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## ROLE OF SANITARY AND PHYTOSANITARY MEASURES IN SAFEGUARDING GLOBAL AGRICULTURE AND FOOD TRADE

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### Abstract

The Sanitary and Phytosanitary (SPS) Agreement measures are pivotal in safeguarding human, animal, and plant health against pests, diseases, and contaminants. They are vital for international trade, ensuring that food and agricultural products meet safety standards, thus facilitating market access and economic growth. Consumers' increasing demand for safe, sustainable, and ethically produced food has reshaped supply chains and agriculture trade. The SPS Agreement, established by the World Trade Organisation (WTO) in 1995, provides a comprehensive framework for these measures, aligning with international standards set by bodies like the Codex Alimentarius Commission and the International Plant Protection Convention. In India, several key organizations and legislations, such as the Food Safety and Standards Authority of India and the Ministry of Agriculture, implement these guidelines to maintain compliance with global norms. Despite challenges like globalization and climate change, India has developed a robust risk analysis framework encompassing risk assessment, management, and communication to address emerging threats. This article delves into the historical evolution, importance, and implementation of SPS measures, highlighting their role in protecting public health, facilitating safe trade, and ensuring compliance with international standards. It underscores the necessity for improved infrastructure, capacity-building, and scientific advancements to enhance SPS measures' effectiveness, ultimately promoting a safer and more efficient global trade environment.

**Keywords:** Sanitary and Phytosanitary Agreement, Food Safety, International Trade, Risk Assessment, Public Health, Global Standards

### Introduction:

The Sanitary and Phytosanitary Agreement measures are distinct and biosecurity measures applied individually to protect human, animal, and plant life and health from pest entrance, establishment, and dispersion, as well as risks from food and feed additives, toxins, and contaminants. Adherence to Sanitary and Phytosanitary Agreement measures is now an important criterion for export market access and influences the shape of the exports and the outcomes of economic growth. Currently, consumers have developed high expectations on the food products they require since they want food items that are safe, sustainable and

produced under proper ethical standards hence altering the supply chain processes, markets and agriculture trade. The World Trade Organisation (WTO) entering into force on January 1, 1995, led to the implementation of the agreement on the application of the Sanitary and Phytosanitary measures, often referred to as Sanitary and Phytosanitary Agreement.

### **Importance of Sanitary and Phytosanitary (SPS) Agreement measures**

Sanitary and Phytosanitary (SPS) Agreement measures can be described as two of the most critical pillars of world trade and the global economy. These elaborate procedures have been strategically developed to safeguard the welfare and existence of humans, animals, and plants against the numerous ailments, pests, and pollutive substances. Thus, the Sanitary and Phytosanitary Agreement measures policies may be considered essential as sovereign nations attempt to build up their domestic agricultural industries and safeguard public health patiently. In the light of constant trends of globalisation and highly developed network of supply chains covering large geographical distances, it has now become not only beneficial but rather indispensable to comprehend about Sanitary and Phytosanitary Agreement measures if one wants to open trade gates smoothly without any interruption, to maintain a strict compliance to regulations and laws which are frequently in lieu change, and to avoid any conflict situation in the realm of international business.

### **Historical background and evolution SPS Agreement measures**

Sanitary and phytosanitary measures have their roots in what can be considered one of the earliest attempts at regulating risks associated with commodities trade. As the trade began to expand across the borders, it was identified that such activities required that standards and laws be consistent. The Sanitary and Phytosanitary Agreement was signed in 1994 and came into force in January 1995, incorporated into the World Trade Organisation's agreements and marked a milestone in the creation of a multilateral system of Sanitary and Phytosanitary Agreement regulations. This agreement followed other previous conventions with international level like the International Plant Protection Convention of 1951 and the formation of the Codex Alimentarius Commission (CAC) in 1963. The Sanitary and Phytosanitary Agreement was meant to establish the same objective of supporting safe trade and at the same time uphold the principle of unfair barriers. It acknowledged the government's authority to take measures to protect life and health but the policies done should be backed by scientific evidence and considerations of risks. The agreement also adapted over the time with respect to emerging challenges such as transparency, harmonisation and equivalency standards, and with respect to new knowledge, science, and changing trade environment.<sup>1</sup>

### **Food Safety and Human Health**

Within the framework of the Sanitary and phytosanitary Agreement measures, there are several procedures connected with food safety and human health. These are aimed to show that the foods and agricultural products that are exported abroad are of high quality, safe for consumption and do not in any way cause health concerns among the consumers. Under the Sanitary and phytosanitary measures, countries are allowed to set measures with regard to food additives, pollutants, poisons and disease-causing pathogens in the food chain and feed. These procedures may include the specifications of maximum residue limits for pesticides,

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<sup>1</sup> Understanding the WTO Agreement on Sanitary and Phytosanitary Measures  
[https://www.wto.org/english/tratop\\_e/sps\\_e/spsund\\_e.htm](https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm)

veterinary drugs, and other undesirable substances as well as food hygiene and microbiological criteria. Moreover, methods of food labelling, traceability and product certification are provided for ensuring that consumers are provided with proper information from the agreement. Countries can also establish such measures as inspection and approval of the facilities for the production of food as well as control measures through food sampling, testing, and quarantine for the high-risk foods. These steps are crucial when it comes to controlling the illness transmission, protecting consumer health and when trading across the borders with foods. The use of food additives, pollutants and residues are very important in the preservation of foods and act as a measure of maintaining healthy standards among human beings. Ingredients like preservatives, colours or those substances that modify the taste of food are more controlled because their use is highly prohibited. For some food additives, maximum permissible amounts and the conditions for their use are defined with governments and international organisations. Likewise, there are rules and regulations on contaminants like heavy metals, mycotoxins and pesticide residue in the food items. These are usually unhealthy contaminants that are dangerous to the health when they reach certain quantities. This also applies to controls of Maximum Residue Levels (MRLs) of veterinary drugs, insecticides, or any other chemical substance that may be left on the food items that result from processed plants or animals treated with the mentioned substances. Measures to monitor, regularly check and enforce compliance to these standards are currently in place in order to safeguard the health of consumers from the lengthy effects of the additives, pollutants and residues which may be found in most of the foods in today's market.

Standards and traceability make up a vital part of the Sanitary and phytosanitary measures that have been put in place with the aim of improving health and sanitary measures within the humankind as well as the plant and animal health. It is crucial to come up with labelling for purposes of providing consumers with correct information about the product, change in contents, and nutritional values as well as any allergens or risks contained in the food products. Some of the things that are required to be included or disclosed on the labels of regulated products include a list of the components used in the production of the product, date of manufacture or expiry as well as the instructions on how to store the product and any warnings that are relevant to specific drugs. Traceability systems, on the other hand, enable food to be followed along the supply channels from the farms to the consumers. The following technologies help in pinpointing the source of contamination or foodborne diseases and helping in recall exercises. Both labelling and traceability procedures lead to increased development of more specific decision-making enabling customers to make proper decisions for their own benefits as well as creating efficient ways to assist in the responding to an instance of food safety thus assisting the protection of human health and disease control.

The systems of inspection and certification are two significant types of the Sanitary and phytosanitary measures related to food safety and human health. These systems check various types of food and manufacturing facilities and supply chain networks to ensure that they meet certain legal and set standards. In a way, they can be carried out at various stages of farming preceding the harvest, during the processing, packing, or distribution in a bid to always look for risks and make certain that the recommended measures and steps are being taken. The use of certification schemes is significant in providing consumers certain guarantees concerning the safety, quality and origin of food items. Such certifications may include the organic production certificates, halal or kosher conformity, or others on the adherence to certain food safety management systems.

To enhance the competency and credibility of the inspection and Certification agencies, Government and International organisations must establish accreditation bodies. Measures for

the certification of products prevent consumers from being exploited while at the same time encouraging trade by helping the public to have confidence that imported food products meet certain standards.

### **Implementation and Compliance**

Since Sanitary and Phytosanitary measures focus on safety standards of food that is tradeable, food safety, animal and plant health, there is a need to ensure that both the implementing and adhering countries apply Sanitary and phytosanitary measures correctly. National level Sanitary and phytosanitary measures are developed through designation of authorities which are responsible for development and the implementation of these measures. Measures on Sanitary and Phytosanitary standards such as import controls and inspections, are conducted at the border and the most common procedures include sampling, laboratory tests and document examination. Checks like certification, auditing, and accreditation play an important role in ascertaining the compliance of the food and other imported items or processes to the Sanitary and Phytosanitary measures. Accounting and notification procedures make governments inform trading partners on new or revised SPS legislation to allow stakeholders to provide feedback, hence creating a predictable business environment. Meeting Sanitary and Phytosanitary standards involves supply chain controls, traceability, and capacity building programs to ensure the users of standards understand and practise them.

### **Sanitary and Phytosanitary SPS Agreement in India**

India has a major stake in agricultural exports and imports, and that is why it holds Sanitary and Phytosanitary Agreement standards which is particularly important in its framework of laws. This dedication is evident in construction of an adequate legal and regulated framework that supports the country's compliance to international Sanitary and Phytosanitary Agreement measures. Apart from the Indian Food Security Act 2013, the Indian Plant Quarantine Order 2003 as well as the Livestock Importation Act of 1898, show India's long history of ensuring public health and sustainable agriculture. The Food safety and standards authority of India also known as FSSAI looks after the food safety regulation in India and the Directorate of Plant Protection, quarantine, and storage functioning under the Ministry of Agriculture and bears the responsibility of regulating phytosanitary measures. In addition, India plays member to important international bodies for food standard issues, as well as animal and plant health, including the Codex Alimentarius Commission the World Organisation for Animal Health (OIE), and the International Plant Protection Convention (IPPC) all of which show a willingness to follow international standards for the country's Sanitary and Phytosanitary Agreement measures.<sup>2</sup>

India's legal framework for sanitary and phytosanitary measures includes several key organizations and legislations. The Bureau of Indian Standards (BIS), Food and Agriculture Department (FAD), Ministry of Food Processing Industry (MFP), and Export Inspection Council (EIC) implement these guidelines. The Ministry of Agriculture oversees laws like the Insecticide Act and Meat Food Product Order 1973. The Ministry of Health and Family Welfare enforces the Prevention of Food Adulteration Act 1954. The Ministry of Food Processing Industries manages the Fruit and Vegetables Product (Control) Order – FPO 1955, while the Ministry of Commerce and Ministry of Rural Development: Directorate of

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<sup>2</sup> Food Laws and Regulatory Authorities - An Indian

Perspective [https://www.researchgate.net/publication/348295790\\_Food\\_Laws\\_and\\_Regulatory\\_Authorities\\_An\\_Indian\\_Perspective#fullTextFileContent](https://www.researchgate.net/publication/348295790_Food_Laws_and_Regulatory_Authorities_An_Indian_Perspective#fullTextFileContent)

Marketing and Inspection (DMI) oversee the Standards of Weights and Measures Act and Export (Quality Control and Inspection) Act 1963.<sup>3</sup>

India has established a coordinated structure for enhancing investigative abilities for enforcement of Sanitary and Phytosanitary Agreement through special laboratories and inspection outlets that have been established at certain areas. However, while pursuing such measures, there are several issues, which are still a matter of concern, which include the need for compliance of Sanitary and Phytosanitary Agreement regulations and policies in the different states of India with more conformity, the need for improved infrastructure to support more intensive Sanitary and Phytosanitary Agreement inspection procedures and the need for more capacity building exercises aimed at assisting stakeholders to effectively embrace more Sanitary and Phytosanitary Agreement measures across the whole country. When India's Food Safety and Standards Act is compared with the World Trade Organisation's Sanitary and Phytosanitary Agreement and international standards, it can be seen that India has currently inadequate alignment with global rules and requirements leading to the trade obstructions for Indian foods outside the borders of the country.

### **Challenges and Emerging Issues**

Essentially, the presence of Sanitary and Phytosanitary measures is always in a precarious state of comfortably threatening and continually escalating risks to India. Unfortunately, because of globalizations as well as climate change the country is facing a new introduction of pests, diseases and pollutants that have disastrous effects on agriculture and food security and also impacts human health status. These include avian influenza, Covid 19 and have necessitated the need for surveillance features and proper imperative response measures. Besides, usage of higher quantities of agrochemicals and the problem of antibiotic resistance in food is the primary concern for food safety. However, for India to be in a better position to address these emerging risks, the country has to also improve on its Sanitary and Phytosanitary measures. This necessitates enhanced scientific endeavours particularly in the screening and evaluation for risk models. Other aspects can be engaged; for example, reporting to other central agencies as well as the modern technologies such as rapid diagnostic platforms, and precision farming for early identification of emergent threats. Furthermore, risk communication and risk awareness play a crucial role in ensuring all stakeholders subscribe to the laid down standards and. prepare adequately along the supply chain.

### **Risk analysis framework in India**

Risk Assessment:

In evaluating the potential risk pertinent to Sanitary and phytosanitary Agreement measures, India has established a proper risk analysis system. Risk assessment in India is done by many agencies and scientific committees based on the area of concern. To regulate the quality of food in the country the Food Safety and Standards Authority of India performs risk assessments based on the state of the art standards as well as scientific research. The procedure comprises the identification of the risks and hazards involved by food pollutants and contaminants, additives as well as biological agents. In the operational terms of plant health, the Ministry of Agriculture's Directorate of Plant Protection, Quarantine & Storage

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<sup>3</sup>Navin Kumar Jaggi, Indian Sanitary and Phytosanitary Measures Agreement 1995  
<https://www.jjandjattorneys.com/post/indian-sanitary-and-phytosanitary-measures-agreement-1995>

provides pest risk assessment to measure the vulnerability to pest introduction and spread. In the same way, the Department of Animal Husbandry and Dairying works with Indian Council of Agricultural Research (ICAR) to review the risk of animal diseases and zoonosis.<sup>4</sup> These risk assessments include the probability of pests or diseases getting in, establishing, and spreading as well as the consequences economically and ecologically. In India, risk assessment comprises scientific evaluation, collection, and discussion of data concerning the SPS measures, which helps to confirm their justification in terms of scientific evidence and the proper management of the recognised risks.

#### Risk Management:

India has laid a good foundation in coming up with risk analysis that can handle the possible risks that may be associated with Sanitary and phytosanitary measures. The country's pest management has a systematic approach regarding the danger that pests are posing, diseases and pollutants to humans, animals, and plants. It applies elements from the different international standards and procedures established by the Codex Alimentarius Commission and other standard organisations such as the Office International des Epizooties and the International Plant Protection Convention of 1951. The system of risk management used in India is closely associated with the risk assessment techniques where all risks are estimated in proportion to the evidence gained with the assistance of the scientific approaches where data act as the primary evidence of the calculated amount of risk and the measures to be taken accordingly. Currently, depending on the results of the risk assessment, the competent authorities of the Republic of India use methods of risk management, including restrictions on imports, quarantine measures, testing and inspection procedures, and other control activities. The risk management method also contains surveillance and follow-up procedures in an effort to address new or changing risk circumstances and confirm that Sanitary and phytosanitary measures are administered efficiently as well as ensuring safe trade.

#### Risk communication:

Every country has its methods of risk communication, which form part of the risk analysis system used by India in Sanitary and phytosanitary measures. Ministries and departments of the Indian government acknowledge that proper communication techniques play an essential role in enhancing transparency and raising public awareness of Sanitary and phytosanitary related risks. The process of communicating risk involves sharing of knowledge or facts and ideas between risk assessors, risk managers, and consumers or producers or other related parties in an industry. In India, these facilitative tasks are divided and performed by the Food Safety and Standards Authority of India, the Ministry of Agriculture and Farmers Welfare, and the Ministry of Health and Family Welfare. Such organisations provide information on potential danger, decision-making processes of the regulatory body, and measures to control these risks through public consultations, advisory committees, awareness creation, and technology-based awareness such as social media. Risk management focuses on increasing the public's awareness of a specific risk, allaying their fears about that particular risk, and getting their input to assimilate into the risk management and assessment process. This way, the Indian government has encouraged the free flow of debate and availing accurate and consistent, evidence-based info to counter Sanitary and phytosanitary issues and build up trust and enhance compliance to deal with all the adverse Sanitary and phytosanitary concerns.

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<sup>4</sup> Food Safety & Standard Authority Of India (FSSAI)  
<https://main.mohfw.gov.in/sites/default/files/13%20ChapterAN2018-19.pdf>

## **Conclusion**

The Sanitary and Phytosanitary Agreement measures may take various forms as it can be specified that a product should come from a pest or diseases free area, they can involve inspecting products, treating products, processing in a particular way, setting maximum or minimum levels of pesticide residues and it can also require products processed with specific additives in foods. The Sanitary and Phytosanitary Agreement deals with measures related to food, animals, and plants. The Act also complies with Codex Alimentarius Commission, World Organization for Animal Health and the International Plant Protection Convention. Regulating over products that are imported and ensuring that they have met the Sanitary and Phytosanitary Agreement needs is mandatory for foods in Canada. The main function of the Sanitary and Phytosanitary measure is that it also permits the use of allowed additives in foods.

Regulating over products that are imported and ensuring that they have met the Sanitary and Phytosanitary Agreement measures are mandatory for foods in Canada. The main function of the Sanitary and Phytosanitary Agreement is that it also permits the use of allowed additives in foods.

The new Sanitary and Phytosanitary Agreement chapter of the modernised North American Free Trade Agreement (NAFTA) and the The World Trade Organisation's Sanitary and Phytosanitary Agreement strengthens and extends provisions made in the original NAFTA and WTO - Sanitary and Phytosanitary Agreement. Sanitary and Phytosanitary Agreement's principles and obligations are mandatory for all WTO members to adhere to. The measure of sanitary and phytosanitary policies is that every World Trade Organisation Member has the right to apply measures that he considers sufficient to protect human, animal or plant life or health in his territory. This is referred to as the Adequate Level of Protection (ALOP). This is achieved with requirements that help in minimising the impacts of Sanitary and Phytosanitary Agreement measures on international trade, supporting the freedom to apply to these measures.

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