Discussion Paper on Regionalisation in India

The discussion paper analyses India's regulations on regionalisation for its sanitary sector in pursuance of its commitment in Article 6 of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures.

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I. Introduction

The discussion paper aims to identify and address the current and potential issues India faces in adapting sanitary and phytosanitary (SPS) measures to regional conditions. To achieve this, the paper will analyse the international framework governing the recognition of regional conditions for both sanitary and phytosanitary sectors and assess India's domestic regulatory landscape concerning regionalisation of important agricultural exports.

Through this analysis, the paper will highlight the regulatory gaps within the Indian system regarding regionalisation. These gaps may hinder India's ability to effectively align with international standards, potentially impacting its trade relationships. Furthermore, the paper will explore the challenges faced by Indian exporters of SPS products when dealing with international markets, emphasising the barriers they encounter due to these regulatory discrepancies.

By identifying these regulatory gaps and understanding the exporters' concerns, the discussion paper will propose potential reforms to improve India's regionalisation efforts. These reforms aim to reduce barriers to agricultural exports, enhancing India's competitiveness in the global market and fostering stronger trade partnerships.

II. Recognition of Regional Conditions in the SPS Agreement

With the establishment of the World Trade Organization (WTO) in 1995, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) came into effect. The SPS Agreement establishes a multilateral framework of rules and disciplines to guide development, adoption, and enforcement of sanitary and phytosanitary measures across the world. The SPS Agreement lays out the fundamental guidelines for maintaining the health and safety of plants, animals, and humans.

Sanitary and phytosanitary measures refer to measures applied to protect animal, plant or human health within the territory of a Member country, which include measures related to the risks arising from the entry, establishment or spread of pests and diseases.[1] From the definition provided by the SPS Agreement, sanitary measures only apply to animals while phytosanitary measures only apply to plants to prevent the spread of pests and diseases.

Article 6 of the SPS Agreement covers the concept of regionalisation. It requires WTO Members to adapt their SPS measures to the regional conditions from which the product originated and to which the product is destined. In particular, WTO Members are required to recognise the concepts of pest/disease-free areas and areas of low pest/disease prevalence.[2] The purpose of this provision is to ensure that products originating from pest- or disease-free areas, or areas with low pest or disease prevalence, are treated differently from those in the rest of a WTO Member's territory for the purposes of an SPS measure. After all, health hazards do not conform to political boundaries and can be limited or free in specific areas in the territory of a Member.[3] This prevents SPS measures from completely restricting or prohibiting the entry of products from a member if those products originate from a pest- or disease-free area or an area with low pest or disease prevalence.

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[1] Sec. 1(a), Annex A, Agreement on the Application of Sanitary and Phytosanitary Measures.
[2] Article 6.2, Agreement on the Application of Sanitary and Phytosanitary Measures.
[3] Rüdiger Wolfrum, Peter-Tobias Stoll, and Anja Seibert-Fohr, WTO – Technical barriers and SPS Measures Vol.3 (Brill 2007).

Exporting WTO Members claiming pest/disease-free areas or areas of low pest/disease prevalence must demonstrate to the importing WTO Member that such areas are, and are likely to remain, pest/disease-free areas or areas of low pest/disease prevalence.[4] Article 6.1 of the SPS Agreement, lays down the criteria that a WTO Member is required to consider for the recognition of regional condition. One of the considerations are the guidelines developed by relevant international organisations. In the Preamble of the SPS Agreement, the 6th Recital provides an indicative list of relevant international organizations which includes the Codex Alimentarius Commission (Codex), International Office of Epizootics (OIE) and the regional organizations of the International Plant Protection Convention (IPPC). With respect to sanitary measures, the key organization responsible for developing standards and guidelines in the area is the OIE, while the IPPC is responsible for phytosanitary measures. While the Codex is responsible for food safety and quality, it does not contain any standards or guidelines with respect to the recognitional of regional conditions. The international standards, guidelines and recommendations (ISGRs) are defined in Annex A of the SPS Agreement to mean those ISGRs which have been established by Codex, OIE, IPPC and any other relevant international organizations open for membership to all WTO Members, as identified by the WTO SPS Committee.

III. Regionalisation and Phytosanitary Measures

a. International Framework

i. The International Plant Protection Convention

The International Plant Protection Convention (IPPC) is one of the three sister organizations recognized by the WTO. The International Plant Protection Convention (IPPC) is an intergovernmental treaty signed by over 180 countries, aiming to protect the world's plant resources from the spread and introduction of pests, and promoting safe trade. The principle of regionalisation is recognised under Article IV. The IPPC standards have recognised that the responsibilities of an official national plant protection organization include the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence.[5]

ii. International Standards for Phytosanitary Measures

The IPPC introduced International Standards for Phytosanitary Measures (ISPMs) as its main tool to achieve its goals, making it the primary standard-setting organisation for plant health. The relevant ISPMSs which address the establishment of Pest Free Areas and Areas of Lows Pest Prevalence have been tabulated below:

ISPM 4	Requirements for the establishment of pest free areas (adopted in 1995)
ISPM 5	Glossary of phytosanitary terms
ISPM 6	Guidelines for Surveillance
ISPM 8	Determination of pest status in an area (adopted in 1998)
ISPM 9	Guidelines for pest eradication programmes (adopted in 1998)
ISPM 10	Requirements for the establishment of pest free places of production and pest free production sites (adopted in 1999)
ISPM 17	Pest reporting (adopted in 2002)

[4] See, LUKASZ GRUSZCZYNSKI, THE WTO AGREEMENT ON SANITARY AND PHYTOSANITARY MEASURES: A COMMENTARY (OUP 2023).
[5] International Plant Protection Convention, < https://www.ippc.int/en/>, accessed 23 October 2022.

ISPM 22	Requirements for the establishment of areas of low pest prevalence
ISPM 26	Establishment of pest free areas for fruit flies (Tephritidae) (adopted in 2006, revised in 2014 and 2015. Ink amendments in 2018)
ISPM 29	Recognition of pest free areas and areas of low pest prevalence (adopted in 2007)

b. Domestic Regime of the Plant Quarantine in India

The legislative framework regulating the quarantine of plants are of high importance for an agriculturally dependent country like India.[6] Plant Quarantine regulatory measures in India derive their sanctity from the "Destructive Insects & Pests Act, 1914 (Act 2 of 1914)" (DIP Act). The main objective of this Act is to prevent the introduction of any insect, fungus or other pest, which is or may be destructive to crops.

The import of agricultural commodities is presently regulated through the Plant Quarantine (Regulation of Import into India) Order, 2003 issued under DIP Act, 1914, incorporating the provisions of New Policy on Seed Development, 1988. The main objective of the Act was to prevent the introduction and spread of exotic pests that are destructive to crops by regulating/restricting the import of plants/plant products, and facilitate safe global trade. At the outset, the provisions of the order lays down detailed procedures concerning the inspection of imported agricultural commodities meant for export as per the requirements of importing countries under the International Plant Protection Convention (IPPC) and existing domestic regulations on detection of exotic pests and diseases introduced for containing/controlling them by adopting domestic quarantine regulations.

The Directorate of Plant Protection, Quarantine and Storage (DPPQS), under the ministry of Food and Agriculture was established in 1946 by the virtue of the DIP Act. The main function of the DPPQS is to advise the Government of India and state governments on all the matter related to Plant Protection. DPPQS is responsible for the development of the strategies to ensure plant protection. The Plant Protection strategies encompass activities pertaining to plant quarantine, regulation of pesticides, locust warning & control and training in desert areas besides training and capacity building in plant protection.[7]

The declaration of pest free zones or an area of low pest prevalence is one of the most important mandates of the DPPQS in order to facilitate trade of plants and planting materials from India.

i. General overview of the procedure for establishing a PFA in India:[8]

1. Identification of the Pest Free Area:

   Identification of a pest free area (PFA) and the type of boundaries that must be determined are dependent on the pest in question and its mechanism for spreading. PFAs often have borders that are easily distinguishable. These boundaries may be determined administratively (e.g., by a state/UT, district, block, taluk, hamlet, etc.), geographically (e.g., by a mountain range, for example), or both (e.g. rivers, seas, mountain ranges, roads). The

[6] 'India at a Glance | FAO in India | Food and Agriculture Organization of the United Nations' <https://www.fao.org/india/fao-in-india/india-at-a-glance/en/> accessed 23 October 2022.

[7] Prof. Shailendra S Gaurav, Plant quarantine and Phytosanitary system, <https://ccsuniversity.ac.in/ccsu/Departmentnews/2020-05-06_95.pdf>, accessed 23 October 2022.

[8] NSPM-24 Guidelines for Establishment of Pest Free Area ,Government of India Ministry of Agriculture & Farmers' Welfare Department of Agriculture, Cooperation & Farmers' Welfare Directorate of Plant Protection, Quarantine & Storage N.H-IV, Faridabad-121001 April, 2020. This standard entitled 'Guidelines for establishment of Pest Free Area' prepared by the Directorate of Plant Protection, Quarantine & Storage, is for rendering guidance for creation, declaration and maintenance of pest free area as per provisions given in IPPC & related ISPMs.

decision of the demarcation of an area as a PFA is done by the State Agriculture/ Horticulture departments in consultation with the Indian Council of Agricultural Research (ICAR), State Agricultural University's (SAUs) and Central Integrated Pest Management Centre (CIPMC), the decision is then communicated to the Directorate of Plant Protection, Quarantine & Storage (DPPQS).

2. Establishment of PFA:

   PFA can be established based on general surveillance data for absence of a pest in a particular area, which can be sourced from state government surveillance data, published literatures, ICAR, SAU reports, and CIPMCs survey reports. If all the source report the absence of a target pest along with the same finding from a survey conducted by the State & Central Government, then the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) can declare the area as a PFA.

3. Measures to maintain PFA:

   3.1 Regulatory measures - Restriction on movement of plants, plant materials or other materials capable of carrying pests into a PFA and buffer zone around the PFA. In addition, respective State Agriculture/ Horticulture Department(s) may also impose restrictions for implementing domestic quarantine.

   3.2 Routine monitoring - State Agriculture/ Horticulture Department, SAUs and CIPMCs will conduct regular surveillance of the PFA and the buffer zone around the PFA.

   3.3 Extension advice to farmers - State Agriculture/ Horticulture Department, SAUs and CIPMCs will provide advisories to the farmers for maintaining PFAs from target pest through training programme, dissemination of literatures though various media.

4. Checks to verify freedom has been maintained:

   4.1 Phytosanitary inspection of consignment by the National Plant Protection Organization (NPPO)

   4.2 Researchers, inspectors, farmers to notify the NPPO of any occurrences of the pest

   4.3 Monitoring surveys- State Agriculture/ Horticulture Department, SAUs and CIPMCs will conduct monitoring surveys to verify frequency of pest freedom in a year based on the type of pest & host association.

   4.4 In the event of any detection of target pest in a PFA area, DAC&FW will de-notify PFA.

Besides the aforementioned regulations, there are several bilateral arrangements in the form of Standard Operating Procedures (SOPs) that India has entered into with numerous countries for trading in specific phytosanitary products.[9] These product specific SOPs lay down procedures tailored to the kind of pest identified in that specific product.[10]

Apart from the general guideline for establishment of PFA under the National Phytosanitary Measures (NSPM-24), DPPQS also has detailed guidelines for establishing pest free area for specific products. For instance, NSPM 13 prescribes the requirements for establishing PFA for mango nut, weevil, and pulp weevil[11] and NSPM 14 deals with the requirements for

[9] Standards ,< https://plantquarantineindia.nic.in/PQISPub/html/standards.htm>, accessed 23 October 2022
[10] *Id.*
[11] National Standard for Phytosanitary Measures, <https://pqms.cgg.gov.in/pqms-angular/homeGuidelines/Standards > accessed 29th July 2024.

establishing PFA *tephritid fruit flies*.[12] Moreover, DPPQS entailed detailed locusts' control and research programme for monitoring, survey and control of Desert Locust in Scheduled Desert Areas mainly in the States of Rajasthan and Gujarat.[13]

IV Regionalisation and the Sanitary Measures

a. International Framework

i. About the OIE

The OIE is an inter-governmental organisation founded in 1924, in 2003 the organisation was renamed as the World Organization for Animal Health. The organisation focuses on transparency, disseminating information on animal diseases, and improving animal health globally.[14] 182 countries are members of the OIE, India joined the OIE in 1924 when the organisation was created. The World Assembly of the OIE is composed of delegates from each member which meet at least once a year to create the standards for regulating animal health. The OIE serves a key purpose of controlling and eradicating the spread of diseases prevalent in animals (i.e. epizootic diseases) as well as diseases that spread from animals to humans (i.e. zoonotic diseases).

ii. OIE Standard for Recognition of Zoning and Compartmentalisation

The OIE provides for a general procedure of recognising and regulating zones and compartments as well as specific procedure required for controlling certain diseases.

Chapter 4.4 and 4.5 of the Terrestrial Animal Health Code (2022) and Chapter 4.2 and 4.3 of the Aquatic Animal Health Code (2022) provide the general guidelines for zoning and compartmentalization for terrestrial and aquatic animals respectively. In the two chapters, the OIE requires members to provide a clear procedure for (1) surveillance, (2) identification and traceability, (3) official control programme and (4) appropriate bio-security measures for the establishment of a disease-free area:[15]

> (1) Surveillance should be based on the risk factor of the disease or its potential to cause harm;
>
> (2) Identification and traceability should permit identification of all animals, however, the OIE states that if this standard cannot be maintained then the veterinary authority of the Member can also provide assurance of traceability;[16]
>
> (3) An official control programme is a programme managed by the veterinary authority of a Member for controlling the spread of a disease; and
>
> (4) Bio-security measures involve identifying pathways for the entry of a diseases and measures to maintain a disease-free zone (DFZ) and mitigate the exposure of diseases in the compartment.

The OIE provides individual recommendations for containing and eradicating the spread of specific diseases. For instance, (1) chapter 8.8 of the Terrestrial Animal Health Code deals with

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[12] *Id.*
[13] Locust Control & Research, < https://ppqs.gov.in/divisions/locust-control-research> accessed 29 July 2024.
[14] *Who we* are, World Organisation for Animal Health founded as OIE, https://www.woah.org/en/who-we-are/
[15] Section 4.4.2, Terrestrial Animal Health Code (2022).
[16] Section 4.5.1, Terrestrial Animal Health Code (2022).

the guidelines for Foot and Mouth Disease (FMD); while (2) chapter 9.8 of the Aquatic Animal Health Code deals with guidelines for White Spot Syndrome Virus (WSSV):

> (1) Guidelines for FMD – The guidelines state that livestock from an FMD infested country can be permitted if the livestock was in isolation 30 days prior to importation in a FMD free country or zone, while also being subject to virological and serological tests and also ensuring that FMD is not found within 10 km of the establishment.[17] The OIE provides considerable latitude to members to design their FMD control programme, but it should be able to demonstrate an effective vaccination program and rapid detection of FMD. The OIE also endorses the FMD control programme in a country if they fulfill these two conditions.
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> (2) Guidelines for WSSV – The compartmentalisation requirements for WSSV is divided between areas that can be considered disease free for the first time and areas that have lost disease free status and wish to be considered disease free again. For areas that can be considered disease free for the first time, there should be a system for targeted surveillance and basic biosecurity conditions for at least one year that reveal no detection of WSSV. For areas that were once disease free but wish to regain disease free status, the area would have to undergo appropriate disinfection procedure, modify their biosecurity measures to rectify the issues that caused the loss of disease-free status and conduct targeted surveillance to show no detection of WSSV.

b. Domestic Regulation on Recognition of Regional Conditions

The primary department responsible for the recognition and maintenance of regional conditions for diseases in animals is the Department of Animal Husbandry, Dairying and Fisheries (DAHD). The Livestock Importation Act, 1898 and the Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009 (Contagious Diseases Act) are the two key legislations that empower the DAHDF for the recognition and regulation of disease-free area (DFAs). For aquatic animals, the Coastal Aquaculture Authority Act, 2005 (CAA), plays a key role in recognizing disease free zones.

i. Recognition of Disease-Free Zones for Terrestrial Animals

A. Recognition of Disease-Free Zones for Importation:

The livestock Importation Act empowers the government to restrict or prohibit the entry of livestock that may be infectious or contagious. In notification no. 655(E), importers of livestock and livestock products are required to submit a valid Sanitary Import Permit (SIP) which contains details of the risk analysis required for the imported product. The risk analysis in the SIP shall be based on international recognized scientific principle. In the SIP, the DAHDF permits the entry of livestock and livestock products from countries infested with contagious diseases if they have been either completely treated for the disease or can be traced to a herd or zone free of the disease. For instance, in notification no.2655(E), the veterinary certificate for the import of bovine semen can receive entry if it is from a zone or area free of the disease. However, the details regarding recognition of the conditions differs depending on the disease prevalent in the country. For countries infested with Blue Tongue, the bovine semen can be imported into the country if the bovine was from a vector free of the diseases 28 days before importation. Similarly, for Trichomonosis, IBR/IPV, Paratuberculosis, and Bovine tuberculosis disease, the bovine semen can be from a herd free of the disease. For Enzootic

[17] Section 8.8.12, Terrestrial Animal Health Code (2022).

Bovine Leucosis and Bovine Brucellosis on the other hand, the bovine could be from a bovine that can be traced to a herd or zone free of the disease.

India has also entered into bilateral arrangements with countries for streamlining import certificates, including the recognition of disease-free zones, as seen with its agreement for importing bovine semen from the United States (US).[18] In the agreement, with respect to FMD, import of bovine semen can be permitted if the bovine for the last three months was in an FMD free zone where vaccination was practiced or if the bovine is from an FMD free compartment.

Below is a table of the recognition of disease-free zones for some of the key detrimental diseases for imported swine and bovine:

Livestock	**Disease**	**Conditions prior to importation**
Live Swine	FMD	3 months in disease free zone
Live Swine	Aujeszky's Disease	Serological tests 15 days prior to importation
Live Swine	African Swine Fever	40 days in disease free zone
Live Bovine	Bovine Spongiform Encephalopathy (BSE)	Country with negligible or controlled BSE risk as recognized by OIE
Live Bovine	FMD	FMD free country following a negative result from the FMDV test
Live Bovine	Vesicular Stomatitis (VS)	21 days in a VS free country or in a VS free establishment.
Live Bovine	Blue Tongue (BT)	BT free country or in a vector free of BT 28 days prior to importation.

B. Recognition of Disease-Free Zones (DFZs) for Exportation:

In addition to the recognition of DFAs for importing livestock and livestock products, India also has a robust domestic mechanism to identify and create disease free zones (DFZs). The National Livestock Policy, 2013, explicitly states that 'disease free zones as per OIE guidelines will be created in areas with export potential'. Section 6 of the Contagious Diseases Act permits the State government to declare an area to be a controlled area, animals in the controlled area will be subject to vaccination and other measures, following which, animals that have not been immunized will be prevented from entering the controlled area. To enforce section 6 of the Contagious Diseases Act, India has enacted a robust enforcement mechanism that provides for surveillance, biosecurity measures, vaccination and quarantining of the area designated as a disease-free zone:

1. Surveillance

The State government is responsible for designating an area as a DFA. The process of designating an area as a DFA is done following the surveillance conducted by the State Monitoring Unit (SMU), District Monitoring Unit (DMU), and Block Monitoring Unit (BMU). The SMU is responsible for the implementation of the Contagious Diseases Act at the state level, the DMU is responsible for surveillance within districts and investigation of outbreaks, and the BMU implements the necessary control measures in case of an outbreak and reports outbreaks to the National Animal Disease Reporting System (NADRS).

[18] Notification No. 109-32/2009, Recognising US Veterinary Health Certificate for Bovine Semen; Also see, Notification F.No. L-110110/26/2019 – Trade (E-14194) (notification recognizes bilateral arrangements for recognizing import certificates).

NADRS is a web-based information technology system for reporting diseases from States and Union Territories (UTs). The NADRS also presents information reports made by producers themselves at the ground level. The information collected from the NADRS is then used by the National Animal Diseases Referral Expert System (NADRES). The NADRES also receives data from the All India Coordinated Research Project on Animal Disease Monitoring and Surveillance centres and the Department of Animal Husbandry and Veterinary Services of every State on a monthly basis. The data is used by NADRES to identify the risk factor for the spread of diseases in districts in the country. The risk factor calculated by NADRES is published on a monthly basis at the national and state level of animal husbandry departments for taking appropriate control measures.[19] In addition to the surveillance conducted by the BMU and the NADRS, the research institutes of the Indian Council of Agricultural Research (ICAR) are also responsible, for identifying investigating outbreaks.[20]

2. Bio-Security Measures

Once a state has been informed that there is a possibility for a disease to spread or if they are required to take measures to contain the spread of a disease. The state government can take the following measures – restrict movement of livestock from infected/disease free area, and disinfection of the infected area with 4% sodium carbonate/2% sodium hydroxide solution.[21]

3. Vaccination and Quarantine

Once an area has been designated as a free area by the state government, to ensure the animals with the designated area is not contaminated by an infected animal, a disease-free zone radius is created around the free area. The radius around the free area should ideally span 10 km in radius.[22] A ring vaccination program is then initiated to create an immunity belt around the free area. The DAHDF for instance, explicitly requires the implementation of a ring vaccination program around farms/semen station to prevent the spread of dangerous diseased like FMD, Haemorrhagic Septicemia (HS), Black Quarter (BQ), Anthrax, Brucellosis, etc.[23]

ii. Recognition of Disease-Free Zones for Aquatic Animals

A. Recognition of Disease-Free Zones for Importation:

Unlike the import of livestock and livestock products, the importation of live shrimp has a special procedure in addition to submitting an SIP. Live shrimp, particularly *L. Vannamei* (white legged shrimp), must undergo quarantine in an Aquatic Quarantine Facility (AQF) for 10 days (not including 12-day pre-quarantine period before importation). At the AQF the consignment will be tested for OIE listed diseases as per OIE protocol, in case a virus is found then the entire consignment is destroyed.[24] Only Specific Pathogen Free (SPF) *L. Vannamei* will be allowed entry into the country for usage as broodstock, and production of seed.[25] For importing SPF *L. Vannamei* for broodstock, the CAA has identified only 12 overseas suppliers following careful evaluation of the Technical Evaluation Committee.[26] The transportation and

[19] Suresh KP, Hemadri D, Patil SS, Krishnamoorthy P, Jacob SS, Shome BR, *Livestock Disease Forewarning Monthly Bulletin- April 2021.*, Vol. 9. Bengaluru: ICAR-NIVEDI (2021).
[20] HB Chethan Kumar, et al., *Animal Diseases Surveillance: Its Importance & Present Status in India*, 153(3) Indian Journal of Medical Research 299-310 (2021).
[21] Operational Manual for Implementation of Foot and Mouth Disease Control Programme in the States
[22] Notification F.No.55-40/2011-AHT (CBF), Ring Vaccination Programme for various diseases around Frozen Semen Stations, Central Cattle Breeding Farm and State Cattle Breeding Farms- regarding.
[23] *Id*.
[24] Requirements for Quarantine Clearance for SPF *L. Vannamei*, Animal Quarantine and Certification Services.
[25] SPF refers to the stock of *L. Vannamei* that is free of pathogens listed under the OIE.
[26] Empanelment of Overseas Suppliers of SPF Shrimp Broodstock, of *L. Vannamei* and *P. Monodon*, Coastal Aquaculture Authority. F. No.: 60-6/2014 Tech (Vol-III), dated 25 October, 2021.

maintenance of the shrimp before, during and after quarantine at the AQF is strictly controlled by the Coastal Aquaculture Authority (CAA).[27]

B. Recognition of Disease-Free Zones (DFZs) for Exportation:

Under Section 13 of the CAA Act, all aquaculture activities in coastal areas or coastal regulation zones must be registered under the CAA. Coastal aquacultural activities that are not registered under the CAA Act, can face punishment of 3 years of imprisonment and/or 1 Lak in fine as per section 14.

All stages of *L. Vannamei* production from broodstock, larvae/post larvae rearing, and harvesting are required to only use SPF *L. Vannamei*. With broodstock, which involves taking sexually mature *L. Vannamei* for the purpose of breeding and collecting seeds, the shrimp could either be imported from SPF recognised farms, induced maturation in captive conditions or be caught in commercial trawling operation, but all three forms of collection of broodstock would require the shrimp to undergo sanitary measures.[28] Use of pond reared broodstock is prohibited.[29] Shrimp collected from the three sources would require them to undergo quarantine and ensure they do not undergo excess stress as they would then become more prone to diseases, and finally they would individually be screened for WSSV before introducing them into the broodstock for breeding.

The Nauplii or the first larval stage after hatching from the seeds and the post larval stage of the *L. Vannamei will* then be sold to only those rearing farms that registered under CAA to rear SPF *L. Vannamei*.[30] Unauthorized seed production and culture of L. Vannamie can be destroyed. To curtail the outbreak of any diseases amongst the SPF registered shrimp production units, the CAA mandate that certain bio-security measures are in place. These bio-security measures include – ensuring SPF farms are not located next to non-SPF farms for *P. Monodon (Tiger Shrimp*), periphery of the farms should be surrounded by a wall or fence, prohibiting the use of farm to cultivate other crustacean species, quality of water intake is carefully examined as per CAA guidelines, disposal of diseases shrimp before entry into hatchery operation, appropriate bio-filers, etc.[31]

c. Regulatory Gap Between OIE Standards and India's Sanitary Measures

i. Regulatory Gap for Terrestrial Animals

In terms of OIE's general guidelines for zoning and compartmentalisation, India has provided a clear statutory framework along with an implementation mechanism to fulfill the criteria provided by OIE. With respect to surveillance, the SMU, DMU and BMU along with the NADRS and ICAR, provides an effective mechanism for surveillance of diseases and protection of disease-free areas from outbreaks. For identification and traceability, the OIE permits Members to have flexible identification system (Members don't have to have a system that identifies every animal). The OIE states that can identify diseased animals through regulatory bodies can also be sufficient. India has implemented several disease control programme within the meaning provided by the OIE, including the FMD Control Programme

[27] Standard Operating Procedure (SOP) for Aquatic Quarantine of Specific Pathogen Free (SPF) *L. Vannamei* Broodstock, Coastal Aquaculture Authority.
[28] Guidelines for Regulating Coastal Aquaculture, http://caa.gov.in/uploaded/doc/Guidelines-Englishnew.pdf.
[29] Guideline for Regulating Hatcheries and Farms, Coastal Aquaculture Authority, 30 April 2009.
[30] *Id.*
[31] *Supra* note 23; *Id.*

which is one of the 7 official control programmes endorsed by the OIE as per Chapter 8.8 of the Terrestrial Code.[32] For bio-security measures, India has an active vaccination program along with measures that can restrict the movement of animals and disinfection for areas where an outbreak has occurred.

Since India's FMD Control Programme is officially endorsed by the OIE, India's regulatory mechanism would be considered compliant with Chapter 8.8. India's practice of creating a vaccination ring radius of 10 km around a designated free area fulfills OIE's perimeter requirements around a free area. India's recognition of a 30-day quarantine period for livestock and livestock product for importation along with a negative FMD test would also be compliant with OIE guidelines.

ii. Regulatory Gap for Aquatic Animals

With respect to the regulation of aquaculture, while the CAA and DAHD have not explicitly recognised aquaculture farms to be 'disease free zones/compartments' for *L. Vannamei*, however, the strict compliance adopted to regulate SPF operation for all registered farms does indicate that they can be considered as disease free operations. The OIE guidelines for recognition of first-time disease-free areas requires the existence of basic biosecurity conditions for one year and to show the non-existence of WSSV. The OIE guidelines states that basic biosecurity conditions include an early detection system, targeted surveillance and passive surveillance

L. Vannamei registered farms are require to maintain detailed records of the sources of seeds, broodstock and nuclei to ensure traceability of diseased stock. The farms are also subject to periodical inspection of the CAA to check the status of the broodstock, seed production and sale of the shrimp. Registered farms are also required to ensure water is properly treated to reduce the possibility of sick and diseased shrimps, build a perimeter wall or fence, etc. The Broodstock Multiplication Centre (BMC), which is responsible for procuring SPF post larvae for rearing to create supply of broodstock for other hatcheries, is required to show disease free status of the facility for at least 2 years.[33] While other operations of *L. Vannamei*, do not require maintaining disease free status except for a duration of time, during inspection the farms are required to ensure no pathogen is found to continue being a CAA registered farm. The process of inspection could be a form of targeted surveillance provided by OIE guidelines. *P. Monodon* farms on the other hand can receive disease free status by the CAA if they can show a history of negative diseases for the previous 2 years.[34]

Establishing clearer rules on surveillance for *L Vannamei* farms on a national level is still a work in progress. However, the DAHDF has attempted to rectify this issue with the National Surveillance Program for Aquatic Animals Diseases (NSPAAD). The NSPAAD is a program led by the ICAR-National National Bureau of Fish Genetic Resources (NBFGR) in 16 states to identify and develop disease free zones as well as identifying areas that are prevalent with diseases. The NSPAAD had developed a diagnostic manual that was circulated to farmers and state fisheries departments and played a key role in the promotion of passive surveillance.

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[32] Resolution No. 14, Endorsement of Official Control Programmes for Foot and Mouth Diseases of Members (2021).

[33] Guidelines for Regulating Establishment and Operation of SPF Shrimp Broodstock Multiplication Centres, National Fisheries Development Board, November 2015, https://nfdb.gov.in/PDF/GUIDELINES/4.%20Guidelines%20for%20Regulating%20Establishment%20and%20Operation%20of%20SPF%20Shrimp%20Broodstock%20Multiplication%20Centres.pdf.

[34] Guidelines for Seed Production and Culture of Specific Pathogen Free P. Monodon, Coastal Aqualculture Authority, http://caa.gov.in/uploaded/doc/Gazette14-09-12.pdf.

V Exporter's Concerns

Some of India's agricultural exports were suspended or denied entry due to phytosanitary concerns. This section lists exporter concerns on specific products identified from Specific Trade Concerns (STCs) raised by India before the SPS committee and from instances of rejection of Indian exports on grounds of pests or disease infestations.

i. Bovine

India exports Buffalo meat to more than 70 countries across the world. In 2021-22, India's total export of buffalo meat amounted to Rs. 24613.24 Crores/3303.34 USD millions. Considering the importance of Bovine exports, it is pertinent to note that India has faced import restrictions of bovine products in US, China and the EU because of prevalence of diseases like Bovine spongiform encephalopathy (BSE) and the Foot and Mouth Disease (FMD).

India raised an STC against the US when it did not accept the OIE categorization of India as a negligible risk country for BSE. Instead, the US asked India to submit its dossier and stated that it will approve India as a negligible risk country only after carrying out its own independent investigation. India highlighted that countries should apply OIE designations instead of conducting their own national assessments.[35] Previously, concern about BSE categorisation was also raised by India in a STC against the EU, where India highlighted the problem with the EU categorising India in the suspected list of geographical BSE risk assessment (GBR), even though BSE had not been reported in Indian cattle and buffalos.[36] However, the concerns were later resolved as they had been overtaken by the OIE's new risk assessment framework and categorization system for BSE risk posed by countries.[37]

India has also raised an STC on import restrictions imposed by China based on India's Foot and Mouth Disease (FMD) status. The concerns persisted despite the STC being raised, the bilateral Memorandum of Understanding (MoU) signed in 2013, the clearing by China in 2017 of 14 centres for the export of bovine meat from India, and the similarity of FMD conditions prevailing in China and India. India's stated position is that its production of buffalo meat was a regulated industry and considered China's measures as being inconsistent with Articles 2.2, 2.3, 3.3 and 5.1 of the SPS Agreement. It requested China to lift the restrictions and allow bovine meat exports from India.[38] The EU has identified India as one of the third countries with the risk of foot and mouth disease (FMD) and this implies that dairy products from India have to undergo various heat treatments before being exported to the EU.[39]

ii. Spices

India is the largest exporter of spices globally. As per the Directorate General of Foreign Trade (DGFT), India exported $ 4.1 billion worth of spices in FY 2021-22. From this share, 1.8 billion

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[35] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/76 (2 December 2014) at 11, available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R76.pdf&Open=True>; *see also* Committee on Sanitary and Phytosanitary Measures, G/SPS/R/82 (7 June 2016) at 18, available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R82.pdf&Open=True>.

[36] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/37/Rev.1 (18 August 2005), available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/G/SPS/R37R1.pdf&Open=True>.

[37] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/45 (12 September 2007), available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/G/SPS/R45.pdf&Open=True>.

[38] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/105, (18 May 2022) at 25 available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R105.pdf&Open=True>.

[39] COMMISSION REGULATION (EU) No 605/2010. Available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:175:0001:0024:EN:PDF.

USD constituted core spices - dried chilli, cumin, and turmeric.[40] Recently, India has faced issues of rejection of its exports of chilli due to phytosanitary issues of contamination by pests. In 2021, India raised an STC against Mexico's suspension of imports of dried chili from India in 2017, citing the interception of the *khapra beetle.* Subsequently, India undertook a standard operating procedure for export of pest-free dried chili.[41]

iii. Fruits and Vegetables

During 2021-22, India exported fresh fruits and vegetables worth Rs. 11,412.50 crores/ 1,527.60 USD Millions.[42] Though India's share in the global market is still nearly 1%, there is increasing acceptance of horticulture produce from the country.[43] There have been issues with respect to Indian exports of fruits and vegetables arising from pest infestation. For instance, India raised an STC on the EU ban of Indian mangoes and four other vegetables since 2014 on the grounds of an increasing number of interceptions of harmful pests and organisms.[44] The ban on mangoes was lifted in February 2015 and the ban on other vegetables was lifted in December 2016.[45] Another issue faced by Indian exporters was regarding bacterial rot (Ralstoniasolanacearum Yabuuchi) detected on potato consignments during the quarantine period. There were nine cases in 2011 and twenty three cases in 2014 when brown rot was detected in plant products from India.[46]

Indian exports of grapes to Russia and Sri Lanka faced issues due to strict pest control requirements. Both countries asked for declaration that the entire area from where the grapes originate is pest free.[47]

iv. Tea

India is among the top five tea exporters in the world making about 10% of total export.[48] Unfortunately, India's tea shipments are being rejected by global buyers. Indian tea makers' opportunity to ramp up exports on the back of falling production by crisis-hit Sri Lanka has hit a roadblock with consignments being rejected due to presence of pesticides and chemicals beyond permissible limits.[49] Recently, exporters have been facing concerns with respect to rejection of Indian agricultural products in other markets. For instance, Iran and Taiwan

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[40] Pranbihanga Borpuzari, 'India's spice exports need to grow at 19.5% to meet $10 billion target by FY27', (Economic Times, 16 June 2022), available at <https://economictimes.indiatimes.com/small-biz/trade/exports/insights/indias-spice-exports-need-to-grow-at-19-5-to-meet-10-billion-target-by-fy27/articleshow/92253030.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst>.

[41] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/101 (19 May 2021) at 12, available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R101.pdf&Open=True>.

[42] 'Fresh Fruits & Vegetables' (Agricultural and Processed Food Products Export Development Authority) available at <https://apeda.gov.in/apedawebsite/six_head_product/FFV.htm>.

[43] Ibid.

[44] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/83 (9 August 2016) at 15, available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R83.pdf&Open=True>.

[45] Ibid.

[46] 'Brown rot disease mars export prospects of Indian potatoes' (BusinessLine, 23 January 2018) available at <https://www.thehindubusinessline.com/economy/agri-business/brown-rot-disease-mars-export-prospects-of-indian-potatoes/article7185569.ece>.

[47] Parthasarathi Biswas, 'Pest certification puts brakes on grape exports to Russia and Sri Lanka, prices fall' (Indian Express, 18 February 2019) available at <https://indianexpress.com/article/business/pest-certification-puts-brakes-on-grape-exports-to-russia-and-sri-lanka-prices-fall-5588631/>.

[48] 'Tea Industry and Exports in India' (India Brand Equity Foundation) available at <https://www.ibef.org/exports/indian-tea-industry#:~:text=India%20is%20among%20the%20top,the%20finest%20in%20the%20world.>.

[49] Here is why Indian Tea is being rejected by global buyers, Mint <https://www.livemint.com/news/india/heres-why-indian-tea-is-being-rejected-by-global-buyers-11654256327500.html>

rejected three containers of Indian tea, citing phytosanitary issues with measures for control of plant diseases.[50]

v. Grains

In 2020-21, Rice was India's largest export within agricultural products amounting to 4,794.54 million USD and wheat was another leading export amounting to 549.16 million USD.[51] However, there have been instances where Indian grains - rice and wheat have been rejected due to phytosanitary concerns. Turkish authorities denied entry for Indian wheat consignment over phytosanitary concerns where the wheat was detected with Indian Rubella disease.[52]

Pests like the Khapra beetle (Trogoderma granarium) and the saw-toothed grain beetle (Oryzaephilus surinamensis) affect Basmati rice exports.[53] There were five cases between 2000 and 2016 where the shipments were not allowed to be distributed in the EU markets (particularly Cyprus, Finland and Italy) because they were infested with insects.[54] It is worth mentioning that pest infected rice is also a concern for exports to the US. In 2015, APEDA released a notification stating that, from April 2016, export of rice to the US would only be allowed from rice mills and processing units registered with the Directorate of Plant Protection, Quarantine and Storage.[55]

vi. Nuts and seeds

India is the second largest producer of groundnut in the world after China with 14.28% share in global production and the third largest producer of global sesame production with 13.05% share.[56] But it is also observed that India is facing SPS issues on its nuts and seed products which India has flagged before the SPS Committee.

Concerns were also raised by India this year, against Russia's new requirement to include a declaration in phytosanitary certificates stating that exported peanuts and sesame were produced in areas free of *Striga spp., Callosobruchus spp., Caulophilus latinasus, Trogoderma granarium.* India noted that this was not possible due to the small size of Striga seeds, which could easily spread and instead suggested that the requirement be changed to a declaration that consignment was free from the above-mentioned pests.[57]

vii. Marine products

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[50] 'Why Iran and Taiwan rejected tea consignments from India' (CNBC, 10 June 2022) available at <https://www.cnbctv18.com/economy/why-iran-and-taiwan-rejected-tea-consignments-from-india-13779332.htm>.

[51] 'Export Products (Agriculture)' (Ministry of Commerce and Industry) available at <https://commerce.gov.in/about-us/divisions/export-products-division/export-products-agriculture/>.

[52] 'Turkey rejects Indian wheat consignment on phytosanitary concerns: Report' (Business Standards, 1 June 2022), available at <https://www.business-standard.com/article/economy-policy/turkey-rejects-indian-wheat-consignment-on-phytosanitary-concerns-report-122060100640_1.html>.

[53] Arpita Mukherjee and others, 'SPS Barriers to India's Agriculture Export: Learning from the EU Experiences in SPS and Food Safety Standards' (Indian Council for Research on International Economic Relations, March 2019) available at <https://icrier.org/pdf/SPS_Barriers_to_India_Agriculture_Export.pdf>.

[54] Ibid.

[55] http://apeda.gov.in/apedawebsite/Announcements/rice_mills.pdf

[56] Emerging Trends in Export of Groundnut, Sesame and Castor from India, Anand Agricultural University <http://www.aau.in/sites/default/files/emerging_trends_in_export_of_groundnut_sesame_and_castor_from_india.pdf>.

[57] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/105 (18 May 2022), at 10, available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R105.pdf&Open=True>.

India exported the highest amount of marine product in its history in 2022 amounting to USD 7.74 billion.[58] However, India has faced a few SPS challenges in marine products that hamper its exports and consequently adversely affecting marine exporters.

Recently, India reiterated its concern regarding the indefinite suspension of exports from over 50 fish and fishery product establishments due to the presence of COVID-19 nucleic acid on the packaging of frozen products. China had not shared the relevant test reports, hindering detailed investigations in India. India requested China to share the relevant reports that had led to the export restrictions or allow exports from the delisted units.[59]

VI Disease Free Area: India poultry Industry

Although India has established domestic regulations to meet its regionalisation obligations under Article 6 of the SPS Agreement, the country's regionalisation efforts have so far been successfully implemented only for poultry farms from avian influenza. This section will explore the circumstances that led to the development of these regionalisation efforts for poultry products. Additionally, it will examine the recognition of these efforts by the OIE, highlighting the steps taken by India to align its practices with international standards.

The poultry industry is one of the fast-growing industries in India's agricultural sector. The sector witnessed substantial growth due to growth in per capita income, a growing urban population and falling real poultry prices.[60] Indian poultry industry currently stood at 28.18 USD and is expected to grow at Compound Annual Growth Rate (CAGR) of 8.1% during 2024-2032 to reach a value of approximately 44.97 USD.[61]

However, the journey of this is industry was not free from challenges attributed to pathogenic diseases. The threat of bird flu or avian influenza poses serious threat to poultry industry for over two decades, hampering production, distributions, and consumption of poultry products. In India, the outbreak of avian influenza in 2007-08 severely impacted the poultry industry.

For instance, in the eggs industry, the top five eggs producing states Andhra Pradesh, Karnataka, Tamil Nadu, Telangana, and West Bengal constitutes 64.93% of the total egg production in the country.[62] It is reported that due to the outbreak of avian influenza Indian eggs export decline from 10 lakh to 5 lakh in 2008-09 and almost nil during 2012-13.[63] To address the problem of Highly Pathogenic Avian Influenza (HPAI) the government has taken proactive measures to mitigate the risk associated with HPAI. The Government has adopted the concept of poultry compartmentalisation to enhance animal health, reduces the risk of

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[58] V. Sajeev Kumar, 'India's marine product exports reach record high of $7.74 billion in FY22' (Hindu BusinessLine, 7 April 2022) available at <https://www.thehindubusinessline.com/economy/agri-business/indias-marine-product-exports-reach-record-high-of-774-billion-in-fy22/article65299720.ece>.

[59] Committee on Sanitary and Phytosanitary Measures, G/SPS/R/105 (18 May 2022), at 18 available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SPS/R105.pdf&Open=True>.

[60] APEDA, Poultry Products, < https://apeda.gov.in/apedawebsite/SubHead_Products/Poultry_Products.htm> accessed 31st July 2024.

[61] The Poultrysite, expanding landscape of India's poultry sector < https://www.thepoultrysite.com/articles/the-expanding-landscape-of-indias-poultry-sector> accessed 31st July 2024.

[62] Supra N 63.

[63] Times of India, Namakkal poultry farmers want to put all their eggs in one basket <https://timesofindia.indiatimes.com/business/india-business/namakkal-poultry-farmers-want-to-put-all-their-eggs-in-one-basket/articleshow/109863695.cms> accessed 31st July 2024.

disease outbreaks and facilitates the trade of poultry and poultry-related products.[64] Moreover, the government has also submitted the self-declaration of freedom from HPAI to OIE related to poultry compartmentalization to ensure safe and unhindered export of poultry and poultry products.[65]

According to the OIE *Terrestrial Code's* Chapter 4.4, compartmentalisation "applies to an animal subpopulation defined primarily by management and husbandry practices related to biosecurity". India took a proactive approach to tackle and mitigate the risk associated with HPAI and submitted through DAHD self-declaration of freedom from HPAI to OIE for twenty-six poultry compartments.[66] OIE has recognised India's self-declaration of freedom from HPAI.[67] These compartments are in four different states, namely Chhattisgarh, Maharashtra, Tamil Nadu, and Uttar Pradesh.

VII Conclusion

Despite India's robust domestic legislation, which aligns with its obligations under the SPS Agreement, the country has struggled to implement successful regionalisation efforts for key export products, apart from poultry in select farms. A significant challenge facing India's dairy exports is the continued blanket rejection of Indian dairy products by other countries, despite the existence of a strong FMD control programme.[68] Regarding phytosanitary products, the Directorate of Plant Protection, Quarantine & Storage in the Ministry of Agriculture and Farmers' Welfare has identified that several pests are reported only in limited areas of the country, yet Indian agricultural commodities still encounter export barriers.[69] For aquaculture products, India needs to amend its domestic legislation to enhance its surveillance system to meet the conditions stipulated by the OIE.

Although there are instances where members disregard the disease or pest status recognised by the OIE and IPPC, it is still in our interest to implement a more robust mechanism for enforcing our regionalisation legislation and to ensure its subsequent notification to the OIE and IPPC. Some members have even restricted the entry of certain products unless they originate from areas where regionalisation efforts have been implemented. For instance, the Eurasian Economic Union notified special phytosanitary quarantine requirements stating that grains, seeds of legume and oil crops must be imported into the customs territory from areas and production sites free of weed plants of the genus Striga spp.[70] It also states that potatoes must be imported from production areas free from diseases like APMoV (Andean potato mottle virus), APLV (Andean potato latent virus), PVT (Potato T virus), PYV (Potato yellowing

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[64] Department of Animal Husbandry and Dairying, answer to Rajya Sabha dated 8th December 2023 <https://dahd.nic.in/sites/default/filess/RS746_1.pdf> accessed 1st August 2024

[65] Id.

[66] PIB, Ministry of Fisheries, Animal Husbandry & Dairying, WOAH approves self-declaration of freedom from avian influenza in India poultry compartments <https://pib.gov.in/PressReleseDetail.aspx?PRID=1967629> accessed 1 August 2024.

[67] WOAH, < https://www.woah.org/app/uploads/2023/10/annexure-ii-list-of-compartments-updated2.pdf> accessed 1 August 2024.

[68] Arpita Mukherjee and others, 'SPS Barriers to India's Agriculture Export: Learning from the EU Experiences in SPS and Food Safety Standards' (Indian Council for Research on International Economic Relations, March 2019) available at <https://icrier.org/pdf/SPS_Barriers_to_India_Agriculture_Export.pdf>.

[69] Directorate of Plant Protection, Quarantine & Storage, *NSPM-24: Guidelines for Establishment of Pest Free Area* (April 2020) <https://plantquarantineindia.nic.in/PQISPub/pdffiles/NSPM24pfa.pdf>.

[70] Decision of the Council of Eurasian Economic Commission No. 157 validating Unified Quarantine Requirements for species subject to quarantine inspection at customs border of the Eurasian Economic Union 3 (30 November 2016) <https://leap.unep.org/countries/am/national-legislation/decision-council-eurasian-economic-commission-no-157-validating>.

alfamo virus); pale potato cyst nematode (Globodera pallida), Columbia root-knot nematode (Meloidogyne chitwoodi) etc.[71] Similarly, export of Citrus fruits to European Union countries require the products to be pest-free from Xanthomonas citri pv. citri and Xanthomonas citri pv. Aurantifolii.[72]

In conclusion, while India has made commendable progress in aligning its domestic legislation with international standards under the SPS Agreement, significant challenges remain in fully realising the benefits of regionalisation for its key export sectors. The persistent rejection of Indian dairy products, despite a strong FMD control programme, underscores the need for enhanced international cooperation and recognition of India's sanitary measures. The barriers faced by Indian agricultural commodities and aquaculture products due to limited recognition of regionalisation efforts highlight the necessity for India to strengthen its surveillance and notification mechanisms. By improving the implementation of regionalisation legislation and ensuring timely notification to the OIE and IPPC, India can better safeguard its export interests. Furthermore, addressing these challenges requires a collaborative approach with international partners to ensure that regionalisation efforts are recognised and respected globally, thereby facilitating smoother trade flows and enhancing the competitiveness of Indian exports on the world stage.

[71] Ibid at 3.
[72] Ibid. at 3.