



Complying with the clauses of the SPS Agreement: Case of a developing country

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ABSTRACT

This paper aims at assessing the implementation of the clauses of the World Trade Organisation (WTO) Sanitary and Phytosanitary (SPS) Agreement in a developing country context, namely Mauritius. It describes the regulatory and institutional infrastructure developed to meet new obligations under the SPS Agreement using an inventory approach and in-depth interviews at stakeholder level. The findings indicate that, as a developing country, Mauritius has achieved a reasonable degree of compliance with its commitments towards the WTO. A national accreditation body has been set up. A number of transparency mechanisms have been put in place such as a National Notification Authority, a Sanitary and Phytosanitary Enquiry Point and a national SPS committee involving the public and private sectors for communicating and discussing about SPS measures of trade relevance. Mauritius participated, to different extents, in the WTO SPS committee and in the activities of international standard-setting organisations. It has also updated some SPS-related laws. There have been operational changes in local organisations dealing with SPS issues. However, constraints such as the insufficient capacity to do risk assessment and to carry out equivalence might prevent Mauritius from meeting all its obligations towards the WTO.

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1. Introduction

The establishment of the World Trade Organisation (WTO) has allowed significant decreases in tariffs in the trade of agricultural goods. However, after 1995, a direct consequence has been the rise of non-tariff barriers (Henson & Caswell, 1999; WHO, 1998). Trade in agricultural and food products is increasingly being governed by many product and process requirements, spurred by a combination of factors such as health and other public policy concerns, scientific advances, consumer preferences and strategic commercial interests (Jaffee & Henson, 2004). It is very difficult for developing countries to integrate the global food trade. In fact, the WTO Agreements are viewed as having benefited mostly developed countries with the developing countries lagging behind (Das, 2008; Disdier, Fontagne, & Mimouni, 2008; Jaffee & Henson, 2004).

The Agreement on Technical Barriers to Trade (TBT) and the Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures concern mostly the preparation, adoption and application of technical regulations. It is the responsibility of central government of WTO member countries to regulate their national market in a transparent way. To this end, a number of national structures and systems have to be established. WTO rules require national authorities to implement technical regulations to

govern the different product areas and government to enforce same. Some of the basic principles include the following:

- technical regulations should be based on international standards for harmonisation,
- transparent rules apply when performing testing, certification and inspection and this is achieved through accreditation,
- inspection, certification, testing and calibration are to be carried out by competent bodies,
- voluntary standards are to be elaborated by competent and recognised standards bodies (standards bodies or industries organisations).

SPS measures are a subset of technical regulations. According to Annex A of the SPS Agreement, SPS measures include all laws, decrees, regulations, requirements, procedures such as end product testing, inspection, certification and approval procedures, quarantine treatments, provisions on statistical methods, sampling procedures, methods of risk assessment, packaging and labelling requirements that apply to the following situations:

- protection of human or animal life from risks arising from additives, contaminants, toxins or disease-causing organisms in their food;
- protection of human life from plant- or animal-carried diseases;
- protection of animal or plant life from the introduction of pests, diseases or disease-causing organisms;

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- protection of a country from damage caused by the entry, establishment or spread of diseases (WTO, 1995).

The SPS Agreement has been drafted to prevent the use of SPS measures as trade barriers (WHO, 1998). Article 3 of the Agreement urges WTO members to implement international standards. The standards, guidelines and recommendations developed by the Codex Alimentarius Commission, the International Plant Protection Convention and the World Organisation for animal health can now be used by developing countries in establishing their SPS infrastructure. The Agreement also allows countries to take legitimate measures for the protection of human, plant and animal life and health, but these measures must be scientifically justified. Measures that are not scientifically justified must be based on risk assessment. The Agreement recognises the principles of transparency and equivalence.

Views about the impact of the SPS Agreement are divergent in literature: the SPS Agreement has been positive for certain WTO members (Josling, Roberts, & Orden, 2004; Wilson, 2002) while for others, implementation has produced mixed results (Das, 2008; Thornsby, 2000) and has been a slow process, especially in developing countries, for instance, in Central America (Hufbauer, Kotschwar, & Wilson, 2001). However, little research has been done to examine the implementation of the SPS Agreement in developing countries. As Hooker (1999) rightly pointed, the SPS Agreement has placed a heavy burden on developing countries which need assistance for their SPS control systems to be in compliance with WTO commitments (FAO, 1997), especially with respect to infrastructural set-up. It would be thus interesting to study the implementation of the SPS Agreement and its impact on agro-food trade in a small island developing state.

As a small island developing state found in the Indian Ocean, Mauritius has witnessed rapid economic growth since the early 1980s (World Bank, 2007) achieving a per capita Gross Domestic Product of US\$ 12,078 PPP in 2008 (World Bank, 2009). It has been a member of the WTO since its formation on 1st January 1995. It is considered as a net food importing developing country (WTO, 2008) and an agricultural and food exporting country. It is therefore likely to be affected by the SPS Agreement. It is opportune to study the structures and systems established in Mauritius in the present context to meet WTO requirements. The objective of this paper is to assess the implementation of the clauses of the SPS Agreement in Mauritius. The methodological approach used to meet the objective of this study is displayed in Table 1. After providing an overview of the domestic SPS control system in Section 2, the information collected from in-depth interviews is critically analysed and the findings are presented in Sections 2.4–2.6. This

paper highlights the main changes that have taken place in the domestic SPS control system. The food safety regulatory and institutional infrastructure developed to meet the obligations of the SPS Agreement and the operational difficulties are also assessed. Conclusions are presented in Section 3.

2. The domestic SPS control system

SPS management capacity is required for developing countries to export their food and agricultural products and to facilitate controls on imported agricultural and food products and on domestic production (Henson, Jaffee, de Haan, & van de Meer, 2002). We term the SPS control system as the components required at institutional and regulatory levels to comply with SPS requirements of a country's trading partners and to demonstrate compliance. Since 1995, a number of changes have taken place in the domestic SPS control system. The introduction of the Food Act (1998) has given to the Ministry of Health and Quality of Life (MOH) the responsibility for ensuring the safety of foods. In addition, the Ministry of Agro-Industry and Fisheries (MOAIF) is responsible for animal health, plant health, safety of food products of animal origin and foods derived from genetically modified organisms. Based on information collected at the level of stakeholders, it was found that the country has a system for

- epidemiological surveillance (reporting systems, surveillance efforts, and monitoring of animal hazards) for animal and plant issues,
- identification and traceability: currently the MOAIF together with the Association des Producteurs et Exportateurs des Produits Horticoles de L'île Maurice (APEXHOM), has a project whose objective is to improve traceability in the fruit supply chain,
- quarantine, verification and certification,
- diagnosis and analysis (but laboratories are not yet accredited),
- pest control,
- registration and control of food premises.

However the main problem was that there were no well established systems and procedures for risk assessment, information management and participation in standards setting. Actors from the government, agricultural producers, food industry, importers, exporters, trade associations, professional bodies, research institutions and academic institutions were involved to some extent in the implementation and operation of the national SPS system. With respect to human resources required for operating the

Table 1
Methodological approach.

Objective	Methodological tool and technique
To provide an overview of the domestic SPS control system	Literature review and in-depth interview with local SPS Enquiry Point Assessment using checklist based on Henson et al. (2002), Henson and Wilson (2002) and Wilson and Henson (2002)
To study the implementation of the SPS Agreement and assess the regulatory and institutional set-up to meet the obligations of the SPS Agreement in Mauritius and the operational difficulties	Literature review and inventory of measures implemented at institutional level since Mauritius adhered to WTO using the WTO document gateway Questionnaire-based in-depth interviews with all local stakeholders ($n = 8$) involved directly with the SPS Agreement, that is, from governmental bodies (Codex Contact Point/SPS Enquiry Point/National Notification Authority, the Division of Veterinary Services (DVS) and the Fisheries Department of the Ministry of Agro-Industry and Fisheries (MOAIF), the Trade Policy Unit (Ministry of Trade) and the private sector/industry (the Mauritius Chamber of Agriculture (MCA) and the Mauritius Chamber of Commerce and Industry (MCCI) The questions used a seven-point Likert scale to measure attitudes of stakeholders towards their participation in the work of international standards organisations, problems associated with the manner in which the SPS Agreement operates and factors influencing the ability of Mauritius to participate effectively in the SPS Agreement

system, experts were available in testing (relating to food safety, plant and animal health) and control, hygiene control, training and teaching capability, but there were not enough experts in surveillance, toxicology, risk assessment and legal knowledge in the SPS area.

2.1. SPS measures

Legislation pertaining to food safety is contained in one document mainly: the Food Act 1998 (MOH, 1998). There are a number of related acts¹ that affect food businesses. The Mauritian Food Act, based on the Food Safety Act (1990), UK, was passed in June 1998 and has been in operation since the 1st of January of year 2000. Local food regulations have been based on the international Codex norms. The introduction of new legal instruments had certain implications for other components of the SPS control system such as administration, enforcement and supporting bodies, but these components have not been fully responsive.

Important SPS measures pertaining to animal health, plant health and the safety of genetically modified organisms include the Animal Diseases Act (1925), the Plant Protection Act (2006), the Supplies Control Act of 1994 and the Genetically Modified Organisms Act (2004).

2.2. Administration and enforcement of SPS measures

The Mauritian Food Control System has been described thoroughly (Neeliah, Goburdhun, & Neeliah, 2009). Food control can be considered to be centrally administered and enforced by the MOH. At central government level, the MOH is responsible for food safety control through its Health Inspectorate Division.

The MOAIF has several departments dealing directly with food safety, plant health and animal health issues. The Division of Veterinary Services (DVS) is recognised as the Competent Authority and as such, is involved in the inspection of fish and livestock products for the issue of health certificates for import, export and in the supervision of manufacturing processes in relation to veterinary products for exports. The National Plant Protection Office (NPPO) controls the import and export of fruits and vegetables. The Fisheries Division deals with the certification for the import and export of fish and fish products. There is a division of responsibility for food control between the MOH and the MOAIF but no coordinating committee or similar body ensures cooperation and coordination. Administration and enforcement of SPS measures in Mauritius are affected by the availability of resources.

The Ministry of Local Government (MLG) exercises control over the activities of people in a given locality through the District Councils and Municipal Councils. These Councils each have a Health department that employs Health Inspectors. The latter are involved in the inspection of markets at local level. Local authorities therefore participate to some extent in food control activities, but under the Local Government Act of 2003. They are not involved in enforcement of the Food Act.

2.3. Supporting bodies demonstrating compliance with SPS measures

There is no framework defining the roles and responsibilities of the different supporting bodies with respect to the SPS control system.

2.3.1. Analytical services

Two laboratories, both under the MOH, are officially recognised under the Food Act (1998), namely the Government Analyst Division and the Pathological Division of the Central Laboratory of Victoria Hospital. The Government Analyst Division is responsible for the chemical analysis of samples while the Central Laboratory has a Food Section which mainly deals with the microbiological examination of food and water samples. These two services are not accredited (as at December 2009). The MOAIF has set up a new Food Technology Laboratory which carries out the analysis of food items meant for export such as fish and fishery products and other tests not currently being performed by the existing laboratories. Analyses include tests for the detection and determination of pesticide residues, heavy metals and aflatoxins in fish and horticultural products. This laboratory is preparing for accreditation (MOAIF, 2007). Disease diagnostic and quarantine facilities also exist at the Animal Health Laboratory of the DVS and at the NPPO.

Analytical services are available at the Mauritius Standards Bureau (MSB) and a few private laboratories, such as the Société Générale de Surveillance which is accredited. The presence of scattered, mostly non-accredited analytical services locally could possibly result in a duplication of activities and a waste of scarce resources.

2.3.2. Standard setting, certification, calibration and accreditation bodies

The Mauritius Standards Bureau is a parastatal body that sets standards defining the products and containing specifications that should be satisfied by a particular food, e.g. MS 65 (2007) specification for processed chicken. A Food and Agricultural Standards Committee oversees the work of sub-committees which draft the standards. These sub-committees involve all stakeholders. The standards are generally voluntary in nature and based on the Codex Alimentarius Commission standards (CAC); however, a few standards have been referred to in legislation such as the standard MS 30 on labelling of pre-packaged foods. Requirements of MS 30 are enforced by officers of the Consumer Protection Unit which falls under the Ministry of Consumer Protection and Citizen Charter. Together with the Legal Metrology Division, which is the national custodian of weights and measures, the MSB is also involved in the traceability of measurements. Other activities of the MSB include testing and certification of quality and food safety management systems.

The Mauritius Accreditation Services (MAURITAS) has been established in 1998 and is responsible for accreditation of conformity assessment bodies involved in calibration, testing, inspection and certification. It is a member of the International Accreditation Forum (IAF) and an affiliate member of the International Laboratory Accreditation Cooperation (ILAC). MAURITAS is one organisation that has been established to meet WTO requirements with respect to accreditation.

2.3.3. Professional organisations, research associations, consumer organisations and trade associations

Professional bodies are organisations with highly qualified professionals like the Institute of Food Science and Technology (IFST) in United Kingdom. There is a dearth of professional organisations in Mauritius. However there are a number of other institutions that provide support to the national SPS control system. The University of Mauritius carries out research in the food area, but much of its work is not published. The Food and Agricultural Research Council funds research on technical aspects of agricultural and food production. It provides policy advice to the MOAIF and coordinates and supports (financially and logistically) the conduct of research and development in the agricultural and food sector (FARC, 2007).

¹ Another Act that has a bearing on the control of food businesses is the Trade and Industries Classification Act 1954, which spells out the requirements for general trades, of which food businesses.

Two consumer organisations are known locally: the “Institute for Consumers’ Protection” and the “Association des Consommateurs de l’Île Maurice”. The two main trade associations concerned with SPS issues are the “Mauritius Chamber of Commerce and Industry” (MCCI) and the “Mauritius Chamber of Agriculture” (MCA). These give a bargaining power to their members and provide services including legal assistance and technical backup. These bodies participate in food control indirectly by attending meetings, sending their comments and organising training programmes on food issues.

2.4. Dealing with the SPS Agreement: the case of Mauritius

The effects of the WTO SPS Agreement can be gauged partly by studying the institutional capacity, the participation in the institutions and the practices established under the Agreement (Loader & Henson, 1999). Objective measures include:

- membership in international standards organisations – the World Animal Health Organisation (OIE), the International Plant Protection Convention (IPPC), CAC,
- implementation of transparency obligations,
- attendance at meeting of SPS Committee.

A coherent regulatory framework and a system to assess compliance and conformity are also needed (Jaffee & Henson, 2004).

Based on the above measures, it can be said that Mauritius has put in place a system so as to be in line with WTO requirements. Mauritius is a member of international standard-setting organisations such as CAC, IPPC and OIE, but participation is limited mostly due to financial constraints. The representative of the SPS Enquiry Point (SEP), who is the Principal Research and Development Officer (PRDO) of NPPO, regularly attends the meetings of the SPS Committee in Geneva and this representation in the SPS Committee clearly indicates the commitment of Mauritius with respect to meeting its obligations towards the WTO. In case local stakeholders are facing problems in their export market, the SEP intervenes either by seeking to solve the matter through bilateral or regional negotiations or by taking the SPS issues raised by local stakeholders, after discussion in local SPS Committee to the SPS Committee meetings in Geneva (WTO, 2006). However due to local economic constraints, it is often difficult to fund the participation of technicians to the SPS Committee. Whenever technicians are unable to participate, the representative from the Geneva-based mission participates. Given the technical/scientific nature of discussions at the SPS Committee, the latter cannot always effectively contribute to the Committee (WTO, 2006).

One measure taken since the signature of the SPS Agreement has been the modernisation of SPS measures like the Food and Drugs Act (1940) and the Plants Act (1976). The first step was to review the Food and Drugs Act (1940). A new food law was introduced in 1998. This indirectly allowed Mauritius to meet its obligation towards the WTO. It is apparent that the MOH has used mostly the British food law, the European Directives and Regulations and the international norms prepared by the CAC as foundation for drafting the local food regulations (MOH, 1998). Other acts and regulations were later modernised or introduced to be in line with obligations towards WTO. The Plant Protection Act was proclaimed in 2006, thus replacing the Plants Act of 1976. The Genetically Modified Organism Act of 2004 was introduced. However many important SPS legislations are yet to be modernised to meet international obligations (Animal and Disease Act, Seed Legislation and Plant Breeders Legislation).

According to stakeholders interviewed, the workload in all departments dealing with SPS issues in Mauritius has increased, implying that each has been involved to some extent. The imple-

mentation of the SPS Agreement has given more prominence to the role of the MOAIF as a regulatory body, especially to the NPPO, on an international front. Other governmental departments also share the administrative responsibilities for SPS measures:

- *Food safety*: the Principal Medical Officer, MOH.
- *Animal health*: the Principal Veterinary Officer, Division of Veterinary Services, MOAIF.
- *Plant health*: the Principal Research and Development Officer (PRDO), NPPO, MOAIF.
- *Marine products safety*: MOAIF.
- *Information about rights, obligations and practical operation of the SPS Agreement*: NPPO, MOAIF.

[Source: G/SPS/GEN/295/Add. 27 (WTO, 2008)].

Thus, although the control of imported food products and locally manufactured food products lies in the hands of the MOH, the MOH is involved to a lesser extent in the implementation of the SPS Agreement. However, it has to account for food safety measures to the WTO officially.

Improved SPS capacity is the key to a successful proactive approach to compliance with the SPS Agreement. To benefit from the SPS Agreement, developing countries have to set up certain institutions. Early establishment of these institutions is vital (South Centre, 1999) but it is excessively costly for many developing countries (Athukorala & Jayasuriya, 2003). Within the limits of its financial status, Mauritius has achieved a reasonable level of compliance with these obligations. Mauritius has the necessary institutional infrastructure for standards, testing, quality assurance and metrology. In addition, a national accreditation body, a National Notification Authority and an SPS Enquiry Point have been established. In fact, the institutional and technical capacity is also being strengthened or in the process of being set up, where inexistent (WTO, 2006). Thus, a Food Technology Laboratory has been set up to assist exporters to meet the norms imposed by importers. Furthermore, it is proposed to set up a Certification Body. Logistic and financial support is being provided to laboratories in Mauritius for accreditation so that proper certification procedures are established in conformity to international norms (WTO, 2006). The institutional infrastructure must however be further consolidated. A national strategy for the food safety infrastructure is also required to delineate responsibilities and avoid overlap and wastage of resources.

2.5. Meeting the clauses of the SPS Agreement

2.5.1. Basic rights and obligations

Article 2 of the SPS Agreement stipulates that “Members have the right to take Sanitary and Phytosanitary Measures necessary for the protection of human, animal or plant life or health”, provided they are “based on scientific principles and are not maintained without sufficient scientific evidence” (WTO, 1995). Mauritius has availed itself of this right to prevent its trading partners from using unjust measures, for instance when Kenya imposed a ban on day old chicken from Mauritius without any scientific justifications (Gujadhur, 2003). When Mauritius imposed a temporary ban on imports from Belgium and Europe due to dioxin contamination, it met an obligation by notifying the measure (G/SPS/N/MUS/1), invoking food safety as the motive (WTO, 2008).

2.5.2. Harmonisation

“Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations”, unless there is a scientific justification (WTO, 1995). Mauritius is currently active in international organisations such as IPPC, OIE and to a lesser extent, CAC, as reported by various stakeholders (Table 2).

Table 2

Degree of participation in the work the SPS committee and of international organisations.

Participation at international level	Rating
Codex Alimentarius	Poor
IPPC	Satisfactory
OIE	Satisfactory
SPS Committee	Satisfactory

1–2: poor; 3–5: satisfactory; and 6–7: good.

The Veterinary Services under the MOAIF represent the interests of Mauritius at the OIE, while the NPPO represents Mauritius at the IPPC. There is limited participation in the activities of the CAC due to the cost implications and lack of scientific knowledge.

Since the SPS Agreement advocates the harmonisation of standards, Mauritius uses internationally recognised standards made by CAC as basis for making its Food Regulations. But, there exist certain sections of the Food Regulations 1999 which differ from international standards for example with respect to date marking of labels. Use is made of a pre-market approval system for food control that does not focus on risk assessment but solely on analysis of samples submitted by the food business operator. The existence of such requirements can act as a barrier to trade and prevent Mauritius from meeting obligations towards the WTO. Moreover the SPS requirements of trading partners are often more demanding than those of the CAC and local exporters are forced to meet these requirements although they follow the guiding principles of the CAC. This can be explained by the fact that WTO SPS Agreement only recommends members to “base” their standards on Codex standards; there is thus room for interpretation by WTO Members.

Organisations like the Mauritius Standards Bureau and the MOH are independently using Codex standards as basis for elaborating their standards and regulations respectively. There is however, no proper coordination of such activities. This could have been possible through the National Codex Committee. The National Codex Committee is currently inactive. A functional Codex Committee would ensure effective input to Codex by all relevant government ministries, consumer organisations and the food industry (Boutrif, 2003). Inactivity of the National Codex Committee also does not facilitate participation of Mauritius in Codex meetings or inclusion of requirements specific for Mauritius. Thus, Mauritius has insufficient ability to participate actively in the development of international food standards. Local requirements are not taken into account when the meetings are not attended. Other developing countries face similar constraints (Foster, 2009; Nyangito, 2002; Prasad, 1999; Thornsbury, 2000; WTO, 2008)². In fact, mechanisms that take into account the economic and technical capacity of developing country members are lacking [G/SPS/510 (WTO, 2008)], although it is recognised that an increased participation of developing countries in the international standards organisations should be a priority within the global food system (Josling et al., 2004). Henson, Loader, Swinbank, Bredahl, and Lux (2000) argued that the process by which international standards are made is lengthy: it is not only very costly to participate in all these meetings, but there is inadequate technical competence and backup. However, the Codex Trust Fund, a joint initiative of the Food and Agriculture Organisation and the World Health Organisation has helped developing countries to enhance their level of participation in the development of international Codex food safety and quality standards since 2003. At the end of 2008, 230 participants from 85 developing countries had been supported to attend 20 Codex meetings by the Trust Fund (WHO, 2009).

2.5.3. Equivalence

Mauritius must accept the sanitary or phytosanitary measures of other Members as equivalent, “even if these measures are different from its own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to it that its measures achieve the importing Member’s appropriate level of sanitary or phytosanitary protection” (WTO, 1995). Equivalence of local SPS measures with those in South Africa has been carried out for canned fish products. South Africa’s production and inspection system have been judged to be equivalent to that in Mauritius by the Mauritian authorities. Judgement of equivalence is carried out by document review focusing on legislation and by visual appraisal of the certification of fish being exported. Presently Mauritius is still building capacity to be in a position to carry out equivalence on all aspects of food safety using a full risk analysis.

2.5.4. Transparency

The SPS Agreement requires “Members to notify changes in their sanitary or phytosanitary measures and to provide information on their sanitary or phytosanitary measures” (WTO, 1995). Members are encouraged to publish their Sanitary and Phytosanitary Measures on the World Wide Web in order to improve transparency (WTO, 1999), but it is one area where WTO members currently face implementation problems [G/SPS/510 (WTO, 2008)] although guidelines have been prepared (WTO, 2000). Mauritius, unlike many developing countries, has achieved a high level of compliance with its transparency obligations (WTO, 2005a, 2006) through the establishment of an SPS Enquiry Point and a National Notification Authority (WTO, 2004). Contrary to previous studies dealing with transparency mechanisms (Henson et al., 2000; Nyangito, 2002), meeting the transparency provisions of the Agreement was not considered to be a major issue in Mauritius as compared to other developing countries, where it was still an area where there was room for improvement (AITIC, 2009).

Another initiative of the SPS Enquiry Point has been the creation of a national SPS committee which monitors and provides comments on the application of SPS measures as they relate to food and agricultural products. It coordinates the official positions of Mauritius with other local agencies and identifies SPS issues affecting the Mauritian agricultural exports to raise these issues in Committee or in informal and formal consultations with WTO member governments. It provides a regular forum for public–private consultations. It is interesting to note that Mauritius, unlike many developing WTO member countries [(G/SPS/GEN/154; G/SPS/R/32 (WTO, 2008)] has managed to involve the private sector in activities relating to SPS issues. The latter participates in the national SPS committee and also submits comments on SPS measures notified by other member countries to the SEP. Moreover, the SEP has organised awareness workshops to inform them about the SPS Agreement. The two main industry representatives, the MCCI and MCA on their part, ensured dialogue with their members by organising workshops and by communicating on relevant notifications through email. This is an important measure because the SPS Agreement places obligations on governments and then passes legislation which the economic operators have to comply with. Such private–public partnerships are laudable.

The SPS Committee comprising representatives from the MOH, Ministry of Commerce, Fisheries Department (MOAIF), Mauritius Standards Bureau, Veterinary Services (MOAIF), the MCA, MCCI and the Agricultural Research and Extension Unit meets at least once a month according to the Head of the NPPO. However, most stakeholders reported that meetings had been irregular and that minutes of the meeting are not published online. For more transparency, the activities of the National Notification Authority (NNA), the SEP and the national SPS committee should have been

² G/SPS/441-2003.

published on a website. The website could also have provided additional information about training and participation in various meetings, as well as the outcomes of any technical assistance activities. It is expected that the formal setting up of a National Sanitary and Phytosanitary Coordination Committee at the MOAIF since October 2009 (Government of Mauritius, 2009), will improve the situation.

2.5.4.1. Publication of regulations. Members must notify changes in their sanitary or phytosanitary measures and provide information on their sanitary or phytosanitary measures. The Mauritian Government has a website (Government of Mauritius, 2006) where the local laws are published. The SEP claimed to have a complete inventory of the country's proposed and adopted Sanitary and Phytosanitary regulations, including the full text of regulations. However an inventory of the notifications sent by the Mauritian SEP to the WTO revealed that the Food Act (1998) and the regulations thereof, the GMO Act (2004) and the Plant Protection Act (2006) had not been notified to the WTO possibly because of lack of awareness or that the laws were considered to be based on international standards. Since the Food Regulations (1999) were not similar to internationally accepted food standards, they should have therefore been notified for transparency sake. Countries like the USA (Livshiz, 2007), China and Japan have considerably increased their regulatory transparency (Biukovic, 2008) possibly because they are major players in international food trade compared to Mauritius.

2.5.4.2. National Notification Authority and notifications. A single central government authority must be designated as responsible for the implementation of the provisions concerning notification procedures. The National Notification Authority (NNA) for Mauritius is the Secretary for Foreign Affairs, Ministry of Foreign Affairs, International Trade and Regional Cooperation (International Trade Division) [Source: G/SPS/NNA2, G/SPS/NNA4A2, G/SPS/ENQ/21; G/SPS/NNA11 (WTO, 2008)]. Its functions are to:

- a. ensure regulations are published early to allow for comments,
- b. notify other countries through the Secretariat of SPS regulations using the appropriate notification form,
- c. provide copies of regulations on request and ensure that comments are handled correctly.

One Trade Policy Analyst is the desk officer for SPS issues and serves the NNA. He is also the desk officer for TBT, agricultural trade negotiations, sugar reform and trade relations with Japan and Australia (WTO, 2006). However, notifications are drafted by the Enquiry Point located with the NPPO and then forwarded to the NNA for onward transmission to the SPS Secretariat of the WTO (WTO, 2006).

During the first 4 years of operation of the Agreement, no notifications were sent by Mauritius (Table 3). It can be argued that either there was too little awareness at that time for Mauritius to fulfil its accession obligations, or there had been no major developments in the sector that would warrant use of this right. However, Mauritius experienced a major development in its food legislation in 1998 and these measures were still not notified to the WTO. This may be due to the fact that there was too little administrative capability to submit notifications as was the case in other countries [G/SPS/R/32 (WTO, 2008)]. Either the measures were not considered to be different from what is internationally recommended or the governmental agency having produced the SPS-related legislation had failed to inform the Notification Authority. Possibly, there was some confusion as to which department was the National Notification Authority. This suggested that the communica-

tion links between the NNA and some government departments should be reviewed. A similar problem exists in India and according to Das (2008), this lack of communication among SPS-related institutions could be a key factor contributing to a country's failure to notify, send comments, and reply to questions.

Since its adherence to the WTO, Mauritius has made 12 notifications (Table 3). Eleven out of 12 notifications were from either the animal health area or the food safety area, or both, and emanated from the DVS from 1999 to 2004. The number of notifications has also remained more or less constant except in 2001 when six notifications were sent. In that respect, Mauritius follows the trend of African countries. African countries have been sending few notifications compared to Latin American countries. This small number of notifications can be attributed to a lax regulation (Oyejide, Ogunkola, & Bankole, 2000; Wilson, 2000), to the fact that the country is using SPS measures based on international standards or to the fact that the country is only a small player in agro-food trade. The absence of notifications from 2004 to 2009 indicates that no SPS measure had been introduced.

In-depth interviews with stakeholders indicated that the current arrangement for sending and receiving notifications, for dealing with enquiries and for discussing SPS issues failed to meet the expectations of all stakeholders. Mauritius has never commented on any notifications because of lack of qualified permanent personnel for operation of the Enquiry Point (WTO, 2006). Mauritian stakeholders generally concurred that there was a too large number of notifications and it was difficult to manage such a large volume of notifications as this could lead to important notifications being missed. Some countries have employed administrative officers to deal solely with notifications on a day-to-day basis, for instance, Argentina and some EU member countries [G/SPS/GEN/425; G/SPS/GEN/455 (WTO, 2008)]. In Mauritius, the same staff working in the local SEP is dealing with notifications. Thus, it may be difficult for them to deal adequately with all the notifications. Availability of email facilities is also very important in that situation, and such facilities are used in Mauritius. These developments are viewed as positive indicating that Mauritius is making efforts to fulfil its obligations. There should be however, increased use of information technology for the circulation of notifications.

2.5.4.3. SPS Enquiry Point (SEP). One Enquiry Point is required for providing answers to questions from interested Members as well as for providing relevant documents regarding local sanitary or phytosanitary regulations, control and inspection procedures, production and quarantine treatment, pesticide tolerance and food additive approval procedures, membership and participation of Mauritius in international and regional Sanitary and Phytosanitary organisations and systems, as well as in bilateral and multilateral agreements and arrangements within the scope of this Agreement. The SEP of Mauritius is the Permanent Secretary of the MOAIF who has delegated his power to the Head of the NPPO [Source: G/SPS/ENQ18, G/SPS/ENQ14A2 in WTO (2008)]. The SEP was using the facilities already available in the NPPO for meeting its transparency obligations. This could mean that there was a pressure on the resources. Several other countries have been facing such a constraint [G/SPS/GEN/430 (WTO, 2008)]. Indeed, monitoring, analysing and communicating about SPS issues imply a basic investment and a minimum staff that make it possible to take advantage of and comply with the SPS Agreement [G/SPS/GEN/497 (WTO, 2008)].

2.5.5. Risk assessment

"Members must ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organisations" and the objective of minimising

Table 3
Notifications made by Mauritius.

Year	Document number	Product covered	Notifying body	Description	Rationale
1999	G/SPS/N/MUS/1	Food and Food commodities from Europe	Department of Veterinary Services	Temporary ban on imports from Belgium and Europe due to dioxin contamination	Food safety
2001	G/SPS/N/MUS/2	Fish and fish products	Fisheries Department	Temporary ban on the importation from the Republic of South Africa	Food safety
2001	G/SPS/N/MUS/3	All livestock and livestock products	Department of Veterinary Services	Ban on import from the United Kingdom with immediate effect	Food safety and animal health
2001	G/SPS/N/MUS/4	All meat products, except poultry and canned pork meat	Department of Veterinary Services	Ban on import from the European Communities with immediate effect	Food safety and animal health
2001	G/SPS/N/MUS/5	Live cattle, sheep and goats	Department of Veterinary Services	Temporary suspension of importation from Zimbabwe and the Republic of South Africa with immediate effect	Animal health
2001	G/SPS/N/MUS/6	Horses and other equidae	Department of Veterinary Services	Temporary ban on importation into Mauritius with immediate effect due to Foot and Mouth Disease	Animal health
2001	G/SPS/N/MUS/7	Chilled processed pork products and live cattle	Department of Veterinary Services	Lifting of ban on import from France and South Africa with immediate effect.	Food safety and animal health
2002	G/SPS/N/MUS/8	Chilled processed pork products and live cattle	Department of Veterinary Services	Lifting of ban on import from Foot and Mouth Disease free-zones in South Africa	Food safety and animal health
2002	G/SPS/N/MUS/9	Pork and pork products Live cattle, live sheep and live goat	Department of Veterinary Services	Lifting of ban on import from the European Communities (except the United Kingdom) and from Foot and Mouth Disease free-zones in South Africa with immediate effect	Food safety and animal health
2003	G/SPS/N/MUS/10	Livestock feed	Department of Veterinary Services	Agreement to ensure the export of safe animal feed from Mauritius to Madagascar (Protocol of Veterinary Agreement for Exportation of Animal Feed to Madagascar)	Food safety and animal health, protection of humans from animal/pest or disease
2003	G/SPS/N/MUS/11	Fruit and vegetables	Division of Plant Pathology and Quarantine	Temporary ban on importation of fruits and vegetables from Kenya due to fruit fly	Plant protection
2004	G/SPS/N/MUS/12	Live poultry and pigs including their frozen and chilled products	Department of Veterinary Services	Suspension of all importation intended for consumption, animal feed, agricultural use and industrial use from South Africa	Animal health

Author's own compilation from WTO (2008).

Table 4
Problems associated with the manner in which the SPS Agreement operates.

Factors
Degree to which developed countries take into account of the needs of Mauritius in setting SPS requirements
Level of technical assistance given to Mauritius
Willingness of developed countries to accept Mauritian SPS measures as equivalent
Any special and differential treatment given to Mauritius
Willingness of developed countries to engage in bilateral negotiations with Mauritius
Period allowed between notification and implementation of SPS requirements
Level of information given with notifications of SPS requirements

negative trade effects (WTO, 1995). Risk assessment is not being systematically carried out in Mauritius because of unavailability of experts and risk assessment data. Locally, only the personnel involved in the operation of the SEP at the NPPO have received training in risk assessment. The NPPO has also been closely associated with a risk assessment exercise for the importation of fruit from China. According to the SEP, in the future, all risk assessment exercises are to be documented before exporting or importing food products. These documents should then be produced to justify any approvals or rejections.

Risk assessment has been identified by local stakeholders as an area where technical assistance was required. Risk assessment methods were not yet fully developed and the necessary expertise and scientific data required for such exercises was not available lo-

cally. This has been recognised as a problem area in many countries, especially developing countries, because Members lacked know-how and laboratory equipment [G/SPS/R32 (WTO, 2008)] and therefore they are not in a position to present a well documented and supported case to challenge a developed country's SPS measure (Henson et al., 2000; Nyangito, 2002). Moreover, it is acknowledged that the SPS Agreement has placed new emphasis on risk assessment related to the trade of safe food (Epps, 2008; Peel, 2004). However, the application of formal risk assessment is a relatively new science (Boutrif, 2003; Hathaway, 1999), subject to controversy (Peel, 2004) and the Codex Alimentarius has only recently developed guidelines. It is suggested that existing local laboratories could be roped in the collection of empirical data provided the responsibilities were well delineated among them.

Moreover, developing countries have failed to separate risk assessment from risk management activities (Zahrnt (2009) as is the case in developed countries such as Denmark (Andersen, Hald, Nielsen, Fielder, & Nørnung, 2007). Lack of demarcation between these two processes could create a conflict of interest.

2.5.6. Dispute settlement

Members may resort to consultation and to dispute settlement mechanisms when the need arises. Mauritius has not been involved as a complainant or respondent in WTO dispute settlement, but has rather negotiated trade issues bilaterally, for instance with South Africa and Kenya. According to Boodhoo and Dabee (1998), the technicalities involved in the dispute settlement procedure may be difficult for Mauritius if it is to file a case or answer to a dispute filed by another member. They also were of opinion that

nobody in the legal profession in Mauritius was conversant enough to handle dispute cases, either in the public sector or in the private sector. Moreover, Mauritius was such a small market that countries exporting to it were not likely to modify their product to meet the SPS measures of Mauritius. In fact studies have shown that poor countries are still less likely than rich ones to participate in WTO disputes (Bown, 2005; Busch & Reinhardt, 2003), possibly because they lack legal resources and expertise or because, due to their small markets, they have limited ability to enforce panel rulings via trade sanctions and logically refrain from filing claims they cannot enforce. However, assistance could be sought from the WTO in that area.

2.5.7. Provisions for developing countries-technical assistance, special and differential treatment

WTO Members must facilitate the provision of technical assistance to other Members, especially developing country Members, either bilaterally or through the appropriate international organisations, for instance, in the areas of processing technologies, research and infrastructure and in the establishment of national regulatory bodies. Technical assistance (national/regional seminars, workshops, national technical mission, training) received by Mauritius in SPS areas include Pesticides Initiatives, Strengthening Plant Health Capability in Seed and Plant Certification Schemes, Strengthening SPS systems in ACP countries regarding the Food and Feed Regulation, on trade policy implications of the international standard-setting bodies and WTO-consistent approaches to the implementation of SPS regulations and Strengthening fishery products health conditions (WTO, 2005b, 2007). At the level of the MCCI and MCA, members had the opportunity to attend a training session organised by the NNA and the MOAIF. The training had as main objective to raise the awareness of the industry about the SPS Agreement. In turn, the MCCI and the MCA organised workshops for planters and importers on the SPS Agreement.

Technical assistance activities that were still required by Mauritius [G/SPS/W/113 in WTO (2005a, 2008); G/SPS/GEN/295/Add.27 in WTO (2008)] include the following areas: Rights, obligations and practical operation of the SPS Agreement, inspection, sampling and investigative procedures, training in HACCP and equipment for microbiology laboratory, animal health and plant health (Training in Vapour Heat Treatment, equipment, quarantine procedures). There are thus, some areas of overlap, for instance, “food safety” and “rights, obligations and practical operation” where assistance has already been provided, but is being sought again. This may imply that the knowledge acquired during such training courses has not been shared with other stakeholders or insufficient or that training was inappropriate.

Training in specific areas such as risk analysis³ and equivalence was urgently required. Training of a technical nature, for instance, for Quality Assurance and certification and HACCP implementation have also been rare. It can be also inferred that there were still problems with respect to the understanding of the Agreement itself. Information management was another issue to be addressed. Technical matters such as inspection, sampling and conformity assessment were also areas that should be given attention in Mauritius.

2.6. Problems with the operation of the SPS Agreement

2.6.1. Operation of the SPS Agreement

All stakeholders agreed that implementation of the Agreement in Mauritius was an obligation, but it required high investments.

There was insufficient knowledge of the rights and obligations of the Agreement among most stakeholders, except for those working in the NNA and the SEP. This could be due to the lack of communication that existed between the SEP and the NNA and other departments. This is a common problem among WTO members [G/SPS/GEN/441 (WTO, 2008)], for instance, Senegal.

Local stakeholders expressed their concerns about the way in which the SPS Agreement operates.⁴ The factor considered to be the most important problem associated with the operation of the SPS Agreement was the degree to which developed countries took into account of the needs of Mauritius in setting SPS requirements. It is expected that developed countries will set SPS measures to meet their consumers' requirements and not to suit developing countries' needs. Although the text of the SPS Agreement is in itself, very short, it has left room for interpretation (Bureau & Doussin, 1999). This argument is supported by more recent literature (Das, 2008). Each country has its own interpretation and this is bound to give rise to conflicts. This particularly applies to provisions relating to the ability of a country to choose its particular level of consumer protection and to the use of international standards relative to the domestic ones (Bureau & Doussin, 1999). Disputes that have arisen due to the SPS Agreement also provide an interpretation, albeit diverging (Das, 2008; Gruszczynski, 2006), to the Agreement and the current interpretation of WTO dispute resolution bodies are still seen as constraining the freedom of member states to respond to the concerns of their citizens (Philbrick, 2008).

The level of technical assistance was considered to be a very important problem in the operation of the SPS Agreement by all stakeholders. Although a Standards and Trade Development Facility has been established for coordination of technical assistance, securing technical assistance is still a problem. Either not all stakeholders were aware about the mechanisms to get technical assistance or donor countries did not consider Mauritius as a priority compared to other developing countries. A review by Wiig and Kolstad (2005) pointed out that assistance was given in an unsystematic and ineffective manner and was often based on political considerations. Such assistance was not expected to promote trade and development. Assistance to the developing world is still considered to be insufficient (AITIC, 2009; Foster, 2009). Based on an empirical analysis of the trade effects of Sanitary and Phytosanitary (SPS) Measures and Technical Barriers to Trade (TBT) on tropical and diversification products, Disdier et al. (2008) affirm that much remains to be done to improve the position of developing and least developed countries in the international agricultural trade. It is important to provide them with technical and financial assistance to help them match the requirements imposed by SPS and TBT Agreements.

This study is therefore in line with previous studies on the problems associated with the implementation of the SPS Agreement (Henson et al., 2000; Nyangito, 2002), where the degree to which developed countries take into account the needs of developing countries when setting SPS requirements and the level of technical assistance (Foster, 2009) were judged to be insufficient.

2.6.1.1. Factors limiting participation in SPS Agreement. Having established that Mauritius faced some difficulties to operate the SPS Agreement, stakeholders considered that the most significant factor to effective participation in the SPS Agreement was the insufficient capacity of Mauritius to assess the scientific justification of developed countries' SPS requirements, to undertake risk assessment and demonstrate equivalence (Table 5). This is a problem common to developing countries (Henson et al., 2000). The NPPO (SEP) mentioned that some work had been initiated in the

³ The University of Mauritius, the MOH and the World Health Organisation organised a food safety risk analysis workshop in November 2008 which involved all stakeholders dealing with SPS issues. Such an initiative should be encouraged and other areas of risk analysis covered.

⁴ For a list of factors discussed, see Table 4.

Table 5
Factors influencing ability to participate effectively in SPS Agreement.

Factor
Ability of Mauritius to assess scientific justification of developed country SPS requirements
Ability of Mauritius to undertake risk assessment of SPS requirements
Ability of Mauritius to demonstrate that domestic SPS standards are equivalent to developed country requirements
Ability of Mauritius to attend SPS Committee and international standards organisation meetings
Ability of Mauritius to participate in dispute settlement procedures
Negotiating position of Mauritius

risk assessment of SPS requirements whereas for the other stakeholders, training in that area was vital since there was a scarcity of risk assessment experts.

One basic principle of the SPS Agreement is that of scientific justification. With its requirement for regulatory measures to be scientifically justified and based on a risk assessment, “the SPS Agreement echoes the quest for science-based, rational decision-making” on questions of health risk (Peel, 2004). Moreover, the WTO panels and appellate body rulings have reaffirmed the need to assess risks and to provide scientific evidence so as to balance the right of member states to set an appropriate protection level (Bureau & Doussin, 1999). The need to provide scientific basis or to carry out risk assessment is still questioned (Epps, 2008) and is not affordable by all countries. In fact, the requirements of the Agreement are generally viewed as high and even developed countries face a huge task when they have to provide a risk assessment robust enough to be judged in conformity with the Agreement's provisions (CTA, 2003). One way of dealing with this problem is for WTO members to use Codex standards and to participate in the drafting of international standards. This increased prominence of the role of Codex standards was already foreseen in the early days of the Agreement (Dawson, 1995; Sikes, 1998). Countries like the USA have increased their participation in drafting of standards at international level (Livshiz, 2007) to have their say on the standards being made.

Equivalence is also a relatively new area and guidelines have only recently been prepared. Thus developed countries are reluctant to accept equivalence of measures set by Mauritius because of lack of data on the local SPS system. Demonstration of equivalence was therefore another area where much remained to be done, as pointed out by the majority of stakeholders. In fact, this is recognised at the level of the Codex Alimentarius (Hathaway, 1999). However, few examples of equivalency have yet been achieved world-wide.

3. Conclusion

This paper assesses the degree of compliance of Mauritius with the clauses of the SPS Agreement and the problems it has met in doing so. It also depicts the regulatory, institutional and operational changes that have materialised with Mauritius becoming a signatory to the SPS Agreement. As a developing country, Mauritius has achieved a reasonable level of compliance with its commitments towards the WTO. A certain number of transparency mechanisms have been put in place such as the setting up of a NNA, an SEP and a national SPS committee involving the public and private sectors for the purposes of applying the WTO SPS Agreement. Mauritius regularly participates in meetings of the WTO SPS committee. It has also updated some SPS-related laws and has integrated the private sector in the decision-making process related to SPS issues.

One institution has been created to ensure the recognition of local conformity assessment procedures, namely the MAURITAS;

other institutions have been assigned additional responsibilities. However, not all institutions have been provided with adequate training, manpower and the necessary logistic and financial resources to meet the clauses of the Agreement. Constraints met by Mauritius in areas of institutional capacity also indicate that the access to financial resources is limited, as is usually the case in developing countries. Indeed, implementing the obligations of the SPS Agreement can put a weight on a country's budget (Finger & Schuler, 1999). Institutional capacity (including informational, enforcement, international standards setting and conformity capacity) precisely determines the ability of a country to cope with emerging standards in food and agricultural products (Kim & Reinert, 2006). This is also a problem common to developing countries (Roberts, Orden, & Josling, 1999; Wilson, 2002) and highlights the importance of developing a national strategy for Standards, Quality Assurance, Metrology and Accreditation. However, the review of the local food control infrastructure has not taken place according to principles set by the Codex, since risk assessment and risk management were still carried out by the same organisations. Further consolidation of the current SPS control system was required.

Responsibilities for dealing with SPS issues should be clearly delineated. One particular unit or Ministry should be given the responsibility of risk assessment and equivalence. In addition, technical assistance could be sought for the consolidation of surveillance network (food, animal and plant diseases) to undertake action for food safety and plant and animal health protection and for hands-on training for officers involved in SPS control. It is important to seek technical assistance in areas such as risk assessment and demonstration of equivalence.

There were still some problems such as the insufficient ability to participate and influence the process in standard-setting bodies and the unclear lines of communication between the NNA, the SEP and all local stakeholders to ensure prompt notification of SPS measures. The nature of the constraints met by Mauritius in participating in the SPS Agreement again point to the fact that the level of scientific and technical expertise required to meet the provisions of the Agreement is insufficient. Since Mauritius forms part of a number of regional groupings, it could pool its resources with other countries to send a team of experts to attend the SPS committee and to participate in the work of international standards setting organisations, or share the responsibility to attend meetings, so that on the whole, all meetings are attended.

This analysis of the compliance of Mauritius with the requirements of the SPS Agreement could serve as a learning platform for other developing countries. It is first important to set up the right control infrastructure and make it operational. It is equally vital to meet transparency obligations. Mauritius has benefited a lot from the establishment of a national SPS committee involving the public and private sectors. Regulatory transparency and revision of SPS measures should also be a priority in the compliance process. This should be in line with the principles of harmonisation, scientific justification and risk assessment. Thus developing countries should, as far as possible, base their measures on Codex, IPPC and OIE, unless there is scientific basis for not doing so. This scientific basis should be based on risk assessment data which should be properly documented, should a trade dispute arise. The participation in standards setting and in the WTO SPS Committee should also be considered as it will help developing countries in meeting their rights and obligations under the SPS Agreement.

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