Cambodia and National Codex Committee are in the process of establishing a list containing types of foods produced domestically to be harmonized with the existing Codex standard.

The draft sub-decree on food hygiene including the specification for microbiological limit in foods harmonizing with the Recommended Code of Practice – General Principles on Food Hygiene and based on the International Commission on Microbiological Specifications for Foods (ICMSF) specification (with some severity temporarily reduced) have been reviewed and sent to the government for formal adoption.

The above sub-decree, when adopted, will make the application of Good Manufacturing Practice (GMP) in the food factory mandatory.

Sub-decree on food additives, contaminants in food, maximum limits for pesticide residues are in process of being drafted by the National Codex Committee in harmonization with the Codex.

The Ministries involved in food safety issues, have important strengths in food safety management and control such as:

* commitment to improving public health, especially food safety, to improve food quality for promoting
* involvement in all sectors of the food chain activities
* better improvement of organization arrangement for food safety management and control.

In reviewing the application of SPS measures (food safety), a number of weaknesses were identified in the current situation:

* Role and responsibilities of Ministries involved in food chains are not effectively implemented
* Activities of the Inter-Ministerial Committee and those of the National Codex Committee are not dynamic enough to cope with the current challenges
* Inadequate enforcement efforts practiced at national and provincial levels
* Insufficient training of enforcement officers, and food inspectors
* Inadequate food surveillance capacity due to lack of a well-equipped reference laboratory with trained and properly resourced analysts.
* Limited training in food hygiene for food handlers.
* Insufficient consumer education on food safety.

CURRENT VIEWS REGARDING THE ROLE OF SPS MEASURES IN THE COMING YEARS, PARTICULARLY WITH REGARD TO TRANS-BOUNDARY PLANT, PESTS AND ANIMAL DISEASES

Organizational Matters

The functions of quarantine (animal quarantine, fish quarantine, plant quarantine) are dealt by the Ministry of Agriculture, Forestry and Fisheries.

The Department of Agronomy and Agricultural Soil Improvement has responsibility to carry out the phytosanitary management. Animal and fish quarantine services are the task of the Department of Animal Production and Welfare.

Plant and animal quarantine stations had been secured at the main entry/exit points of Cambodia. The Department also operates diagnostic laboratories.

Legislation Governing Quarantine Service

So far, the quarantine service has been using the regulations adopted in 1983 (on plant quarantine) and in 1988 (on animal quarantine) as a legal tool for implementing its activities. Now, the Ministry of Agriculture, Forestry and Fisheries has proposed a new draft regulation in the expectation to better manage pests and animal diseases, to strengthen Cambodia's border quarantine services and to support in a better way regional cooperation in these areas.

The new regulations enable the quarantine service to declare noticeable/emergency diseases, to take emergency action, to enforce control on the movement of animals/plants within the country, and/or to declare areas/zones infected/free of diseases. The quarantine service also issues certificates for entry and export of food items.

GREATEST NEED IN THE FUTURE AND PROBLEMS ENCOUNTER IN MEETING OUR NATIONAL, REGIONAL AND GLOBAL OBLIGATIONS TOWARDS SPS OBLIGATIONS

Cambodia has great concerns towards the potential costs of adapting to global competition. While making efforts to strengthen its capacity and capability in this area of focus using its own resources, the need for assistance is outlined as follows:

1. ***Management of Food Imports/Exports-related Training***
* Import risk analysis process
* Process for computerized database compilation of imports/exports.

2. ***Management Control Techniques-related Training***
* Certification of products for export
* Food import inspection
* Plant quarantine measures
* Animal quarantine measures.

3. ***Strengthening Conformance Capacity- and Capability-related Training***
* Chemical and microbiological analysis of foods
* Diagnostic of pests and animal diseases in laboratory
* Provision of additional equipment to make the existing laboratories fully operational, and to be potentially accredited by a regional accreditation body
* SPS inquiring point operation-related training.

17. UNION OF MYANMAR

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INTRODUCTION

Myanmar is a country endowed with diverse ecological zones. With a total land area of about 676,000 km^2, the country's mountainous topography and the monsoon are variously encompassed in different regions. Pictured further in its ecological diversity, the country boasts a forest-cladding on 48 percent of the total land expanse, a coastal line stretching along over 2,000 km, and four principal rivers whose total annual inflow works out for 876 million acre feet.

Myanmar is bordering with Bangladesh in the West, India in the Northwest, China in the North and Northeast, Thailand in the South and East, and Laos PDR in the East.

Traditionally, Myanmar farmers grow over 50 different kinds of crops, on a net sown area of about 10 million ha, about 7 million ha still remains as cultural wasteland. Major export crops include pulses and beans, maize, rice, oilseeds and timbers. Consequently, the government has adopted a policy to building up the nation's economy based on agriculture farming, forest, fisheries and livestock breeding, which contributes over 40 percent of total GDP.

In order to support domestic agriculture production, Myanmar has enacted a Pesticide Law and a Plant Pest Quarantine Law in 1990 and 1993, respectively. The provisions in the two legislations include management and control of pesticide residue in food as well as import and export certification (relating to phytosanitary measures) of plant and plant products.

CURRENT CAPABILITY ON SANITARY AND PHYTOSANITARY (SPS)

Food Safety

The Ministry of Agriculture and Irrigation, the Ministry of Health and the Ministry of Livestock Breeding and Fisheries involve in the various activities related to the food safety program of the country.

For pesticide residue in food, a Pesticide Analytical Laboratory under the Ministry of Agriculture and Irrigation has been legally recognized and is carrying out activities related to residues survey and monitoring in agricultural food commodities. In addition, the Pesticide Analytical Laboratory has the capacity to carry out mycotoxin analysis. Laboratories under the Ministry of Health and the Ministry of Livestock Breeding and Fisheries are also carrying out analysis with emphasis on microbiological contamination. The analyzed data below is presented in order to give a view of food safety pertaining to pesticide residues and mycotoxin contamination. The results of pesticide residues in food starting from 1989 to date, grouped in five-year terms, are illustrated in Table 1; and mycotoxin analysis for the past five years in Table 2.

The results clearly show that there were severe trade problems relating to pesticide residue until 1998. The food commodities found to be contaminated with the organo-chlorine residues were mainly pulses and beans. There were also the cases that the traders used those pesticides for storage pest control. But with the legal prohibition in the use of persistent organic pesticides and other highly toxic compounds in the country, and of course, the direct economic impact suffered by the traders, we now are confident that such improper use of pesticides, is well under control.

Table 1. Number of Samples Analyzed for Food Residues, and the Percent of Violation to National and Codex Maximum Residue Limits (MRL) (five-yearly accumulation)

Year	1989-93	1993-98	1999-2002
No. of food sample analyzed	649	359	265
Sample detected exceeding Codex limit	107	9	-
Percent violation	16.49	2.51	-
Sample detected exceeding national MRL	112	9	-
Percent violation	17.25	2.51	-
Detected Residue Level (mg/kg)	Aldrin + dieldrin 0.01-1.3 ∑DDT 0.01-1.0	Aldrin + dieldrin 0.01-0.03 ∑DDT 0.02-0.15	-

Table 2. Amount of Samples Analyzed for Mycotoxin during the Last Five Years and the Percent Above Various National Tolerances

Year	1998-99	1999-2000	2000-01	2001-02	2002-03 (Nov.)
Number of samples:					
Analyzed	49	32	16	13	48
Detected	4	5	0	0	30
Aflatoxin (μg/kg)	31-74.4	13-20	0	0	7-41
Sample violating national tolerance level (B1)					
Japan (<10 ppb)	4 (100%)	5 (100%)	0	0	12 (40%)
Thailand (<20 ppb)	4 (100%)	0	0	0	10 (33.3%)
India (<30 ppb)	4 (100%)	0	0	0	7 (23.3%)
Malaysia (<35 ppb)	3 (75%)	0	0	0	0
Taiwan, China (<50 ppb)	2 (20%)	0	0	0	1 (3.3%)

Food commodities detected to be contaminated with mycotoxin due to lack of proper storage facilities include corn, sesame, chilies and peanut.

Phytosanitary

The major export commodities, in terms of traded volume are listed in Table 3.

Table 3. Major Export Commodities (1997-2002)

(Unit: mt)

Commodity	1998-99	1999-2000	2000-01	2001-02	2002-03
Cereal	89,526	68,396	282,932	1,506,949	665,118
Pulses	679,115	636,159	761,111	1,070,883	802,681
Oilseeds	44,063	39,143	41,248	20,515	839
Maize	156,078	116,228	184,403	78,844	62,595
Others	94,858	100,231	103,994	115,586	56,388
Timbers	224,126	383,069	380,138	377,111	236,877

Japan's consumption of the pulses and beans, sesame and sunflowers, etc. are considered significantly important, in view of SPS issues. The details of export and import commodities to and from Japan are listed in Annex Ia-Ib.

Plant Protection Division, Myanmar Agriculture Service of the Ministry of Agriculture and Irrigation is legally responsible to issue Phytosanitary and Import Certificates for plant and plant products according to the Plant Pest Quarantine Law enacted in 1993. The certificates for import and export are issued in the Head Quarter (Yangon) and also at the seven border entry points inspection stations listed below.

No.	Entry Point/Station	State/Division	Bordering
1.	Muse	Northern Shan State	China in the Northeast
2.	Tachilate	Eastern Shan State	Thailand in the East
3.	Lwegye	Kachin State	China in the Northeast
4.	Myawaddy	Kayin State	Thailand in the Southeast
5.	Lawthaung	Taninthayi Division	Thailand in the South
6.	Tamu	Sagaing Division	India in the Northwest
7.	Maungdaw	Rakhine Division	Bangladesh in the West
8.	Yangon International Airport	Yangon Division	-
9.	Mandalay International Airport	Mandalay Division	-

Myanmar is not a member of the International Plant Protection Convention (IPPC) as yet, however as a member of FAO makes it possible to carry out the task of SPS measures, in line with the International Standards of Phytosanitary Measures (ISPM).

The prioritized areas for further capacity building are:

1. Pest Surveillance Program
2. pest risk analysis and risk management
3. LAN network among Head Quarters and inspection stations, and border area entry points
4. Plant Quarantine Policy, system development and documentation (review of present legislation, inspection, post entry quarantine, etc.)

PARTICIPATION IN HARMONIZATION OF SPS AMONG ASEAN

Food Safety

Myanmar has been informed that the Meeting of Expert Working Group on Harmonization of MRLs among ASEAN member countries is dispatching reports to member countries.

Myanmar has not formed a National Committee on Pesticide Residues and no national MRL has been set up. Since the country has limited facility and expertise to generate residue data reflecting the national situation, it is also very difficult to make comments on the harmonized data.

However, Myanmar at present pays special attention to the crops, pesticides and the types of pesticides considered important for ASEAN countries, and is carrying out yearly survey of residues of the pesticides in those crops. The residues reported did not exceed the ASEAN harmonized and Codex MRLs (the details of the finding is listed in Annex II).

Myanmar is a major producer of peas and beans and taking a role of leading country for the crop within ASEAN and consequently, paying special attention to pesticide use and residues in those crops. Myanmar, at the first meeting of the ASEAN National Focal Point Working Group on Peas and Beans Promotion Scheme, 8-9 January 2001, Yangon, reported some pesticides applied in the crop of major export were not listed in the harmonization process, nor in Codex limits. The active ingredients and the commodities of the country's interest are shown in Table 4.

Myanmar considered the importance of seeking assistance from a competent international body, regarding this issue, as the residues in the crops may raise problems, in intra- and extra-ASEAN trade of peas and beans.

Plant Quarantine

Myanmar has also been informed about the harmonization of phytosanitary measures in ASEAN and has submitted an endemic pest list for rice and mango and also preparing for the additional 12 crops; coconut, ginger, dendrobium, ground nuts, round cabbage, black pepper, potato, onions, oranges, coffee, pineapples and banana.

Table 4. Name of Active Ingredients which are not Listed in Harmonization Process

No.	Active Ingredient	Commodities (Peas and Bean)	Scientific Name
1.	Cartap hydrochloride (Padan)[a]	Mung bean[b]	*Vigna radiata*
2.	Fenitrothion[a]	Urd bean[b]	*Vigna mumgo*
3.	Monocrotophos[a]	Pigeon pea[b]	*Cajanus cajan*
4.	Dimethoate[a]	Butter bean	*Phaseolus lunatus*
5.	Fipronil	White bean	*Phaseolus cylindricus*
6.	Thiodicarb	Rice bean	*Vigna umbellata*
7.	Carbendazim	Lablab bean	*Lablab purpureus*
8.	Thio-phanate methyl	Lima bean	*Phaseolus lunatus*
9.	Mancozeb	Chick pea	*Cicer arietinum*

Notes: [a] Widely applied pesticides; and [b] major export commodities of Myanmar.

Myanmar, together with Cambodia, Laos PDR and Vietnam, is now trying to build capacity in phytosanitary areas, with the assistance from New Zealand Agency for International Development (NZAID), Australian Agency for International Development (AUSAID) Programs, in longer and short terms, to come up with the harmonized SPS measure within the ASEAN.

CURRENT VIEWS AND PERSPECTIVE OF AGRICULTURE PRODUCTION RELATING TO SPS

Myanmar's economy is based on agriculture and the country considers reliance on these resources for long years as the sector contributes around 23 percent of export earning and employs about 63 percent of working population. For further development of the agriculture sector, it is vital that the production and trade be in accordance with the internationally agreed SPS requirements. At present, over 90 percent of major export crops such as pulses and maize is selling to countries with less rigorous SPS regulations. Traders understand the reasonably better prices offered by advanced countries (on the commodities in question) than those by current trading partners. So they begin to look for ways and means of production and marketing to meet the well-established SPS measures of advanced countries.

Although many of the traders are enhancing agriculture production and trading, they are operating with but limited technical expertise on SPS. For example, Myanmar's major export now is in pulses and beans but some entrepreneurs are expending to produce and export fruits such as mangoes (which the country considers very special), other fruits and vegetables, cut flowers, etc. However, the proper treatment required by the importer, such as Vapor Heat Treatment (VHT) facility for fruit fly and technical expertise for postharvest treatments is lacking and hindering further development.

Besides, some are also trying to produce seeds and to export. A practical example is a local private entrepreneur incorporating with a Japanese company, is attempting to produce watermelon and melon seeds in Myanmar, using Japanese parental lines, and export to Japan. The importer requires not only an ordinary phytosanitary certificate but also a field inspection report for the life of crop period.

Trans-boundary Issues

Myanmar is bordering two ASEAN countries and three non-member countries of ASEAN, by land. Border area agriculture trade contributes a great deal to national trade volume. Proper control and risk management of trans-boundary plant pest and animal diseases is highly important for the country's agriculture. At present, the entry point inspection stations have been opened, but working with very limited technical capacity and facilities.

Myanmar also considers trans-boundary movement of plant pest and animal diseases significant not only for national concern but also for multilaterally-related trading such as ASEAN Free Trade Area – Closer Economic Partnership with New Zealand and Australia, trading among ASEAN and dialogue partners, etc.

Myanmar is trying to build local capacity in SPS technology and facility, rather limited to phytosanitary part though, within ASEAN member and partners. Besides, the regional interest, such as "participation of

developing countries in Asia in international standard-setting fora" is also considered of high priority, in near future.

Some SPS-related Interceptions in International Trade

*	Organochlorine residues in peas and beans (1989-90):	Japan
*	Chili suspected of organo-phosphorus pesticide contamination (1993):	Korea
*	Bamboo shoots suspected to be contaminated with mycotoxin (1994):	Japan
*	Mung bean contaminated with soil (2000):	Korea
*	Sprout beans suspected to be diseased (2002):	Japan
*	Rubber sawed woods (requiring treatment) (2002):	Malaysia
*	Broken rice contaminated with weed seeds (*Echinochlora, Crolalaria*) (2002):	Indonesia

Myanmar is very keen to cooperate with experts and authorities of relevant countries, and competent international organizations, to look into possible ways and means of resolving such issues.

Annex Ia.

List of Plants and Plant Products Exported to Japan

No.	Commodity	Unit	1998-99	1999-2000	2000-01	2001-02	2002-03
1.	Urd bean	mt	1,120	2,750	1,722	2,511	1,917
2.	Mung bean	mt	21	1	20	4	-
3.	Cow pea	mt	282	202	322	161	161
4.	Butter bean	mt	4,577	5,027	4,620	4,167	3,366
5.	Common bean	mt	40	40	-	20	-
6.	Lima bean	mt	567	245	542	304	140
7.	Rice bean	mt	868	560	285	789	343
8.	White bean	mt	-	152	20	40	-
9.	Lablab bean	mt	42	-	-	-	-
10.	Sesame seed	mt	6,037	6,444	13,924	4,134	108
11.	Cut flowers	Pcs.	1,900	2,103	-	10*	-
12.	Chrysanthemum seedlings	Pcs.	-	18	200,011	400,004	280,002
13.	Maize	mt	-	-	1	140	-
14.	Turmeric finger	mt	58	95	72	60	97
15.	Ginger	mt	-	58	-	-	298
16.	Cashew nut	mt	-	2	-	-	-
17.	Dried taro	mt	-	141	75	51	-
18.	Buckwheat	mt	-	-	-	54	-
19.	Pauk	mt	-	5	10	2	2

Note: * kg.

Annex Ib.

List of Plants and Plant Products Imported from Japan

No	Commodity	Unit	1998-99	1999-2000	2000-01	2001-02	2002-03
1.	Ornamental plants	Plt.	1,200	-	-	200	55
2.	Fruit plants	Plt.	50	-	130	105	-
3.	Vegetable seeds	kg	-	-	17	92	-
4.	Vegetable	kg	38	-	-	-	-

Annex II.

a. ASEAN Harmonized Pesticides and Their Residues in Cabbage (60 samples for three years)

No.	Pesticide	Detected Level	ASEAN MRLs (mg/kg)	Codex MRLs (mg/kg)
1.	Diazinon	<0.04	-	-
2.	Parathion methyl	<0.017	-	-
3.	Chlorpyrifos	<0.05	0.05	0.05
4.	Malathion	<0.029	8	8
5.	α Endosulfan	<0.027	-	-
6.	β Endosulfan	<0.053	-	-
7.	Prothiofos	<0.034	-	-
8.	Phenthoate	<0.012	-	-
9.	Dithiocarbamate	*	5	-
10.	Dimethoate	*	2	2
11.	Methamidophos	Banned	1	1
12.	Monocrotophos	<0.02	0.2	0.2

Note: * Method validation required.

b. ASEAN Harmonized Pesticides and Their Residues in Tomato (104 samples for three years)

No.	Pesticide	Detected Level	ASEAN MRLs (mg/kg)	Codex MRLs (mg/kg)
1.	Diazinon	<0.02	0.5	0.5
2.	Parathion methyl	<0.05	-	-
3.	Chlorpyrifos	<0.07	0.5	0.5
4.	Malathion	<0.06	3	3
5.	Prothiofos	<0.06	2	2
6.	Dithiocarbamate	-	3	5
7.	Dimethoate	<0.24	1	1
8.	Methamidophos	-	1	1
9.	Monocrotophos	-	1	1

18. PAPUA NEW GUINEA

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INTRODUCTION

Papua New Guinea (PNG) is predominately an importing economy inasmuch as food is concerned. About 60 percent of all food imports in PNG are of animal origin and about 40 percent is of plant origin, such as grain, fruits and vegetables. Much of the domestic food production is consumed locally. However, the volume produced locally is inadequate to meet the domestic demand and therefore a significant volume has to be imported, in particular, meat and processed goods. In the export trade, PNG is heavily reliant on the mineral sector. Although, the country maintains a significant agricultural export market in the cash crop or tree crop industry, much of these domestic products are exported in their primary form. The major export crops include timber, palm oil, coffee, copra, cocoa, sugar, and tea which makes up the major agricultural export. In more recent times, exports in fishery products and crocodile meat as well as hides have picked up in volume as a result of improvements in the quality assurance programs.

Adoption of Sanitary and Phytosanitary (SPS) and international harmonization measures under WTO guidelines have also seen positive progress in export of meat and poultry products to neighboring Pacific Island Economies. At this stage, only small volumes of these products are exported and there are now plans to include small goods to these countries. Australia, Vanuatu and New Zealand provide most of the fresh and frozen meat and live animal imports as well as the processed animal products. The recent adoption of risk analysis concept for imports and the current trend in international harmonization of SPS measures have seen very positive progress in opening up the PNG market to non-traditional trading economies such as: Thailand, Malaysia, Indonesia, Singapore, Philippines, US and the EU countries. High risk animal products like animal and fresh/frozen animal products remain restricted from countries endemic with Office International des Epizooties (OIE) List A and selected List B diseases, in particular, foot-and-mouth disease, classical swine fever, Transmissible Gastroenteritis (TGE), Newcastle disease and avian influenza and Bovine Spongiform Encephalopathy (BSE), bovine tuberculosis, are some of the major diseases of concern to PNG. Note that PNG does not have all OIE List A disease except for serological evidence. Only of bluetongue virus and active surveillance system for these diseases remain high on priority function of the government veterinary service.

WTO SITUATION IN PNG

PNG has established a National WTO Secretariat within the International Relations Division of the Department of Trade and Industry (DTI). The Secretariat provides all the administrative and coordinative support services for various WTO program activities in PNG, including the Enquiry and Notification Contact Point for the Technical Barriers to Trade (TBT) and SPS measures in PNG. A National WTO Committee consisting of all line government and non-government agencies has also been established and is represented as follows:

* PNG Manufacturer's Council
* Department of Finance and Treasury (DFT)
* Investment Promotion Authority of PNG

* PNG Forest Authority (PNGFA)
* National Agriculture Quarantine and Inspection Authority (NAQIA)
* National Institute of Standards and Industrial Technology (NISIT)
* National Fisheries Authority (NFA)
* Department of Attorney General (DAG)
* Department of Agriculture and Livestock (DAL)
* PNG Chamber of Commerce and Industry (PNGCCI)
* Internal Revenue Commission (IRC)
* Department of Foreign Affairs (DFA)
* Department of Environment and Conservation (DEC)
* Department of Health (DOH)
* Prime Minister's Department (APEC Secretariat)
* Consumers Affairs Council (CAC)

The National WTO Committee deals with all issues relating to WTO in PNG. The Committee's activities are administered by the National WTO Secretariat. The National Committee is also sub-grouped into TBT and SPS sub-committees.

SPS sub-committee comprised of representatives from the following line agencies:

* PNG Manufacturer's Council (PNGMC)
* NAQIA
* NFA
* DAL
* DEC
* DOH
* NISIT
* CAC.

SANITARY AND PHYTOSANITARY ACTIVITIES IN PNG

How Is SPS Measures Coordinated in PNG?

The flow diagram illustrates the channel of communication involved (Figure 1).

How Are Queries and Responses Coordinated?

Once a query is received by DTI, the SPS query is passed onto NFA. The NFA representative then convenes a sub-committee meeting session during which the query is initially discussed by the group and the appropriate agencies is identified and given the task to respond. *Vice versa*, the response is channelled to NFA and another sub-committee meeting is convened during which the response is discussed, amended and/ or adopted and finally submitted to DTI. The DTI then prepares the response document and submit this to the SPS Secretariat in Rome.

How Has SPS Measures Contributed to Enhancing Food Safety and Trade in PNG?

1. ***Food Safety Standard and Code***

I regret to report that PNG does not yet have a food safety standard or a code to address the food safety situation in the country. We do, however, have a food regulation, the Food Sanitation Act, which has recently been amended to address the food safety issues in the country. The advent of WTO and SPS requirements in our exports and also in the import has in recent times, demanded an urgency to develop and put in place an appropriate Food Safety Standard and the Code, in consistence with Codex guidelines.

As a result of this and other pressing demands in trade, the CAC in consultation with line agencies, developed a draft about two years ago. The draft is now with the NISIT (the standard-setting organization in PNG) for its final stages of development and it is hoped that this will be ready for endorsement and hopefully implemented by the end of this year, if not, early next year at the latest.

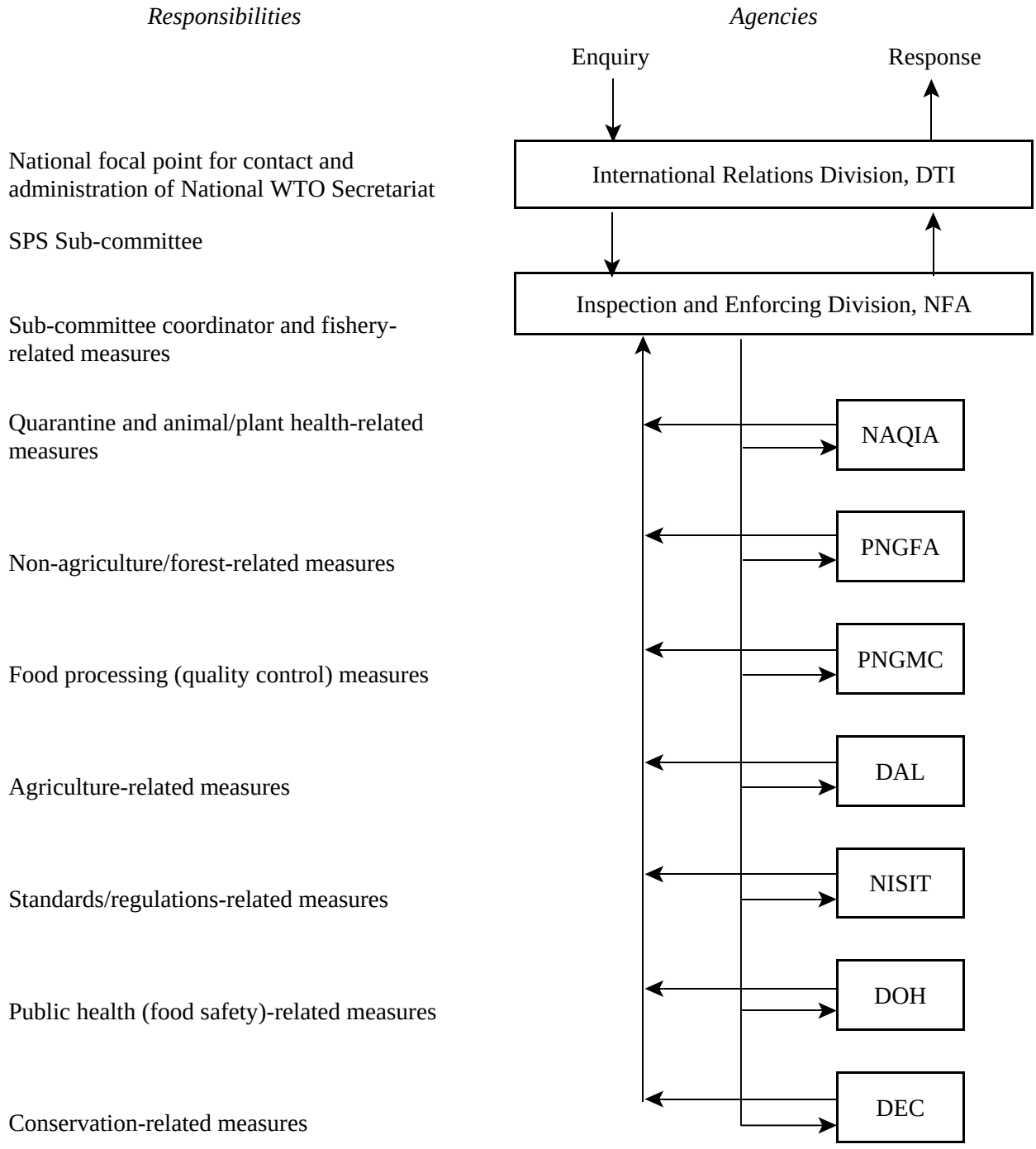

Figure 1. Channel of Communication for Enquiry and Notification of SPS Measures

2. ***Hazard Analysis and Critical Control Points (HACCP)***

In the interim, major food companies are been urged to revise their quality control system to adopt the HACCP system if they want to participate in the competitive export markets. Because of the potential high demand for PNG fishery products to the competitive EU market, HACCP system has rapidly gained momentum in the fish and seafood processing industry. NFA has, through donor funding agencies, conducted extensive training in HACCP system for the industry in their efforts to developing a viable fishery export market. Modular training manuals for trainers and trainees alike have also been developed. As a result, potential export companies have shown great enthusiasm in adopting the HACCP system. The industry is also supported by the newly established Quality Assurance Seafood Laboratory for microbiology and histamine analysis.

This development has enhanced the capacity of the industry to meet the food safety requirement of the highly competitive EU market in seafood products. The outcome has been an enormous boost to PNG's seafood export and much needed foreign exchange.

While seafood trade has had a success story, other food industries, especially the food manufacturing industry has not progressed in the same momentum. Nevertheless, major establishments are beginning to get into the HACCP system, however, at a gradual pace. One reason for the slow progress experienced is that, unlike the fish and seafood industry, the volume of potential export products is commercially insignificant.

3. ***Codex and Food Safety Regulations***

Our food regulations were initially developed based on old Australian guidelines. However, with the current international trend in food safety, PNG is now embarking on a major program to revisit all relevant regulations affecting food safety issues in PNG. This has resulted from a successful Joint Codex/WHO Workshop on Food Safety which was held in September 2001. From the outcome of that deliberation, a Food Safety Policy emerged. Accordingly, PNG has now established a Working Committee who will be responsible for all food safety policies and provide advice to the government. Heads of all stakeholder agencies are members to this National Committee. There is a proposal at its final stage for an establishment of a National Codex Secretariat to oversee the activities of Codex in PNG and to provide administrative and coordinative support to the National Committee as well as liaison between PNG and Codex Secretariat. It is proposed that this Secretariat be established in the Ministry of Agriculture and Livestock. The proposal is currently awaiting official approval by the government.

4. ***Risk Analysis Unit***

The process of risk analysis is gradually being adopted, although, a national unit is yet to be established. The NAQIA has adopted the concept and has undertaken the process to evaluate a selected number of imports. It has established an in-house risk analysis team within its technical services. In the current setup, the Chief Quarantine Officer (animals) who is ex-officio Chief Veterinary Officer is responsible for coordinating the risk analysis process relating to imports involving animal and animal by-products, and the Chief Plant Quarantine Officer for plant-related imports. Risk analysis process has been used to amend import conditions for a selected number of food and live animal imports. Discussions are underway to setting up a National Risk Analysis Unit comprising of representatives from all stakeholder agencies. So far import risk analysis has been conducted for the following:

* Breeding fish stock for aquaculture from Nepal
* Fresh and frozen meat from domestic kill meat establishment in Australia
* Tinned corn beef meat from Fiji
* Aquarium fish from Australia.

Inport Risk Analysis (IRA) in progress are: pork meat from Canada; and pearl oysters from Australia.

Much of our new imports from our traditional trade partners do not require IRA as *per se*, in particular, Australia and New Zealand, because we have special mutual quarantine arrangements and trust developed over many years of trade.

5. ***Disease Surveillance and Monitoring***

Active and passive surveillance programs are routinely carried out and forms the basis of our monitoring program. Based on potential risk, a list of target diseases for surveillance is established from time to time depending on the changes in the disease status of neighboring and major trading countries. Current list includes: classical swine fever; swine influenza (surra); Porcine Reproductive and Respiratory Syndrome (PRRS); TGE; porcine aujzeskies; *Trypanosome evansi*; blue tongue virus; Newcastle disease; and avian influenza. Sentinel herds of pig, cattle and poultry species located at strategic locations in the country are sero-sampled at 3-month interval and serologically tested for the above diseases both at our Diagnostic Veterinary Laboratory or out-sourced to high security Australian Animal Health Laboratory in Australia. In addition to this, joint plant and animal disease surveys are conducted every two years. This forms our active surveillance program. Passive surveillance composed of field submissions from field officers and farmers alike and abattoir monitoring for selected diseases of zoonosises.

Due to lack of an established disease information system, data generated from laboratory and field diagnosis remain unprocessed and are manually kept and stored. Networking disease information is yet to be established although a regional networking was attempted for all Pacific Islands countries but its

effectiveness is yet to be assessed. We are in need of developing and establishing disease information system database.

6. ***Veterinary Capabilities***

For the effectiveness of the animal and plant health services, the recent reform in the DAL saw establishment of Animal and Plant Health and Quarantine as an autonomous government institution, referred to as NAQIA. The move had enabled the government's veterinary and plant health services as well as quarantine services to be self-reliant in funding their operations through a cost-recovery system, thus, relying less on national budget, which has not been very reliable in the past. This situation has brought about very positive and effective quarantine service in PNG. The user-pay system has certainly worked. A major reform within the DAL resulted in the formation of NAQIA and National Agricultural Research Institute (NARI). Both these organizations were curved out from the parent Department to provide quarantine and research functions, respectively under an autonomous semi-government system and function on the basis of fee-for-service system. In the process, the veterinary services function was transferred from the Department to NAQIA. The Department is no longer responsible for veterinary services. NAQIA is the government veterinary authority in PNG and all matters relating to all animal health services including animal quarantine and health are vested in NAQIA. NAQIA is therefore the national competent certifying authority for all animal and animal products exports from PNG.

Government Export Policy

Due to the downturn in the current economic situation in PNG, the newly elected government has embarked on a major export growth drive. This has given the necessary political and funding support for export and inevitably, the need to adopt internationally accepted practices that have been discussed above. If all goes well, PNG should see drastic improvements in export market. However, it will depend very much on the part of the government to establish appropriate export regulatory support and the encouragement of the private sector investment to develop and maintain quality export production in agriculture.

Constraints

From predominately a domestic producer to current emphasis on export growth has by no means been an easy road for PNG. Whilst domestic companies have shown enthusiasm in developing their production system to meet the diversified export market requirements, additional expenses in adapting to internationally accepted standards remain the greatest barrier for many operators. The current downturn in PNG's economy situation means many food processing companies are reluctant to change to export production unless they are convinced of the economic viability of the change.

The coordination and dissemination of SPS measures and information has also suffered from lack of efficiency and continuity. National committee sessions are irregular and disorganized. The high turnover rate of staff in committee member agencies means that too often there are new faces after every two sessions. This often causes misunderstanding and unorganized situations of member agencies with the Contact Point.

Lack of consistency and proactiveness on the part of member representatives is also causing stagnation of planned activities resulting in too many uncompleted tasks. Severe funding inadequacies and lack of trained manpower capabilities are also causing poor performance by the secretariats.

CONCLUSION

Although it has generally started in the right direction, PNG has a long way to go in its developments. The cultural, ethnics and socioeconomic situation of the country may limit complete adoption of the food safety issues discussed above for its masses. However, it is apparent that high quality products and food safety development initiatives are geared more towards the export products and also for the high living standards of the urban or cosmopolitan population.

While PNG has kicked started some progress in the right direction, the infrastructure development necessary to maintain the momentum in meeting SPS and for that matter, WTO requirements is perhaps, questionable. The inconsistencies in government policies, political instability, poor funding situation and slow pace in foreign investment are few of the factors that are not in PNG's favor, hence, the constraint.

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2. PROGRAM OF ACTIVITIES

(4-11 December 2002)

Date/Time	Activity
Wed., 4 Dec.	
Forenoon	Opening Ceremony Presentation and Discussion on Topic I: *Sanitary and Phytosanitary (SPS) Agreement: Overview and Recent Development* by Dr. Kazuaki Miyagishima
Afternoon	Presentation and Discussion on Topic II: *Enhancing Asia's Participation in the Harmonization of Food Standards* by Dr. Yukiko Yamada Presentation and Discussion on Topic III: *Bovine Spongiform Encephalopathy (BSE) Outbreaks and Commutable Disease Control Measures in Japan* by Mr. Minoru Yamamoto
Thurs., 5 Dec.	
Forenoon	Presentation and Discussion on Topic IV: *Measures for Enhancement of Food Safety and Quality Assurance Systems for Enhanced Trade* by Mr. Cornelis Sonneveld Presentation and Discussion on Topic V: *Rights and Obligations under the SPS Agreement: Responses of Governments, Japan's Case* by Mr. Shiroh Inukai
Afternoon	Presentation and Discussion on Topic VI: *Enhancement of Phytosanitary Measures for Trading of Plants and Plant Products* by Dr. Jane Chard Presentation of Country Papers by Participants
Fri., 6 Dec.	
Forenoon	Presentation of Country Papers by Participants
Afternoon	Presentation of Country Papers by Participants
Sat., 7 Dec.	
Forenoon	Workshop
Afternoon	Free
Sun., 8 Dec.	Free
Mon., 9 Dec.	
Forenoon	Visit Plant Protection Section, Ministry of Agriculture, Forestry and Fisheries (MAFF)
Afternoon	Visit Animal Quarantine Service, MAFF
Tues., 10 Dec.	
Forenoon	Visit Kanakei Sangyo Co. (dealing with rice), Ayase-shi, Kanagawa Prefecture
Wed., 11 Dec.	
Forenoon	Summing-up Session Closing Session