

Review on Sanitary and Phytosanitary Agreement

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Abstract

Fresh food exports represent a growth opportunity due to high demand and fewer trade barriers than traditional exports. Fresh food products are more likely to encounter sanitary and phytosanitary barriers to trade. Ensuring food safety remains a significant challenge in developing and developed countries. This is due to illegal international trade, which allows the rapid transfer of contaminated food from one country to another. Thus, the main objective of this review is to highlight the sanitary and phytosanitary agreements. The Sanitary and Phytosanitary agreement was primarily concerned with food safety and animal and plant health regulation, as well as health and international trade in general. World Trade Organization members specify that Sanitary and Phytosanitary measures are classified as sanitary for human and animal life and phytosanitary for plant life and health. A Sanitary and Phytosanitary measure is any measure taken to protect animal or plant life or health within the territory from risks posed by pests, diseases, disease-carrying organisms, or disease-causing organisms; to protect human or animal life or health within the territory of the member from risks posed by additives, contaminants, toxins, or disease-causing organisms in foods, beverages, or feedstuffs; or to protect human or animal life or health within the territory of the member from zoonotic diseases. The Sanitary and Phytosanitary Committee reviews virtually all of the provisions of the Agreement at its meetings and documents it with 14 articles, in addition to considering specific trade concerns raised by governments, with standing agenda items on monitoring the use of international standards, basic rights and obligations, harmonization, transparency, equivalence, regionalization, risk assessment, technical assistance, and special and differential treatment. To generalize that, Sanitary and Phytosanitary agreement has a great role in improving food safety and avoiding zoonotic diseases through transboundary trade. However, there are common problems in the agreement because of time and ambiguous effectiveness of agreements. Therefore, the negotiations should be carried out, and further measurements have to be included for all nations to avoid unnecessary trade barriers and illegal exports of animals and plants.

Key words: Agreement, Disease, Phytosanitary, Provisions, Sanitary, Trade

List of Abbreviations

APHRD	Animal and Plant Health Regulatory Directorate
BSE	Bovine Spongiform Encephalopathy
CBD	Convention on Biological Diversity
CBPP	Contagious Bovine Pleuropneumonia
FAO	Food and Agriculture Organization
FMD	Foot and Mouth Disease
GATT	General Agreement on Tariffs and Trade
IPPC	International Plant Protection Convention
ISVEE	International Symposium of Veterinary Epidemiology
LDCs	Least Developed Countries
LSD	Lumpy Skin Disease

MoARD	Ministry of Agriculture and Rural Development
NTBs	Non-Tariff Barriers
OIE	Office International des Epizooties
RVF	Rift Valley Fever
SPS	Sanitary and Phytosanitary
STDF	Standards and Trade Development Facility
WHO	World Health Organization
WTO	World Trade Organization

1. Introduction

Food export markets present a somewhat different set of challenges from domestic food safety regulation. Exports of fresh food products such as meat, fish, fruit and vegetables represent a growth opportunity because these products have a high-income elasticity of demand and fewer trade barriers than traditional agricultural exports. Fresh food products are more likely to encounter sanitary and phytosanitary barrier to trade. Delivering safe food to distant markets requires process controls throughout the production process and mechanism to certify to buyers that such controls are effective. Food safety is one of the protective aspects that assuring the condition being safe from any harmful to the consumer when it is prepared and consumed according to its intended use. The food safety has great role in public health and also on international trade [1].

Effective food safety systems are vital to maintain consumer confidence in the food system and to provide a sound regulatory foundation for domestic and international trade in food, which supports economic development. In the last decade, large efforts have been made on the global level towards development and implementation of food safety management systems to assure food safety in the agri-food chain. This is demonstrated by multiple Codex Alimentarius guidelines and for example in European Union, illustrated by the introduction of the General Food Law [2]. However, ensuring food safety to protect public health remains a significant challenge in developing and developed countries even one third of the population of developed countries is affected by food borne diseases and these challenges is likely to be even more widespread in developing countries [3,4]. Food safety challenges differ by region, due to differences in income level, diets, local conditions, and government infrastructures. Here are some trends prevalent in both developed and developing countries that can increase food safety challenges [5].

International trade allows for the rapid transfer of microorganisms and introduction of new and unfamiliar food borne hazard from one country to another. The increased time between processing and consumption of food due to long distance international travels leads to additional opportunities for contamination, time or temperature abuse, and increasing the risk of food borne illness [6]. The world livestock and livestock products trade are influenced significantly by sanitary and health restrictions imposed by importing countries. Thus, countries are forced to apply stricter measures so that animals and their products exported should meet

international sanitary and phytosanitary (SPS) agreement requirement of the World Trade Organization (WTO). This requires putting in place adequate biosecurity practices. However, due to lack of biocontainment, awareness of the actors and poor biosecurity measures in feedlots, those feedlots are venerable for the introduction and spread of transboundary animal diseases. Due to this fact export-oriented feedlots are repeatedly challenged by transboundary animal diseases such as foot and mouth disease (FMD), lumpy skin disease (LSD) and contagious bovine pleuropneumonia (CBPP) [6-8].

The establishment of the WTO and the coming into force of the Agreement on the application of SPS Agreement has a significant impact on international trade in livestock and livestock products. The ultimate sanction is to impose a partial or total ban on imports from countries that fail to meet the required SPS standards. SPS policies are guided by international standards, such as those recommended by the Office International des Epizooties (OIE). Generally, the health and hygiene standards adopted by organizations like the OIE are substantially higher than those of the developing countries. Although such controls in the importing countries may reflect legitimate concerns regarding food quality and safety, and protection of animal and human health, the high costs of compliance may prove prohibitive for countries like Ethiopia [9]. Esthete and Abraham, The SPS agreement permits countries to take legitimate measures to protect the life and health of consumers, animals and plants provided such measures can be justified scientifically and do not unnecessarily impede trade [10].

SPS agreement of 1994 provides a framework for resolving disputes about SPS measures under the WTO. There is evidence that this agreement has stimulated activity to reduce SPS barrier to trade, but there remains significant disagreement at the international level over the role of science and consumer choice in regulating risk. The SPS Agreement specifically empowers the OIE as the organization responsible to draft international standards for animal health. The renewed importance conferred by the SPS Agreement on the OIE has spurred the interest of countries across the globe; in 1989, 114 countries were members and by December 1999 membership had reached 155 countries [11]. In Ethiopia, a new Animal and Plant Health Regulatory Directorate (APHRD), under the MoARD, has been mandated to regulate, monitor and control SPS standards for plants, animals and their derivatives at the federal level [12]. The new Directorate will have two separate divisions/departments to handle animals and plants. The organi-

zational structure of the Directorate is currently under formation [13]. Poor animal health services coupled with the sporadic outbreak of economically important diseases (RVF and FMD) remain major constraints for the marketing of livestock and meat from the Horn in general. Over the last thirty years, available evidence indicates that the allocation of resources for the livestock subsector has been decreasing both in absolute and proportional terms [14]. Therefore, the main objective of this manuscript is to overview the sanitary and phytosanitary agreement.

2. Literature Review

2.1 Concepts of Sanitary and Phytosanitary Agreement

The SPS agreement, which was negotiated during the Uruguay round of the General Agreement on Traffic and Trade (GATT), came into force with the foundation of the World Trade Organization (WTO) in 1995. The SPS agreement was primarily concerned with food safety and animal and plant health regulation, as well as health and international trade in general. In the last 50 years, international trade and tourism have grown dramatically. This has resulted in an upsurge in the transportation of potentially harmful products. The SPS Agreement recognizes the necessity for WTO members to defend themselves from the risks posed by pests and illnesses entering their countries, while simultaneously attempting to minimize any negative consequences of SPS trade restrictions [15]. The World Trade Organization (WTO) emerged from the General Agreement on Tariffs and Trade (GATT) and was founded in 1947 as an international platform to promote free trade between its 151 member states. The Agreement on the Application of Sanitary and Phytosanitary Measures, which contained a requirement that quarantine limitations have a scientific foundation, was one of the outcomes of the 1986-1994 Uruguay Round of GATT negotiations. This became known as the SPS Agreement, and it has had a significant impact on the application of phytosanitary trade restrictions [16].

The SPS Agreement establishes a set of ground rules for trade measures to protect human, animal, or plant health, with the goal of ensuring that such measures do not generate unfair trade barriers. This agreement addresses a sensitive area of regulation, broadly speaking, measures to safeguard human, animal, or plant health from food-borne risks or risks from plant or animal pests and illnesses that may harm international trade directly or indirectly. Because traded items, particularly in the food and agricultural sectors, might introduce dangers to human, animal, and plant health in the importing country, governments frequently regulate to protect against these risks, which are referred to as SPS concerns. Even if such rules are not employed for protectionist motives, they are likely to operate as barriers to market access for the exporting country. This is because SPS regulations may be designed or administered in an overly trade-restrictive manner, imposing unjustified restrictions on food and agricultural exports [17].

SPS agreements comprise transparency, equivalence, risk assessment, harmonization, regionalization, the role of national sov-

eignty, and dispute settlement [18]. The SPS Agreement defines harmonization as the creation, recognition, and application of common sanitary and phytosanitary measures, and it encourages countries to actively participate in the development of international standards through relevant international bodies. However, the agreement recognizes that different measures may achieve the appropriate level of protection deemed by the importing country and allows the establishment of bilateral and multilateral agreements on the recognition of equivalence of specified measures, which is enshrined in the concept of equivalence. All changes to SPS implementation should be publicized and made available to the WTO and trading partners, guaranteeing openness [19].

2.2 Sanitary and Phytosanitary Measures

SPS measures are classified as sanitary for human and animal life and phytosanitary for plant life and health by WTO members. The WTO members' agreement establishes the essential guidelines for food safety as well as animal and plant health standards. The applicability of SPS measures should not be based on arbitrary distinctions between nations with similar conditions. The GATT's main goal had always been to cut tariffs, and the deal that preceded the SPS agreement was a huge failure to tackle the difficulties, resulting in the creation of a new independent agreement or concept known as the sanitary and phytosanitary agreement. The SPS agreement was an ambitious attempt to deal with the NTBs that arose from the cross-national differences in technical standards without diminishing governments' prerogative to implement measures to guard against diseases and pests [20].

SPS measures may be related to product criteria, processes and production methods, testing, inspection, certification approval procedures, quarantine treatments, animal transport, packaging and labelling requirements, which are directly related to food safety [21]. According to the SPS Agreement, an SPS measure is any measure taken to protect animal or plant life or health within the territory from risks posed by pests, diseases, disease-carrying organisms, or disease-causing organisms; to protect human or animal life or health within the territory of the member from risks posed by additives, contaminants, toxins, or disease-causing organisms in foods, beverages, or feedstuffs; or to protect human or animal life or health within the territory of the member from contaminations [21,22].

Phytosanitary measures apply to pests that have been quarantined or are not quarantined, as well as pests that have been legislatively classified, nominated, or gazetted. If commerce is to be allowed to flow, the influence of phytosanitary controls on trade must be managed. Regular pest management strategies can be used, as well as novel ones, to allow quarantine restrictions to act as a filter for undesired pest organisms. These measures can come from a variety of places and can be applied to both the pre-harvest and post-harvest stages of crop production. Over the last three centuries, phytosanitary practices have become a more significant component of pest management in the production and selling of agricultural

commodities. Through migration, commerce, and travel, man has boosted the natural distribution of commercial crop plants and others since antiquity. Many linked plant pests' distribution patterns are similar to old land and marine travel and commerce routes [23]. Some pest plants are now cosmopolitan in their distribution, while others have yet to reach their full dispersal potential for one reason or another. Phytosanitary measures can be a cost-effective component of holistic pest management in that some pest plants are now cosmopolitan in their distribution, while others have yet to reach their full dispersal potential for one reason or another. Although phytosanitary barriers cannot guarantee that a pest will not enter, risk management can limit the likelihood of entry and establishment to acceptable levels [24,25].

3. The Sps Committee

The SPS Committee was formed to oversee the Agreement's implementation and to offer a venue for discussion of any trade issues relating to SPS measures (Article 12). The SPS Committee, like other WTO bodies, allows all WTO members to participate in its work and decision-making. The SPS Committee is a WTO-created special committee that oversees the implementation of the SPS Agreement. It considers compliance and assesses the impact on trade. It is primarily a forum for member countries to exchange information on SPS. Sham and Narayana Kumar, [26]. Codex, OIE, and IPPC, as well as a number of other international and regional intergovernmental organizations involved in food safety, animal health, and plant protection, have been admitted as observers by the SPS Committee. The CBD Secretariat is presently considering a request for observer status. The SPS Committee meets three times a year, generally at the World Trade Organization's headquarters in Geneva. The SPS Committee reviews virtually all of the provisions of the Agreement at its meetings, in addition to considering specific trade concerns raised by governments, with standing agenda items on monitoring the use of international standards, transparency, equivalence, regionalization, technical assistance, and special and differential treatment [27].

If indeed the SPS agreement is maintained, developing nations should think about three things as they prepare to participate: First, the function of Codex, OIE, and IPPC in establishing internationally recognized standards. Many developing countries lack the financial and technical resources to participate in these international organizations, and it is unclear whether their concerns are always considered. The second concern is the increasing use of process standards for food safety, which makes determining equivalence between countries challenging. Through establishing specified processes from specific countries, equivalent can be established. On a case-by-case basis, it must be determined whether hazards are indeed different for commodities produced in developing countries. Developing countries must engage in Codex's current talks on risk assessment and equivalence determination to avoid being held to a *de facto* higher standard. The final question is whether a domestic food safety regulatory framework is becoming a requirement for trade participation. Although some elements of the

food safety system are required, developing nations should fight the trend of importing them Scott, [28,29].

The Committee reviews compliance with the agreement, examines issues having potential trade implications, and works closely with competent technical groups. The Committee also oversees the progress of worldwide harmonization of measures and coordinates efforts in this regard with appropriate organizations under the SPS Agreement. The SPS Committee has established a legal process to protect developing country interests by examining how proposed or finalized SPS policies affect LDCs. The market, WTO legislation, and development issues are all discussed by the SPS committee. The private sector can assist suppliers in improving product quality and gaining and maintaining access to high-quality markets. Other members claim that private standards can be more specific (requiring lower pesticide residue levels) more prospective (accepting one method of obtaining a certain food safety outcome) than government import restrictions. Many members have raised worry about the price of meeting private standards, as well as the added cost of obtaining a certificate for small-scale producers in underdeveloped nations. The SPS agreement holds importing nations' governments accountable for the standards specified in the agreement's scope and set by their private sectors [30].

The Agreement established a committee (hereafter referred to as the SPS Committee) to act as a regular platform for member consultations on food safety and trade-related animal and plant health issues. It convenes regular sessions in Geneva three times a year on average, and may convene informal or special meetings and seminars as needed. The Committee's efforts are aimed at advancing the implementation of the Agreement's provisions, particularly by supporting standard harmonization. Regular observers include representatives from relevant standard-setting bodies. Members' submissions and declarations on their relevant regulatory processes, their use of risk assessment in developing SPS measures, and their status regarding the transmission of illnesses such as BSE, FMD, or fruit flies are all considered by the Committee. Delegates from member nations have the chance to discuss questions and concerns about the implementation of the SPS disciplines during SPS meetings. Effective channels of communication must be established between the Geneva-based delegation and the government's regulatory authorities, who, on their part, must also ensure the efficient gathering, analysis, and transmission of relevant information between and among local producers and exporters, as well as national/regional food safety.

4. Key Provisions of the Sps Agreement

The SPS agreement is a brief document with 14 articles and three appendices. Despite its brevity, it has had far-reaching implications for veterinary services all around the world. This part examines the agreement's text, underlining its ramifications and consequences, and underlines epidemiology's role in implementing the agreement's important provisions. The SPS Agreement was negotiated during the Uruguay Round of the General Agreement

on Tariffs and Trade, and it became effective when the World Trade Organization was established in 1995. There are 14 articles in all, as well as numerous appendices [31].

5. General Provisions

The agreement covers all sanitary and phytosanitary regulations that have an impact on international trade. If substantiated by scientific data, sanitary and phytosanitary regulations are solid justifications that can be used to regulate international trade. Because of the accord, SPS regulations are now at the forefront of international farm trade negotiations. Veterinary and plant health services have become increasingly important in international trade. Veterinary services, on the other hand, must thoroughly appreciate the implications of the SPS agreement and alter their organizational structures and operations to comply with the SPS agreement's obligations in order to engage successfully in international trade [32].

6. Basic Rights and Obligations

Article 2 of the SPS Agreement requires technical standards be based upon sufficient scientific evidence and that there be a rational and objective relationship between the standard and the science. Countries have the right to preserve human, animal, and plant health if the measures taken are scientifically sound and non-discriminatory. Countries can request sanitary measures for diseases that are exotic on their territory or diseases that are under government control, but only if the desired measures are also implemented internally in the latter instance. Countries are expected to identify their animal health status based on accurate disease reporting and surveillance in order to create a scientifically based list of their imported animal diseases and declare which diseases are under an official control program in order to implement SPS measures. The World Health Organization (OIE) recently released guidelines for recognizing historical disease freedom, laying out basic criteria by which countries can declare disease freedom from diseases that have never occurred or have ceased to exist without having to conduct extensive, active surveillance. Similarly, the OIE code includes standards for recognizing disease freedom for a limited number of disorders [33].

Most diseases, on the other hand, still lack guidelines for determining disease independence after they have been eradicated. Each country's implementation of SPS measures is expected to be guided by its own set of rules and regulations. This influence has been positive, and it has aided in the development of standards and rules. It has also aided in the formalization of national and regional disease control activities. On the other side, several countries still need to develop a systematic, transparent, and open-to-public-comment regulation drafting process [34].

7. Harmonization

The establishment, recognition, and application of common sanitary and phytosanitary measures are referred to as harmonization. Article 3 calls for WTO members to harmonize SPS standards and requirements by basing national standards on international ones,

such as the Codex Alimentarius for food safety, the International Plant Protection Convention (IPPC) for plant health, and the World Organization for Animal Health (OIE) for animal health. Countries may implement SPS measures that are stricter than international norms if they are scientifically justified and based on a risk assessment. Despite the fact that membership in the reference international organizations is not required, the SPS agreement has resulted in an increase in the number of nations that are members of and actively participate in these organizations. In the case of the OIE, this has resulted in a steady expansion in membership, which today stands at 166 countries [35]. OIE membership is not mandatory for all WTO members (and vice versa). Although OIE membership fees are reasonable, they represent a significant portion of the veterinary services budget for some smaller developing nations, and as a result, these countries are unable to participate in the process of creating standards that they will be required to follow. International or regional organizations have helped some countries pay for their membership. Veterinary epidemiologists are increasingly being asked to contribute to the creation of international standards. In collaboration of the Scientific Commission, the OIE recently formed an epidemiology group. One of the first responsibilities assigned to this committee is to improve surveillance guidelines and recognize disease freedom [36].

8. Equivalence

Equivalence means that alternative procedures can be considered as long as they produce equivalent outcomes. Under Article 4, when an exporting member produces a product that meets the importing member's required level of protection but does so under different regulations or required procedures, the importing member is encouraged to recognize the exporting member's procedures as equivalent and accept the product. Exporting countries must defend the procedures' scientific foundations and objectively demonstrate that they meet the importing country's protection requirements. The development of bilateral or multilateral equivalency agreements is promoted among member countries. Equivalence's primary feature is that it focuses on results rather than processes, allowing for greater flexibility in the organization of official veterinary services and allowing countries to focus their attention on critical areas based on resources and priorities. The OIE code includes a sanitary measure equivalent which examines concepts and details a step-by-step process for assessing equivalence. Methods for recognizing equivalence must be developed and established. Epidemiologists play a key role in the development of scientific processes that allow for a fair comparison of various methodologies [37]. The equivalency provision of the agreement is potentially one of its most valuable elements to developing countries, but there are few examples of equivalency having been established [38].

9. Risk Assessment and Protections

Article 5 requires that standards emerge from an evidence-based scientific assessment of the human, plant, or animal health risk presented by the importation of a product. Risk assessment, according

to the SPS agreement, is 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 that 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 diseases, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse [39].

According to article 3, a country has the right to establish SPS measures based on a scientifically sound risk assessment if an international standard does not exist or does not provide the degree of protection required [40]. It's worth noting that the SPS agreement talks about risk assessment, whereas the OIE talks about risk analysis, which includes risk assessment as one of the steps. A prevalent misconception is that if an importing country follows the OIE code's risk-mitigation suggestions, no risk analysis is required. Despite the fact that most countries have already received some form of risk analysis training, according to a recent study among OIE member countries, the majority of countries still require training in risk analysis methodology.

The OIE collaborating center for animal disease surveillance systems and risk analysis has developed a series of short training courses on epidemiology and risk analysis and has organized and conducted several training sessions internationally. Similarly, other institutions worldwide are offering short courses on risk analysis. However, there is a lack of formal training opportunities in animal health risk analysis within universities at the graduate or postgraduate levels. Currently, efforts are underway to harmonize the approach to risk assessment internationally [41]. The OIE code describes the risk analysis process as consisting of four steps: hazard identification; risk assessment; release assessment; exposure assessment; consequence assessment; risk estimation; risk management; and risk communication. Although a complete risk assessment should include all the relevant steps, the OIE code chapter on risk analysis states that when the results of the release or exposure assessments demonstrate no significant risk, the risk assessment may conclude at this step. These include: identifying the diseases that may be introduced and their associated consequences; evaluation of the likelihood of entry, establishment, and spread of the diseases identified as hazards as well as the biologic and economic consequences; and evaluation of the likelihood of entry, establishment, and spread of the diseases according to the SPS measures that might be applied [42,43].

10. Recognition of Differing Regional Conditions

Article 6 acknowledges that countries have different growing regions and certain pests and diseases may not be found in all of them. Article 6 obligates members to recognize and permit the importation of disease-free and pest-free areas within a country. In the past, when a disease agent existed in a country, the entire territory was considered infected. The SPS agreement recognizes

that it is possible to consider regions, countries, or zones within countries free from disease or infection based on the epidemiology of the disease and other criteria. This provision is generally known as zoning or regionalization, and is reflected in the OIE code.

Zoning and regionalization require an effective surveillance system and good-quality veterinary services both at the national and regional level. When determining the animal health status of a country or zone, consideration of several factors has been suggested: Infrastructure of the veterinary services; disease status of the region; extent of an active disease control program; vaccination status of the region; degree to which the region is separated from adjacent regions of higher risk; extent to which movement of animals and animal products is controlled from regions of higher risk; level of biosecurity; type and extent of disease surveillance in the region; diagnostic laboratory capabilities. The OIE code initially developed guidelines for the assessment of veterinary services. Different approaches to zoning and regionalization have been adopted, such as zoning to contain disease outbreaks and zoning of disease-free areas. From a risk point of view, the application of zoning as a reaction to disease incursion is not the same as the application of zoning as a measure of progress in a disease eradication program. In the first instance, a zone is a way to separate a diseased area in an otherwise disease-free country. In the second, a zone is a way to secure a free area in an otherwise infected country. A zone that is defined on the grounds of infection is less stable [44].

A new concept for the management of animal health is compartmentalization, which is a procedure to define ecologically distinct animal populations of different animal health status. Regionalization consists of establishing zones of different animal health status on the basis of either geographical features or production systems. Compartmentalization can be applied in situations where different production systems co-exist such as commercial and subsistence farming. In general, commercial farms are in a better position to control and eradicate disease and maintain their status. Regionalization has allowed directing resources more efficiently by allowing access to export markets from disease-free areas without the need to achieve eradication in the entire territory of a country [45]. Quantification of the joint probability of detection of all the components of a surveillance system allows reaching a high level of confidence of the absence of disease higher than any of the components individually. There is also a need to include economic considerations in defining the intensity of surveillance and deciding upon the optimal combination of surveillance components of a system [46].

11. Transparency

Article 7 and Annex B of the SPS Agreement require that all SPS regulations be easily identifiable. It requires WTO Members to freely provide information on their phytosanitary measures and to have a central enquiry point at which questions on SPS regulations will be answered. The transparency provision also includes

control and inspection procedures as well as risk assessment. Throughout the process confidentiality of commercial information is maintained. The transparency provision has led many countries to review the process of regulation drafting, resulting in more open processes that allow input from all interested parties. Under the OIE, the concept has been interpreted as transparency in reporting the animal health status by member countries. In this respect, surveillance systems are an essential component guaranteeing the quality of the information. International disease reporting guidelines are currently being restructured. OIE list A and B diseases will be merged into a single list, this will allow different diseases to 'gravitate' according to their relative importance. Countries will need to report on an emergency basis 'significant epidemiological events, events that have an impact on the animal health status of a country including: occurrence of a disease or strain of a pathogen that is considered exotic to the country or zone; reintroduction of a previously eradicated disease; emerging diseases; significant changes in the epidemiology of an existing disease. Countries will also be required to notify periodically the occurrence of all OIE-listed disease.

12. Control, Inspection and Approval Procedures

The intent is that control, inspection and approval procedures should be transparent, non-discriminatory, timely and scientifically based. This creates the need to revise the adequacy of current procedures including sampling protocols with a view to optimize cost, efficiency and practicality. Epidemiologists can contribute in designing sampling strategies that are scientifically based and statistically sound [47]. In addition to imposing disciplines on the selection of SPS measures, the SPS Agreement also requires that testing and inspection procedures used by governments to enforce these measures do not themselves act as unnecessary trade barriers. The basic requirement is that any such procedures should not be less favorable for imported products than they are for domestic goods, and should be no more than what is necessary to ensure compliance. This applies for time delays, information requirements, fees, sampling procedures and siting of facilities Alcala ET.

13. Technical Assistance

A report by the SPS committee noted that although the SPS agreement had contributed to improving international trading relationships with respect to sanitary and phytosanitary measures, there were several issues regarding the operation and implementation of the agreement that still needed to be resolved. Many developing countries feel that SPS measures are becoming more stringent and are being used as new barriers to trade. International and regional organizations have played and continue to play a crucial role in assisting developing countries to develop the adequate infrastructure to satisfy the demands of the international market. The WTO and several international organizations have carried out numerous workshops to increase the understanding of the agreement. However, in order to achieve compliance several countries require assistance and access to funding sources., WTO developed in partnership with the World Health Organization, the World Bank, the

OIE and the Food and Agriculture Organization, the Standards and Trade Development Facility (STDF). Its objective is to fund projects with the purpose of enhancing the capacity of developing countries to meet SPS standards. One of the first projects funded by the STDF is a project to develop a tool to assess and evaluate national veterinary services capacity to benefit from the SPS agreement.

14. Special and Differential Treatment

The SPS agreement recognizes that some countries may require longer time-frames for compliance with new SPS measures, as long as the appropriate level of protection is not compromised. Countries may solicit time-limited exceptions to any obligation under the agreement taking into account their financial, trade and development needs [48]. Apparently, the provisions under article 10 have had limited use. The review conducted by the SPS committee on operation and implementation noted that it had no information on the extent to which the special and differential treatment had been granted to developing countries. During the period covered by the review no specific requests for special and differential treatment had been submitted to the committee. It is likely that many countries lack a clear understanding of the SPS agreement and have not interpreted article 10 as a means to obtain additional time for implementation than what is established in article.

15. Consultations and Dispute Settlement

Dispute settlement WTO member countries have the right to invoke the dispute settlement procedure; however, bilateral settlements are always encouraged. The OIE has set up a procedure for 'in house' dispute settlement under the good offices of the Director General Valet and Wilson, The WTO dispute settlement procedure is a lengthy procedure that can be very costly. It often requires legal advice and a continuous presence at WTO's headquarters. Therefore, it is a procedure best suited for issues that imply large amounts of trade. It is possible that developing countries may not be willing to elevate a dispute to this level due to financial constraints, leading to an inequitable application of the rights embedded in the SPS agreement. The SPS committee acts as the first forum in which SPS-related disagreements can be discussed once bilateral talks have been exhausted. Often, the fact of raising an issue at the SPS committee level leads to renewed bilateral discussions resulting in very few disputes needing to go through the entire dispute settlement process. According to the panel, an import risk assessment needs to identify the diseases whose entry, establishment or spread a member wants to prevent within its territory, as well as the potential biological and economic consequences associated with the entry, establishment or spread of these diseases; evaluate the likelihood of entry, establishment or spread of these diseases, as well as the associated potential biological and economic consequences; evaluate the likelihood of entry, establishment or spread of these diseases according to the SPS measures which might be applied.

16. Administration

The SPS committee has the task of maintaining close contact with the international standard setting organizations (OIE, IPPC and Codex Alimentarius) as well as promoting and monitoring harmonization and the use of international standards, guidelines and recommendations.

17. Implementation

Signatory countries are responsible to comply with all obligations of the agreement and have the responsibility to implement all the provisions. Furthermore, countries should ensure that non-centralized government bodies, non-governmental entities and regional bodies comply and act in a manner consistent with the provisions of the agreement. Countries should establish open working relationships with industry and consumer groups to promote the understanding of the SPS agreement and its implications. Clearly, the implementation of the SPS agreement in the animal health arena requires significant epidemiological input. The International Society on Veterinary Epidemiology and Economics (ISVEE) could serve as a forum for communication and coordination for such efforts. The ISVEE forum can be expanded to include application of epidemiologic methods and engagement of staff members of veterinary services [49].

18. Final Provisions

Countries agreed to comply with the agreement within 2 years after its inception, however upon request to WTO countries could have up to 5 years for implementation. The delays applied to all provisions of the agreement with the exception of the transparency provision (article 7) and the right of a country to request an explanation if a measure, not based on an international standard, is perceived as a barrier to trade. These periods expired on 1 January 1997 and 2000, respectively, therefore, all WTO member countries have the obligation to comply with the agreement. It is important to recall that countries may request additional time for the implementation of the agreement under article 10.3.

19. Challenges with Sps Agreement

The SPS Agreement has opened vast opportunities for veterinary epidemiologists. Still, the solutions required to facilitate safe trade call for an integrated multidisciplinary approach including other disciplines such as economics, statistics, geography and geographic information systems, ecology, sociology and politics. Epidemiologists have always dealt with the concept of health and disease in populations; however, the promotion of international trade presents an additional challenge, it requires a shift from herd-level epidemiology to a much larger scale that encompasses zones, countries and regions. There is a need to develop new methods to determine the disease status of countries and zones as prevalence approaches zero methods to be applied when an area (zone, country or region) is to be declared free from disease. An additional challenge is the quantitative integration of the results for the evaluation of veterinary services into the risk analysis process. Although, there is a widespread recognition that the quality of the veterinary services

is linked to the level of risk, at present, there is lack of methods to assess this relationship in a quantitative way [50-61].

SPS measures are no longer used to restrict trade after the successful negotiation of the SPS agreement and explanation offered in subsequent dispute settlement cases, but there is a challenge during measures. The first difficulty is the length of time it takes to settle a problem. Currently, if one member believes another is maintaining a standard that is incompatible with the WTO SPS commitments, bilateral negotiations or discussions are used to remedy the issue. Due to scheduling and resource constraints, only one or two sessions may be organized per year, relying on information exchange between meetings. It's easy for such a process to drag on for two years or more without making any progress, or with just enough development to give both parties the impression that progress is being made on some of the technical challenges. If the member contesting the other's standard chooses to abandon the bilateral negotiating process after a few years of little progress and takes the disagreement to the WTO, the member defending its standard is likely to halt any ongoing bilateral talks on the matter until the WTO case is settled. Exporters seeking market access must consider the time it takes to obtain a favorable opinion in the WTO and then comply with that decision.

The ambiguity of the SPS Agreement is a second barrier to its efficacy. If members are given the flexibility to maintain an import restriction in the absence of scientific evidence and in violation of international standards, or to restrict imports in the absence of a product-specific risk, global trade will revert to pre-WTO days, when countries could impose import restrictions on the basis of whim.

20. Conclusion and Recommendation

The SPS Agreement establishes a set of ground rules for trade measures to protect human, animal, or plant health, with the goal of ensuring that such measures do not generate unfair trade barriers. This agreement addresses a sensitive area of regulation: measures to safeguard human, animal, or plant health from food-borne risks or risks from plant or animal pests and illnesses that may harm international trade. The SPS Agreement has opened vast opportunities for veterinary epidemiologists. For epidemiologists, the concept of health and disease in populations has always been central to their work. However, the promotion of international trade presents an additional challenge. It requires a shift from herd-level epidemiology to a much larger scale that encompasses zones, countries, and regions. SPS measures are no longer used to restrict trade during control and prevention of diseases, but there are challenges concerning the time and ambiguity of the effectiveness of SPS agreements. For this reason, ensuring food safety remains a challenge in developed and developing countries, and food safety challenges differ by region due to differences in income level, government infrastructure, and local conditions. Even though challenges are common, SPS agreements play an important role in reducing unnecessary trade barriers and avoiding hazard

cross-contamination through the exportation of animals, plants, and their byproducts. Therefore, depending on the above conclusions, the following recommendation should be forwarded:

- All countries should participate in the SPS agreement to improve their food safety
- The occurrence of challenges among the committee should be solved with negotiations
- The risk assessment should be conducted as per the agreement
- The SPS measures should be carried out with the territories to reduce transboundary diseases
- International trade in contaminated plants, animals and byproducts should be avoided

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